



**US Army Corps  
of Engineers®**



# **Phase I Hazardous Toxic or Radioactive Waste Environmental Site Assessment**

## **Jefferson Lakefront Levee Jefferson Parish Kenner and Metairie, Louisiana**

**Individual Environmental Report #3, Addendum 01**

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## 1.0 SUMMARY

This Phase I Hazardous Toxic or Radioactive Waste (HTRW) Environmental Site Assessment (ESA) report for the IER 03: LPV, Jefferson Lakefront Levee (Jefferson Lakefront Levee) in Kenner, Metairie, and New Orleans, Louisiana (the “Property”) was prepared by Earth Tech, Inc. (the Contractor) for the U.S. Army Corps of Engineers (USACE)-New Orleans District. This first section is intended as a general overview of the report, including the findings and opinions.

The term Hazardous Toxic or Radioactive Waste (HTRW) has the meaning in USACE Engineering Report ER 1165-2.132, “Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects” (USACE, 1992).

The Jefferson Lakefront Levee is located on the East Bank of Jefferson Parish, Louisiana along the southern shoreline of Lake Pontchartrain in Kenner and Metairie. With regard to the south side of the levee, the western portion consists predominantly of residential communities; commercial sites become more prominent to the east.

The 9.5 miles of Jefferson Lakefront Levee represents the formal Property, as defined in ASTM Standard E1527-05, for this Phase I HTRW ESA (ASTM, 2005). However, the USACE requested that the PHASE I HTRW ESA include the entire area that falls within a footprint extending 1,000 feet from both sides of the centerline of the levee. Therefore, the Contractor evaluated residences and businesses from public streets and sidewalks and open levee area within this footprint extending from the levee crown. The Contractor drove and observed from the roads all of the parcels (light industrial, commercial, and residential) within the 1,000-foot footprint of Jefferson Lakefront Levee. The parcels located contiguous to the 1,000-foot footprint are considered adjoining parcels. The various environmental database minimum search distances, as required in the USACE Scope of Work (Appendix A) and ASTM Standard Practice E1527-05, extended from the edge of the 1,000-foot footprint. The search distances are discussed further in Section 5.1. Thirty-six (36) figures (Figures B-1 through B-36) that depict aspects of this report are included in Appendix B and Appendix D-1.

### 1.1 Recognized Environmental Conditions (RECs), Suspected RECs and Historical Suspected RECs

The ASTM Standard E1527-05 definitions are important in understanding this summary. Additional definitions are discussed in the Introduction following this section. Terms in italics are defined in that Standard Practice.

3.2.74 *recognized environmental conditions* – the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not represent a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not *recognized environmental conditions*.

3.2.39 *historical recognized environmental condition* – environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently.

1.1 *de minimis conditions* – conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

3.2.52 *material threat* – a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional*, is threatening and might result in impact to public health or the environment. An example might include an above ground storage tank system that contains a *hazardous substance* and which shows evidence of damage. The damage would represent a *material threat* if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

The professional practices that the Contractor used to assess whether Recognized Environmental Conditions (RECs) exist in connection with the Jefferson Lakefront Levee and its 1,000-foot footprint included interviews with selected local and state regulatory personnel, visual inspections of the Property, a review of readily available historical information such as aerial photographs and topographic maps, a drive-by and walking inspection of adjacent parcels from public sidewalks and streets, a review of selected environmental records that were made available to the Contractor, and a review of a computer search of selected Federal and State environmental databases. These data were reviewed for indications of the presence of hazardous substances or petroleum products on the levee reach or nearby parcels from which those substances might migrate to the levee reach in other than vapor form.

With regard to suspected RECs, the Contractor considers all of the sites that are registered as having current Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) as representing some potential for an environmental impact. They are listed below as suspected RECs because, even though a hazardous substance or petroleum product is present, the Contractor has not identified a material threat of a release. Similarly, suspected RECs exist at several other facilities because of the management of relatively high volume and movement of fuels or other hazardous materials or by the nature of the facility operations, increasing the chances of associated environmental impact.

The Contractor has included the locations of the former registered or unregistered USTs, ASTs, and historical Leaking Underground Storage Tank (LUST) sites as historical suspected RECs, because of the potential that some residual soil or groundwater impacts may exist (even though the tank removal and closure was conducted under the oversight of the Louisiana Department of Environmental Quality (LDEQ)). Historical suspected RECs were also identified for sites where the former activities, by their nature, may have caused environmental degradation.

The findings below are based upon the information obtained during this PHASE I HTRW ESA, and discussed throughout this report. In accordance with ER 1165-2-132 Paragraph 7.c.(2) (USACE, 1992), the potential contaminants of concern (COCs) associated with each site are described or listed in parentheses. This report addresses petroleum products, although specifically excluded in paragraph 4.a(1) of 1165-2-132 of USACE's ER 1165-2-132.

## **1.2 Recognized Environmental Conditions**

No obvious signs of major contamination were visually observed during the inspection of the Jefferson Lakefront Levee. No known or suspected RECs were observed on the Jefferson Lakefront Levee itself.

For the land outside of Jefferson Lakefront Levee, but within the 1,000-foot footprint, the only definitive visual evidence of current RECs was the 17 leaking or possibly leaking transformers described in Section 6.3. The latitude and longitude of these RECs are presented in Table B-2.

The 17 leaking or possibly leaking transformers identified in Table B-9 represent the only known RECs within the study area of Jefferson Lakefront Levee (but outside of the Property itself). Entergy owns and operates all electrical equipment on or near the Property. Of the 17 leaking transformers, Entergy has tested five (5) of these 17 transformers for concentrations of polychlorinated biphenyls (PCBs). All five of these transformers were tested and have <50 parts per million concentration of PCBs. The remaining 12 transformers have not been tested.

The Contractor e-mailed Entergy the list of publicly accessible leaking or potentially leaking transformers in the 1,000-foot footprint of the Property on 29 August 07. Entergy researched its electrical equipment database and provided the Contractor with information related to the fluids within these transformers (Appendix F-4). The leaking (or potentially leaking) transformer locations are shown throughout Figures B-4 through B-33. Figure B-34 presents the location of these transformers across the entire 9.5-mile Study Area.

Although leaking or potentially leaking transformers may result in PCB impacts to soil and/or groundwater, Entergy's policy regarding its equipment is to replace, repair, and clean up any oil leaks originating from its equipment (Appendix F-4).

## **1.3 Suspected Recognized Environmental Conditions**

Suspected RECs are identified at the following facilities outside of the Jefferson Lakefront Levee, but within the 1,000-foot footprint:

- Pumping Station No. 1 – Bonnabel (management of large quantity of petroleum products, petroleum products), Figure B-29;
- Pumping Station No. 2 – Suburban (management of large quantity of petroleum products, petroleum products), Figure B-21;
- Pumping Station No. 3 – Elmwood (management of large quantity of petroleum products, petroleum products), Figures B-15 and B-16;
- Pumping Station No. 4 – Duncan (management of large quantity of petroleum products, petroleum products), Figures B-9 and B-10;
- USACE 17th Street Canal Pumping Station and Construction Site, Figures B-31 and B-32;
- Nine 55-gallon drums (potential releases of hydraulic oil, petroleum products) between Jefferson Lakefront Levee and Metairie Hammond Highway, Figures B-31 and B-36;
- Camellia Cleaners and Lakeview Cleaners (dry cleaning operations, chlorinated volatile organic compounds), Figure 26;
- Live Oak Discount Zone (formerly EZ Serve #2093, current USTs, petroleum products); and
- Old Duncan Pumping Station #4 – Former USTs and/or ASTs (Figures B-9 and B-34). Excavated in mid-1980's, per Jefferson Parish Pumping Station Superintendent. (LDEQ and

Jefferson Parish UST closure records were unavailable, although limited LDEQ records indicate the removal and characterization of impacted soils.)

*Note: For the purposes of this report, the Old Duncan Pumping Station is being treated as outside of the current levee footprint. However, given its proximity to the existing levee, the Contractor recommends that the USACE survey the existing footprint of the Old Duncan Pumping Station #4 in relation to and prior to proposed invasive groundbreaking activities in this area.*

All of these suspected RECs may have impacted soils and or groundwater near the site. There is also some possibility of the petroleum products associated with the four pumping stations or chemicals from sources outside of the Study Area and along the Lake Pontchartrain shoreline, near boat docks, harbors, and marinas along the length of the 9.5-mile Study Area to have impacted the sediments along the south shore of the lake and within adjacent harbors and canals. The locations of these known or suspected RECs are shown on the previously mentioned figures and on Figure B-34.

#### **1.4 Historical Known or Suspected Recognized Environmental Conditions**

The only historical REC identified in the EDR environmental database search within the 1,000-foot footprint is located at the Suburban Pumping Station No. 2. This facility received closure (no further action required) from the LDEQ (Appendix E). However, residual contamination that may still be present at the sites would be petroleum products impacting the nearby soils and/or groundwater, and in the case of the Suburban Pumping Station #2, possibly sediments of the adjacent Suburban Canal.

The following sites are presented in EDR's Environmental Database Search report and are identified as historical suspected RECs within the 1,000-foot footprint, on the basis of the former presence of a registered UST and/or by the nature of the facilities' operations:

- Pumping Station No. 2 – Suburban (former USTs, petroleum products), Figure B-21;
- U-Haul (former UST, petroleum products), Figure B-26;
- Pelican Pool and Patio (former USTs, petroleum products), Figure B-26;
- South Shore Toll Plaza (former USTs, petroleum products), Figure B-26; and
- Bernard's Car Care (former USTs, petroleum products – gasoline and service station since at least 1965), Figure B-30.

The following sites are identified as historical RECs within the 1,000-foot footprint on the basis of the likely former presence of ASTs or historical USTs or because of the management of relatively high volume and movement of fuels or other hazardous materials and/or by the nature of the facilities' operations:

- Old Bonnabel Pumping Station No. 1;
- Old Suburban Pumping Station No. 2; and
- Old Elmwood Pumping Station No. 3.

According to the Jefferson Parish Drainage Department Superintendent, these three former pumping stations were located in front of the current pumping stations and were demolished after the current pumping stations were brought online. Plans showing the former footprints of the building and ancillary equipment were unavailable for review.

Verbal information obtained from the East Jefferson Parish Levee District (EJLD) identified a hydraulic oil release to soils near the levee when a hose on an East Jefferson Levee District wing-

mower maintenance tractor ruptured on 25 July 07. The release occurred south of and at the base of the levee, immediately west of Williams Boulevard at Gate L-4 (Figure B-11). Per the East Bank Levee District's request, the Kenner Fire Department responded to the incident and assisted in the clean-up. A summary of that incident is also provided in an email from Mark Fos, EJLD Police dated 27 September 07 (Appendix F-2).

The locations of these historical known and suspected RECs are shown on the previously mentioned figures and on Figure B-34.

### **1.5 Known or Suspect De Minimis Environmental Conditions**

No de minimis environmental conditions were identified within the footprint of the existing levee, although it is likely that those conditions exist as portions of the levee are in various stages of modification and de minimis drips of hydraulic oils and petroleum fuels from construction equipment are likely to have occurred.

Known or suspect de minimis conditions exist at each of the four existing pumping stations and the Old Duncan Pumping Station #4 and are represented by operational leaks and drips of diesel fuel and oils from the pumps and other equipment, onto internal and external surfaces of the pumping stations. Per the pumping stations' Spill Prevention, Control, and Countermeasure (SPCC) Plans, these de minimis drips and leaks are mitigated using drip pans and/or absorbent pads (or absorbent media) to absorb oil from drips/leaks of equipment onto other areas of the pumping station. According to the Jefferson Parish Pumping Station Superintendent, used oil and used absorbent pads are picked up by National Oil, the used oil recycler used by Jefferson Parish.

According to the Jefferson Parish Pumping Station Superintendent, the walls and floors of the pumping station basements are constructed of concrete and are reportedly 2½ feet in thickness. Therefore it is unlikely that de minimis drips and leaks of oil will migrate to soils or groundwater beneath the pumping stations, when consistently mitigated by absorbent media and where no concrete cracks exist in the walls or the floors of the pumping stations.

### **1.6 Other Environmental Concerns**

The following current potential RECs were identified during site reconnaissance:

- Marine debris and 55-gallon drums on Live Oak vacant lot (between Cherokee and Aztec), Figure B-30.

The site reconnaissance also identified the following Sites of Interest:

- Six (6) Inclinometers
- One (1) Gray PVC Casing (inclinometer)

According to the USACE Project Manger for those levee reaches, the inclinometers were installed to monitor slope stability along the southern base of the Jefferson Lakefront Levee, near the Jefferson and St. Charles Parish line as shown on Figures B-4, B-5, B-6, and B-7. Of these six inclinometers, two were locked and one was damaged at the hinge, preventing the lock from operating as designed. A fourth inclinometer was visible only as a PVC casing, sheared off at ground level (Photos 85). The remaining two inclinometers could not be located. An open gray PVC casing was also noted (Figure B-4, Photo 79). The USACE stated that this gray PVC casing is also an inclinometer. The Contractor recommends that the owner/operator of these inclinometers rehabilitate the damaged or unlocked

inclinometers to locking condition or properly plug and abandon the inclinometers (and gray PVC inclinometer) in accordance with the Louisiana Department of Transportation and Development Water Well regulations.

A targeted 10-year interval Polk City Directory review identified the following Sites of Interest within the 1,000 foot-footprint:

- Clifford Green Sheet Metal Works (518 Live Oak – 1975, 1969), Figure B-31;
- Li'l General Food Store (1001 Live Oak), Figure B-30;
- Two Lakeway Center (3850 N. Causeway), Lakeview Cleaners, Abbot Laboratories, Voelker Williams Printing Company, Figure B-26;
- One Lakeway Center (3900 N. Causeway), Enterprise Car Rental, Figure B-26;
- Lee King Auto Repairs (3733 N. Causeway);
- Unclaimed Vehicle Distribution (2005) and Broadmoor General Contractors (1985, 3101 7th Street), Figure B-26; and
- Lakeside Toyota Collision (1996), Olsen and Kennedy Oil and Lubricants (1985), and CONOCO (1975, 1965) (3100 7th Street).

Table B-3 provides the 10-year interval Polk City Directory Summary and provides a selected list of Sites of Interest outside of the 1,000-foot footprint and generally within EDR's search radius.

Multiple boat launches, marine service and repair facilities, harbors, and marinas exist along various sections of the entire Jefferson Lakefront Levee, with concentrations in the following areas:

- Williams Boulevard Boat Launch
- Bonnabel Boat Launch
- New Orleans Municipal Marina
- Southshore Harbor

It should be noted that, given the number and concentration of such facilities within the Study Area and operations generally conducted in those types of facilities, the potential for those facilities to have historically impacted the sediments along the shore should be evaluated prior to initiating construction activities that would disturb these sediments.

## **1.7 Other Environmental Records**

In light of the objective of the environmental records review (to obtain and review reasonably ascertainable records that would help identify RECs in connection with Jefferson Lakefront Levee), in the professional opinion of the Contractor, no review of additional reasonably ascertainable environmental record sources is required.

However, it is recommended that the USACE attempt to locate and review current and historical facility plans showing the footprints of the former pumping stations and ancillary equipment in relation to proposed projects, prior to invasive groundbreaking activities. Given enough research time, the Louisiana State Fire Marshall's office, the Kenner Building Department and the Jefferson Parish Drainage Department may be able to locate additional historical records relating to the storage of petroleum and chemicals at the old pumping stations, assuming the records were not destroyed during Hurricane Katrina. The USACE may also consider searching their archives for these types of facility plans.

Additionally, the Contractor did a general comparison of the EDR oil and gas well locations against oil and gas well locations presented on the Louisiana Department of Natural Resource Office of Conservation's SONRIS oil & gas well online GIS maps and noted differences in the plotted locations of the wells. The Contractor recommends that additional Louisiana Department of Natural Resource research be conducted to ascertain the legal surveyed location of each oil and gas well, drilling pad and production facility, and the type and operating status (active or plugged and abandoned) of each oil and gas well located on or adjacent to the levee and near the northern and southern perimeter of the 1,000-foot footprint, prior to conducting invasive construction activities in or near those areas.

## **1.8 Conclusions**

Based upon all of the information obtained, the environmental professionals who conducted this Phase I HTRW ESA believe that the known or suspected RECs identified in Section 8.0 have not resulted in an impact to the soil or groundwater quality within the existing footprint of the Jefferson Lakefront Levee. Therefore, the Contractor sees no need to collect soil or groundwater quality samples with regard to the levee construction efforts within the current levee footprint. The Contractor would suggest, however, vigilance during any invasive or ground breaking activities for physical signs of soil or groundwater contamination. Additionally, should any of the soil be transported off site, the USACE is encouraged to follow appropriate soil characterization protocols.

Should the USACE extend the footprint of the levee onto the location of a known REC, suspected REC, historical known REC, or historical suspected REC that is located adjacent to and within the 1,000-foot footprint area, the Contractor recommends that the USACE consider collecting soil and/or groundwater quality samples at those locations (i.e., the Old Duncan Pumping Station No. 4: structure and AST/UST area within the retaining brick walled area and within current and former footprints of the other three former pumping stations' ASTs, USTs, fuel distribution lines, drum storage areas and canal sediments). Sampling locations could be identified upon receipt and review of available facility plans.

Additionally, the Contractor did a general comparison of the EDR oil and gas well locations against well locations presented on the Louisiana Department of Natural Resource Office of Conservation's SONRIS oil and gas well online GIS maps, and noted differences in the plotted locations of these wells. The Contractor recommends that additional Louisiana Department of Natural Resource research be conducted to ascertain the legal surveyed location of each oil and gas well, drilling pad and production facility, and the type and operating status (active or plugged and abandoned) of each oil and gas well located on or adjacent to the levee and near the northern and southern perimeter of the 1,000-foot footprint, prior to conducting invasive construction activities in or near those areas.

At the request of USACE-HPO, the Contractor has performed a Phase I HTRW ESA in accordance with the Scope of Work presented in Appendix A and in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 of the Jefferson Lakefront Levee. Any exceptions to, or deletions from, the ASTM Standard Practice are described in Sections 2.0 and 11.0 of this report. This assessment has revealed no evidence of "recognized environmental conditions" (as that term is defined in ASTM Standard Practice E1527-05) in connection with the levee itself, although RECs and suspected RECs (both current and historical) have been identified adjacent to and within the 1,000-foot footprint.

## 2.0 INTRODUCTION

The USACE is investigating a 9.5-mile-section of levee on the East Bank of Jefferson Parish, Louisiana, located along the southern shore of Lake Pontchartrain, for storm protection. This section of levee is referred to as IER 03: LPV, Jefferson Lakefront Levee, and is located in Kenner and Metairie, Louisiana, west of New Orleans. The Phase I HTRW ESA includes the entire 9.5 mile stretch of the Jefferson Lakefront Levee, as well as a 1,000-foot footprint to each side of the levee center line. The locations of the Jefferson Lakefront Levee and the 1,000-foot footprint are shown in Figures B-2 and B-3. (All figures referenced in this report are located in Appendix B.)

This Phase I HTRW ESA for the Jefferson Lakefront Levee in Jefferson Parish, Louisiana (the “Property”) was prepared by the Contractor for USACE-New Orleans District, who is the “User” of this report, as that term is defined in ASTM Standard Practice E1527-05. In this report, the term User includes any legal counsel or other representative of the User.

As noted above, the Jefferson Lakefront Levee represents the formal Property, as defined in ASTM E1527-05 (Photographs 1 through 104 in Appendix C). However, the USACE requested that the PHASE I HTRW ESA include the entire area that falls within a 1,000-foot footprint extending from either side of the centerline of the levee. The extent of this 1,000-foot footprint is shown on Figures B-2 and B-3. Therefore, the Contractor evaluated the publicly accessible areas within this footprint extending from the levee crown. Right-of-entry to private properties (commercial and residential) was not provided by the USACE and is included as a data gap in this report.

The parcels located contiguous to the 1,000-foot footprint are considered adjoining parcels. The various environmental database minimum search distances, as required in ASTM Standard Practice E1527-05, extended from the edge of the 1,000-foot footprint. The search distances are discussed further in Section 5.1.

The format of this report generally follows the recommendations in ASTM Standard Practice E1527-05. Appendices A through G include supporting information and documentation for this report. The following definitions from that Standard are important in understanding this report. Terms in italics are defined in that Standard Practice.

- 1.1 *de minimis conditions* – conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.
- 3.2.39 *historical recognized environmental condition* – environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently.
- 3.2.52 *material threat* – a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional*, is threatening and might result in impact to public health or the environment. An example might include an above ground storage tank system that contains a *hazardous substance* and which shows evidence of damage. The damage would represent a *material threat* if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

3.2.74 *recognized environmental conditions* – the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not represent a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not *recognized environmental conditions*.

The term “recognized environmental condition” is not used in this Phase I HTRW ESA report in complete accordance with the ASTM standard, which notes that a recognized environmental condition is associated directly with the Property itself. The Property in this case is the Jefferson Lakefront Levee and does not include the entire area encompassed by the 1,000-foot footprint. The term “recognized environmental condition” is applied, where warranted, to all sites within the 1,000-foot footprint even though they may not affect the Jefferson Lakefront Levee itself.

The category “suspected recognized environmental condition” is also used in this report. Suspected recognized environmental conditions are those sites or parcels where there is a realistic (but not *likely*) potential that the site has been (or will be) impacted. Suspected RECs show no definitive evidence (visual, documentation) that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures, the ground, groundwater, or surface water. Rather, more information (for example sampling and analytical data) is commonly needed to determine whether the potential condition is a REC. In this report suspected RECs are those that manage a high volume of petroleum products or hazardous substances (for example, registered USTs), have a history of regulatory violations, or that currently or historically house businesses that are commonly associated with environmental contamination (for example, dry cleaning facilities).

This report is intended for use only as a complete document. It is based upon the Scope of Work (Appendix A) and is subject to the Limitations and Exceptions and other restrictions, defined herein. It has been prepared for the exclusive use of the USACE. No other person or organization is entitled to rely upon any part of it without the prior written consent of the Contractor. The USACE may release or authorize the release of all or part(s) of this report to third parties. However, if any third party uses or relies on this report without the express written permission of the Contractor, such third party agrees that it shall have no legal recourse against the Contractor or its parent or subsidiaries, and shall indemnify and defend them from and against all claims arising out of or in conjunction with such use or reliance.

## **2.1 Purpose**

The Phase I HTRW ESA was performed to investigate the potential presence of HTRW in the vicinity of Jefferson Lakefront Levee. This Phase I HTRW ESA was conducted in general compliance with the following documents to the extent feasible given the nature of the project:

- ASTM Standard E1527-05, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” (ASTM, 2005); and
- USACE Engineering Report ER 1165-2-132, “Hazardous, Toxic and Radioactive Waste Guidance for Civil Works Projects” (USACE, 1992).

This report addresses petroleum products, although specifically excluded in paragraph 4.a(1) of 1165-2-132 of USACE's ER 1165-2-132. Additionally, this report suggests general future investigative activities, but does not include costs and scopes of work for the investigative work, as noted in the USACE ER 1165-2-132 (USACE, 1992).

The focus of the PHASE I HTRW ESA was to review existing and past historical information regarding the Jefferson Lakefront Levee, the 1,000-foot footprint, and the adjoining parcels. The PHASE I HTRW ESA documents the current and historical uses of the assessment areas to determine the potential presence of any HTRW.

## **2.2 Detailed Scope of Work**

The detailed Scope of Work provided by the USACE for this PHASE I HTRW ESA, as well as the Contractor's proposal, are located in Appendix A. The standard professional practices that the Contractor conducted to assess if RECs exist in connection with the Jefferson Lakefront Levee included the following activities:

- Review of US Army Corps of Engineers information relating to the inclinometers along Jefferson Lakefront Levee. Per the USACE HTRW Coordinator, no prior Phase I HTRW ESAs exist for the 9.5 miles of Jefferson Lakefront Levee Study Area.
- Limited personal and/or telephone interviews with and where available, review of records provided by personnel of the following local and state agencies: Louisiana State East Jefferson Levee District Maintenance Department and Levee Police (Jefferson Lakefront Levee and Spill Incidents), Jefferson Parish Drainage Department (Pumping Stations), Jefferson Parish Environmental Department (Environmental Records, SPCC and SWPP Plans), Louisiana Department of Environmental Quality, Southeast Region, Underground Storage Tank Division (LDEQ UST Records for Pumping Stations along Jefferson Lakefront Levee), LDEQ Public Records Technicians, Louisiana State Fire Marshall's Office (Historical Aboveground Storage Tank Records).
- Visual inspection of the publicly accessible areas of the levee 1,000-foot footprint (not requiring right-of-entry agreements),
- Review of readily available historical information, such as aerial photographs and selected Polk City Directories that depict it (Sanborn Fire Insurance Maps were not available for the Study Area, per Environmental Data Resources).
- Drive-by and/or "public sidewalk" inspection of adjacent parcels,
- Review of selected environmental records that were made available to the Contractor, and
- Review of a subcontracted (Environmental Data Resources) computer search of selected federal and state environmental databases for indications of the presence of hazardous substances or petroleum products on the Jefferson Lakefront Levee or on nearby parcels from which those substances might migrate to the levee in other than vapor form.

In general, the Scope of Work has been completed in accordance with the scope and limitations of ASTM Standard Practice E1527-05, with the provision that any deviations from the ASTM Standard are further discussed in Section 11.0 and are cited as USACE acceptable data gaps.

## **2.3 Significant Assumptions**

In preparing this report, the Contractor has relied upon certain verbal information and representations provided by government employees and others and a computer search of environmental government databases by a firm whose business is to provide that service. Except where discussed, the Contractor

relied upon that information and has not attempted to independently verify its accuracy or completeness. Inconsistencies that the Contractor recognized among the sources of information are noted in the text. To the extent that the conclusions in this report are based in whole or in part on such information, they are contingent on its validity. The Contractor assumes no responsibility for any consequence arising from any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to the Contractor.

#### **2.4 Limitation and Exceptions**

This report is limited to representations of identified RECs on Jefferson Lakefront Levee and the 1,000-foot footprint, conditions of concern on adjoining parcels as they existed at the time of this PHASE I HTRW ESA, and of the conclusions drawn based upon the information obtained and assumptions made during the assessment process. This PHASE I HTRW ESA was restricted to the Scope of Work as defined herein. No representations or warranties are made concerning the nature or quality of the air, soil, water, building materials, or any other substance on or adjacent to the Jefferson Lakefront Levee (including the potential for any substance to migrate into a structure), other than the visual observations and the representations by others as stated in this report. By definition, a Phase I HTRW ESA is not intended to be a definitive investigation of existing or potential adverse environmental impacts, and thus it is possible that such an impact exists on the Jefferson Lakefront Levee and the 1,000-foot footprint, but was not identified during the PHASE I HTRW ESA. Conclusions in this report represent professional judgments based upon the information evaluated during the course of the assessment, not scientific certainties.

Within the limitations of the agreed-upon Scope of Work, this Phase I HTRW ESA has been undertaken and performed in a professional manner, in accordance with generally accepted practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, express or implied, is made.

#### **2.5 Special Terms and Conditions**

There were no special terms and conditions between the User and the Contractor, except as specified in the Scope of Work.

#### **2.6 User Reliance**

This report is intended for use only as the complete document. It is based upon the Scope of Work, and is subject to the Limitations and Exceptions and other restrictions, defined herein. It has been prepared for the exclusive use of USACE. No other person or organization is entitled to rely upon any part of it without the prior written consent of the Contractor. The USACE may release or authorize the release of all or part(s) of this report to third parties. However, if any third party uses or relies on this report without the express written permission of the Contractor, such third party agrees that it shall have no legal recourse against the Contractor or its parent or subsidiaries, and shall indemnify and defend them from and against all claims arising out of or in conjunction with such use or reliance.

### **3.0 PROPERTY DESCRIPTION**

#### **3.1 Location and Legal Description**

The Property is the Jefferson Lakefront Levee located along the southern shoreline of Lake Pontchartrain on the East Bank of Jefferson Parish, Louisiana. Its western terminus is located at the Jefferson Parish and St. Charles Parish Line at latitude N 30.02082 degrees and longitude E -90.12193 degrees. The eastern terminus of the Jefferson Lakefront Levee is located at the 17th Street Canal, at latitude N 30.04911 and longitude E -90.27661. The Jefferson Lakefront Levee includes the following levee reaches:

- LPV 00 Reach 1 Jefferson Lakefront Levee,
- LPV 01 Reach 2 Jefferson Lakefront Levee,
- LPV 02 Reach 3 Jefferson Lakefront Levee,
- LPV 09 Pumping Station #1 (Bonnabel Canal),
- LPV 10 Pumping Station #2 (Suburban Canal),
- LPV 11 Pumping Station #3 (Elmwood Canal),
- LPV 12 Pumping Station #4 (Duncan Canal),
- LPV 16 Floodwall and Gate at Bonnabel Boat Launch,
- LPV 17 Bridge Abutment and Floodwall Tie-ins at Causeway Bridge,
- LPV 18 Floodwall and Gate at Williams Boulevard Boat Launch,
- LPV 19 Reach 4 Jefferson Lakefront Levee, and
- LPV 20 Reach 5 Jefferson Lakefront Levee.

The Jefferson Lakefront Levee can be accessed from Interstate 10 by taking Exit Number 223 and heading north on Williams Boulevard; Exit Number 226 and heading north on Clearview Parkway; or Exit Number 228 and heading north on Causeway Boulevard. The levee is accessible at public entry points associated with these roads, as well as several other smaller roads (for example, Transcontinental Drive). The Jefferson Lakefront Levee is commonly constructed as a linear earthen mound approximately 15 to 17 feet above the surface of Lake Pontchartrain. Along some sections, the levee mound is topped with cubed metal cages filled with sand and anchored in the levee. At the mouths of the four canals, flood walls extend from the levees and tie in the pumping stations. A re-curve floodwall parallels the St. Charles/Jefferson Parish line (north-south) and ties into the earthen levee along Kenner's south shore of Lake Pontchartrain. An additional description of the physical characteristics of Jefferson Lakefront Levee is presented in Section 3.4.

#### **3.2 Property and Vicinity General Characteristics**

The height of the existing levees along Jefferson Lakefront Levee is estimated to average about 15 to 17 feet above mean sea level (MSL). The terrain of the 1,000-foot footprint south of the levee is fairly constant, with a very gentle slope southward. The ground elevation of the 1,000-foot footprint decreases inland (southward) from 0 feet above MSL near the base of the levee to approximately 5 to 7 feet below MSL near Esplanade Boulevard (1998 topographic maps in Appendix D-4).

Jefferson Lakefront Levee extends approximately 9.5 miles in an East-West direction. The area encompassing the levee section and the 1,000-foot footprint is approximately 1,881 acres. The shoreline of Lake Pontchartrain bounds the north side of the Jefferson Lakefront Levee for its entire extent, with exception of the Williams Boulevard Boat Launch and New Bonnabel Place Boat Launch areas. A combination bicycle and pedestrian path (mostly paved) parallels the north side of the levee as well. The Jefferson Lakefront Levee is interrupted by the mouths of four canals (Duncan Canal,

Elmwood Canal, Suburban Canal, and Bonnabel Canal). The Duncan Canal (West) is at the western terminus of the Jefferson Lakefront Levee and the 17th Street Canal is located at the eastern terminus of the Jefferson Lakefront Levee. Pumping Station Numbers 4, 3, 2, and 1 are located at the mouths of the four canals, respectively. An interim pumping station is currently being constructed by the USACE at the mouth of the 17th Street Canal. West of Suburban Canal, the area within the 1,000-foot footprint south of the levee is virtually all residential (mainly single family). Some commercial properties (retail, professional) as well as the Pontchartrain Center are located along Williams Boulevard. The Treasure Chest Casino and the Williams Boulevard Boat Launch are located north of the levee and Williams Boulevard.

East of Suburban Canal within the 1,000-foot footprint south of the levee, single family residents decrease and multi-family apartment buildings and commercial activities become more prevalent. The area around the Causeway Boulevard is heavily commercial (Figure B-26). The Bonnabel Boat Launch is located north of the levee just east of Causeway Boulevard. The area near the eastern terminus of the Jefferson Lakefront Levee includes a moderate concentration of commercial entities (for example, restaurants, convenience stores, and office complexes). A U.S. Coast Guard Station lies on the north side of the levee, near its eastern terminus and the 17th Street Canal. An additional description of the physical characteristics of the Jefferson Lakefront Levee is presented in Section 3.4.

### **3.3 Current Use of the Property**

According to information obtained from the historical aerial photograph and topographic map review, portions of Jefferson Lakefront Levee were constructed during the middle 1900s. The floodwalls of Jefferson Lakefront Levee described in Section 3.4 were constructed around 1979. Since that time, the levee reach has been used for flood control to protect the neighborhoods and businesses from the waters of Lake Pontchartrain.

### **3.4 Detailed Property Description**

The western terminus of Jefferson Lakefront Levee is located by the mouth of the Duncan Canal (West). This canal is sometimes referred to as the West Return Canal or Parish Line Canal and should not be confused with the Duncan Canal at Pumping Station No. 4, which is east of the Parish Line Canal. This canal coincides with the boundary of Jefferson and St. Charles Parishes, as well as the western limits of the City of Kenner, Louisiana (Figures B-1, B-2, B-3, B-4, and B-34). This part of the levee consists of a linear earthen mound covered with mowed grass (Photographs 81 and 84 in Appendix C). Near the mouth of Duncan Canal at Pumping Station #4, the earthen levee ties in to a concrete floodwall. East of the canal, the levee transitions back to an linear earthen berm, but here it is capped with metal cube-shaped cages (approximately 4 feet × 4 feet × 4 feet) filled with sand and covered with heavy weather-proof cloth. These cages are anchored into the crown of the levee. Approximately 1,000 feet east of Williams Boulevard, the cages are absent and the levee is a linear earthen berm all the way to Causeway Boulevard, except for near the mouths of canals, where the levee ties in to floodwalls. East of Causeway Boulevard, the levee is again topped with the metal cages, which extend all the way to the 17th Street Canal (Photograph 53 in Appendix C).

No part of the Jefferson Lakefront Levee is fenced, but access is restricted to several public right-of-ways within the neighborhoods to the south and near the eastern terminus, where the USACE 17th Street Pumping Station Construction Site and U.S. Coast Guard Station are located.

### **3.5 Current Uses of Parcels Within and Adjoining the 1,000-Foot Footprint**

The existing Jefferson Lakefront Levee is bounded on the north Lake Pontchartrain, on the east and west by a continuation of the levee system, and on the south by residences (single and multiple family units) and commercial facilities (Figures B-2, B-3, and B-34). Two public boat access facilities are located north of the levee. The western one (Williams Boulevard Boat Launch) is adjacent to the Treasure Chest Casino. The eastern boat launch is called the Bonnabel Boat Launch and is located at New Bonnabel Place. The Lake Pontchartrain Causeway extends northward from the levee across Lake Pontchartrain to the Covington/Mandeville areas of the north shore of Lake Pontchartrain.

A U.S. Coast Guard Station is present north of the levee, very near the Jefferson Lakefront Levee's eastern terminus. The land area south of the Jefferson Lakefront Levee and west of Suburban Canal is primarily single family residences. These homes are mainly on approximately 0.3- to 0.5-acre lots, and apparent hurricane damage is minimal. The commercial (mainly retail operations) businesses in this area are mainly located along Williams Boulevard and West Esplanade Boulevard. Eastward from the Suburban Canal, single family residences remain prominent with some multi-family apartment buildings and commercial enterprises, particularly near West Esplanade Boulevard to the south.

Causeway Boulevard is heavily commercial on both sides, with a Marriott Hotel, car dealerships, gas stations, restaurants, condominiums, and office complexes on both sides of the boulevard from I-10 north to the South Shore Causeway Toll Plaza. East of Causeway Boulevard, the residences are smaller with an increase in the number of multi-family dwellings. Commercial operations are interspersed with the residences. Near the eastern terminus of the Jefferson Lakefront Levee, the area within the 1,000-foot right-of-way is composed primarily of commercial businesses.

Damage from Hurricane Katrina is more prevalent at the eastern terminus of the levee than to the west.

## **4.0 USER-PROVIDED INFORMATION**

### **4.1 Title Records**

In accordance with the SOW (Appendix A), a title record search was not included in this Phase I HTRW ESA and is cited as an acceptable data gap (USACE, Appendix A).

### **4.2 Environmental Liens or Activity Use Limitations**

In accordance with the USACE SOW (Appendix A), a complete environmental lien search was not included in this Phase I HTRW ESA and is also cited as an acceptable data gap. The EDR environmental database search did include a search for any environmental liens imposed by the Louisiana Department of Environmental Quality (LDEQ) (Appendix D-1).

### **4.3 Specialized Knowledge**

The User and Jefferson Parish Drainage and Environmental Departments provided the Contractor with no specialized knowledge, such as previous assessments, soil or groundwater quality evaluations, or other investigations pertaining to the environmental conditions of the Jefferson Lakefront Levee or the 1,000-foot footprint. The Contractor pursued this type of information through field visits, interviews, and evaluating other online databases (e.g., those provided by the LDEQ). The Jefferson Parish Drainage Department and Environmental Department provided the Contractor with copies of the Jefferson Lakefront Levee Pumping Station Numbers 1, 2, 3, and 4 Stormwater Pollution Prevention Plans (SWPPPs) and their Spill Prevention, Control and Countermeasures (SPCC) Plans. These plans were reviewed and used to categorize the four pumping stations as suspected RECs on the basis of the volume of petroleum products managed and stored on a site adjacent to surface water bodies and above soils known to be located in areas with shallow groundwater.

### **4.4 Valuation Reduction for Environmental Issues**

The User provided the Contractor no information regarding a reduction in the value of the Jefferson Lakefront Levee due to environmental issues.

### **4.5 Owner, Property Manager, and Occupant Information**

According to the East Jefferson Levee District, the Jefferson Lakefront Levee was constructed by the USACE, and is currently maintained by the Louisiana State East Jefferson Levee District (Abadie, 2007).

### **4.6 Reason for Performing the Phase I HTRW ESA**

The Phase I HTRW ESA that resulted in this report was performed in contemplation of rehabilitating and improving the flood protection system of southeast Louisiana (Appendix A). The Jefferson Lakefront Levee would reportedly be enlarged with compacted fill and/or floodwalls constructed to the 100-year level of flood protection. The footprint of this enlarged levee would not exceed the limits of the existing right-of-way at this time; however, if this levee's elevation is eventually brought to the 100-year level of flood protection, the footprint would likely increase outside of the existing right-of-way by not more than 1,000 feet on either side of the levee crown, according to the USACE.

#### **4.7 Other User Information**

The User provided no other information material to this Phase I HTRW ESA, with the exception of plans showing the location of the inclinometers.

## **5.0 RECORDS REVIEW**

### **5.1 Standard Environmental Record Sources**

Government databases that identify sites of environmental concern were reviewed via a computerized search conducted by Environmental Data Resources, Inc. (EDR), a commercial database service, to determine if the Jefferson Lakefront Levee was listed or if any listed sites were nearby. EDR provides a valuable service for firms conducting Phase I HTRW ESAs, because they are specialized in the environmental database search process. They provide a comprehensive search of numerous databases and a useable report in an efficient manner. EDR has represented that its procedures conform to, or exceed, the requirements of ASTM Standard Practice E1527-05. A list of all of the government records searched and the dates of the data obtained are shown in Section 5 (last section) of the EDR Report (Appendix D-1).

The report includes information about sites within 1 mile of the 1,000-foot footprint. Some sites in the databases do not have complete address information. In other cases, the algorithms used by the government to map the addresses do not recognize certain street addresses. Both of these types of sites are referred to as Orphan sites. They are in the vicinity of the Jefferson Lakefront Levee, but not precisely locatable from the address information in the databases. The Contractor evaluated the information available for each Orphan site, and identified no sites that are or have the possibility of being within the applicable minimum search distances.

The Contractor has evaluated the information in the EDR report in conjunction with the results of the Jefferson Lakefront Levee inspection and the evaluation of its setting.

The latitude and longitude coordinates for all sites discussed in this report as RECs are presented in Table B-2.

Federal databases searched included, but were not limited to:

- NPL (National Priority List),
- Proposed NPL,
- Delisted NPL,
- NPL Recovery (Federal Superfund Liens),
- CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System),
- CERC-NFRAP (CERCLIS No Further Remedial Action Planned),
- CORRACTS (Corrective Action Reports under RCRA),
- RCRA (Resource Conservation and Recovery Act Information),
- ERNS (Emergency Response Notification System),
- HMIRS (Hazardous Materials Information Reporting System),
- U.S. Brownfields,
- CONSENT (Superfund/CERCLA Consent Decrees),
- ROD (Records of Decision for NPL sites),
- FINDS (Facility Index System),
- PADS (PCB Activity Database System),
- RAATS (RCRA Administrative Tracking System),
- TRIS (Toxic Chemical Release Inventory System), and
- TSCA (Toxic Substances Control Act).

State databases searched included, but were not limited to:

- LUST (Leaking Underground Storage Tanks),
- UST (Registered Underground Storage Tanks),
- SHWS (State Hazardous Waste Sites),
- SWF/LF (Solid Waste Disposal Facilities),
- SPILLS (Spills List),
- AST (Registered Aboveground Storage Tanks),
- Drycleaners,
- AULs (Activity and Use Limitations), and
- VCPs (Voluntary Remediation Program Sites).

Additional databases searched included Tribal Records for Indian Reservations, Indian USTs, and Indian LUSTs, as well as Manufactured Gas Plants.

As described above, the EDR Report presents all of the identified sites that fall within a 1-mile radius of the 1,000-foot footprint (Appendix D-1). The Contractor evaluated this information using the approximate minimum search distances for the researched databases in accordance with ASTM Standard Practice E1527-05 and USACE's Scope of Work (Appendix A). The databases searched and associated search distances included the following (all noted minimum search distances are based on the edge of the 1,000-foot footprint):

- The National Priorities List (NPL; 1-mile minimum search distance);
- Delisted NPL (0.5-mile minimum search distance);
- The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS; 0.5-mile minimum search distance);
- The Comprehensive Environmental Response, Compensation, and Liability Information System No Further Remedial Action Planned Database (CERCLIS NFRAP; 0.5-mile minimum search distance);
- The Solid Waste Landfills/Facilities Database (0.5-mile minimum search distance);
- The Emergency Response Notification System (ERNS) and Hazardous Materials Incident Reporting System (0.25-mile minimum search distance);
- The Resource Conservation and Recovery Information System (RCRAInfo; 1-mile minimum search distance for treatment, storage or disposal (TSD) facilities and 0.25-mile minimum search distance for generators);
- Any state listing of registered and leaking underground storage tanks (0.25- and 0.5-mile minimum search distance, respectively);
- The Louisiana Inactive and Abandoned Sites List (1-mile minimum search distance); and
- Louisiana Department of Natural Resources Oil and Gas Wells Database (1-mile minimum search distance).

No sites on the Jefferson Lakefront Levee itself, within the 1,000-foot footprint, or within the applicable minimum search distances were identified for the following databases:

*Federal Records*

- National Priority List (NPL);
- Proposed NPL;
- Delisted NPL;
- Federal Superfund Liens (NPL Recovery);

- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS);
- RCRA Corrective Action (CORRACTS);
- RCRIS Hazardous Waste TSD Facility;
- Engineering Controls Sites List (U.S. Engineering Controls);
- Sites with Institutional Controls (U.S. Inst. Control);
- Department of Defense Sites (DOD);
- Formerly Used Defense Sites (FUDS);
- U.S. Brownfields;
- CERCLA Consent Decrees (Consent);
- Records of Decision (ROD);
- Uranium Mill Tailings Sites (UMTRA);
- Open Dump Inventory (ODI);
- Toxic Chemical Release Inventory System (TRIS);
- Toxic Substances Control Act (TSCA);
- FIFRA/TSCA Tracking System (FTTS);
- Section 7 Tracking Systems (SSTS);
- Land Use Control Information System (LUCIS);
- Incident and Accident Data (DOT OPS);
- FIFRA/TSCA Tracking System Administrative Case Listing (HIST FTTS);
- Clandestine Drug Labs (U.S. CDL);
- Radiation Information Database (RADINFO);
- CERCLA Lin Information (LIENS 2);
- PCB Activity Database System (PADS);
- Material Licensing Tracking System (MLTS);
- Mines Master Index File (MINES); and
- RCRA Administrative Action Tracking System (RAATS).

*State and Local Records*

- Landfill List (SWF/LF);
- Environmental Liens (LIENS);
- Conveyance Notice Listing (AUL);
- Voluntary Remediation Program Sites (VCP); and
- Brownfields Inventory.

*Tribal Records*

- Indian Reservations (Indian Reserv.);
- Leaking Underground Storage Tanks on Indian Land (Indian LUST);
- Underground Storage Tanks on Indian Land (Indian UST).

In addition, no former manufactured gas plants were identified within the search area.

The remainder of Section 5.1 describes the sites identified within the associated databases.

### **5.1.1 CERCLIS NFRAP Sites**

Neither the Jefferson Lakefront Levee itself nor any sites within the 1,000-foot footprint have been identified as a CERCLIS NFRAP site. One CERCLIS NFRAP site, Lee Sanitation Services (3229 Ridgelake Drive), was identified approximately 0.5 miles outside of the 1,000-foot footprint. Tonti Properties (an apartment complex building) is currently situated at this address (Figure B-28).

Two Orphan sites, Supreme Sugar (whose address is described as being 7 miles west of Highway 1 on Highway 1011), and Pelican State Landfill (Highway 61 [Airline] 9 miles north of Highway 50 in St. Rose) is listed as a CERCLIS NFRAP site (Appendix D-1). However, based on available information, these sites are located outside of the minimum search distance.

The potential impact of the identified CERCLIS NFRAP sites on the Jefferson Lakefront Levee is low because of the distance from the sites to the levee.

### **5.1.2 RCRA Hazardous Waste Generator Sites**

Neither the Jefferson Lakefront Levee itself nor any sites within the 1,000-foot footprint were identified in the EDR database search as having filed a RCRA notification as a large quantity hazardous waste generator (LQG). However, one facility within the minimum search distance from the 1,000-foot footprint was identified as an LQG, East Jefferson Medical and Surgical at 4500 Clearview Parkway. This facility has had no violations (Appendix D-1).

One Orphan Site was identified as a LQG by EDR; the US Coast Guard New Canal Station at 8001 Lakeshore Drive near West End Boulevard, New Orleans, La 70124 located outside of the 1000-foot footprint, but within the EDR minimum search area (Figure B-33). According to Mr. Wayne Desselle, LDEQ SE Region Surveillance Division Environmental Scientist Staff, this facility was the former location of the lakefront's USCG station. The facility's LDEQ EDMS records showed that the facility had erroneously been classified as a LQG on 15 April 1986 and that the USCG had petitioned the LDEQ for de-listed LQG status on 11 April 1991.

The Jefferson Lakefront Levee itself contains no sites identified as small quantity generators (SQGs) of hazardous waste. Ten sites located within or adjoining the 1,000-foot footprint of the Jefferson Lakefront Levee filed RCRA notifications as SQGs of hazardous waste. These sites are:

- Gas Technology Consultants;
- Jefferson Downs Finish Line;
- Lakeside Toyota;
- TLC Printing and Copying;
- Franklin Southland Print Co;
- Impact Mail, LLC;
- Jet Set Body Shop;
- DS Glass City;
- Marine Power; and
- Harry H. Philibert, MD.

The locations of these SQGs are topographically downgradient from the levee and are shown as yellow triangles throughout Figures B-4 through B-33 and in the EDR Report figure, Appendix D-1.

Twenty additional SQG sites were identified within 0.25 miles of the 1,000-foot footprint:

- Berman Chiropractic;
- Sintes Boat Works, Inc;
- MG Mayer Yacht Services;
- Municipal Yacht Harbor;
- Board of Commissioners Orleans;
- Schubert's Marine;
- Exxon Mobil 51450;
- New Concept Cleaners;
- Rapid Oil Change;
- Dry Clean Super Center;
- Tailor's Cleaners;
- Four Winds Specialty Printing;
- Kwik Kopy Printing 153;
- Royal Cleaners;
- Crescent City Infinity;
- Jiffy Lube Store #505;
- Clearview and West Esplanade Shell Station;
- Sport Screen Inc.;
- United Chiropractic Clinic;
- Chet Press;
- SK Gilotra; and
- Mai's Cleaners.

The location of the Pat Farrell Bicycles #3 has not been definitively identified, but is inferred to be outside of the 1,000-foot footprint and east of the 17th Street Canal.

No Orphan sites were identified as SQGs located within the minimum search distance (0.25 miles) from the 1,000-foot footprint.

The potential impact of the identified nearby hazardous waste generators upon Jefferson Lakefront Levee is considered low because no visual evidence of potential contamination was observed during site reconnaissance and none of the above listed sites are listed by EDR as having violations (Appendix D-1).

### **5.1.3 Leaking UST Sites**

No leaking UST (LUST) sites were identified by EDR on either the Jefferson Lakefront Levee itself or within the 1,000-foot footprint. One facility within the minimum search distance (0.5 miles) was identified, Ritz 24 #2 at 3605 Causeway Boulevard. This facility is located approximately 0.15 miles south of the 1,000-foot footprint. Based on information contained in groundwater quality investigation reports, the groundwater in the uppermost aquifer has a primarily eastward component (Hydrodyne Environmental, Inc., June 2007). Therefore, any contamination associated with the site is unlikely to have caused an environmental impact to the levee or the 1,000-foot footprint.

No Orphan sites were identified as LUSTs located within the minimum search distance (0.5 miles) from the 1,000-foot footprint.

### **5.1.4 Historical Leaking UST/AST Sites**

No historical leaking UST (LUST) sites were identified on the Jefferson Lakefront Levee itself.

Two historical LUST sites, the Jefferson Parish Suburban Pumping Station No. 2, 4201 Avron Boulevard (Figure B-21) and the former E-Z Serve #2093, currently Live Oak Discount Zone; 200 Live Oak Street, (Figure B-30) were identified by EDR as being located within the 1,000-foot footprint of the Jefferson Lakefront Levee (Figure B-34). Additional information on these facilities is provided in Section 6.3.

A third site, known as the Old Duncan Pumping Station No. 4, located west of Duncan Canal adjacent to the Jefferson Lakefront Levee, was not listed on EDR reports. However, interviews with Jefferson Parish Drainage District Superintendent indicated that USTs were excavated from the retaining walled-in area adjacent to and south of the existing levee floodwalls (west of the Old Duncan Pumping Station No. 4 Building) during the mid-1980s. Records of these UST removals were requested from the Jefferson Parish Environmental Department, but were not available for those mid-1980 UST removals.

Ms. Bridget Lions, LDEQ Southeast Region UST Environmental Scientist, stated that she recalled being present during the excavation of petroleum contaminated soils from the area within the retaining walls adjacent to the Old Duncan Pumping Station #4. Ms. Lions reviewed the available scanned records for the Old Duncan Pumping Station in an effort to ascertain whether the soil removal was the result of a UST leak or an AST leak; however, the records did not specify the origins of the leak. Ms. Lions' recollections of the event and site suggest the former presence of ASTs within the retaining walls. Available records were unable to confirm whether USTs, ASTs, or both existed at the Old Duncan Pumping Station #4.

Seven historical LUST sites were identified by EDR outside of the 1,000-foot footprint, but within the 0.5-mile minimum search distance (Appendix D-1). These sites are:

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
Coleman's West End Gulf Ltd	7402 Lakeshore Drive	Figure B-33
Orleans Marina	7590 Lakeshore Drive	Figure B-33
West Esplanade Shell Service Station	3534 Edenborn Avenue	Figure B-25
Texaco Station	3512 West Esplanade Boulevard	Not located.
E-Z Serve #2055	3652 West Esplanade Boulevard	Figure B-25
Danny and Clyde's #16	4320 Clearview Parkway)	Figure B-20
Chevron Facility #109010	4545 West Esplanade Boulevard	Figure B-20

The potential for these historical LUST sites to have adversely impacted soil or groundwater on the Jefferson Lakefront Levee and the 1,000-foot footprint is considered to be low because of their distance from the levee, their location on the east side of 17th Street Canal, and/or their topographically downgradient position from the levee.

No Orphan historical LUST sites were identified on the Jefferson Lakefront Levee itself or within the 1,000-foot footprint. One Orphan historical LUST was identified within the minimum search distance (0.5 miles), E-Z Serve #7149 (3630 West Esplanade/Causeway Boulevard), Figure B-27. This site is

located approximately 0.16 miles south of the 1,000-foot footprint and hence is not considered an environmental threat to the Jefferson Lakefront Levee or the 1,000-foot footprint.

**5.1.5 Registered UST Sites**

No LDEQ registered USTs were identified by EDR as being located on the Jefferson Lakefront Levee. Six sites have registered USTs and were identified as being within the 1,000-foot footprint. All of these sites are positioned topographically downgradient from the Jefferson Lakefront Levee. These sites are:

<u>Site Name</u>	<u>Reference</u>
Jefferson Parish “Suburban” Pumping Station #2	Figure B-21
U-Haul	Figure B-26
Pelican Pool and Patio (former location)	Figure B-26
South Shore Toll Plaza	Figure B-26
Bernard’s Car Care	Figure B-30
Live Oak Discount Zone LLC (formerly EZ-Serve #2093 and Time Saver #93)	Figure B-31

In the event of a release, the potential for these sites with registered USTs to have a significant adverse impact on soil or groundwater on the Jefferson Lakefront Levee is considered to be low to moderate based on the relative distances to the levee.

Thirteen UST sites have been identified by EDR as being located outside of the 1,000-foot footprint and within the minimum search distance (0.25 miles). These are:

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
Schubert’s Marine	126 Roadway	Figure B-33
Orleans Marina	7590 Lakeshore Drive	Figure B-32
Exxon Retail Store #51450	3530 North Causeway Boulevard	Figure B-27
America’s Largest Shell #13746	3534 Edenborn Avenue	Figure B-25
Ritz 24 #2	3605 Causeway Boulevard	Figure B-27
Texaco	3512 West Esplanade Boulevard	Not located.
E-Z Serve #2055	3652 West Esplanade Boulevard	Figure B-25
Shell #101229	3450 West Esplanade Boulevard	—
Olsen and Kennedy, Inc.	3100 7th Street	Figure B-26
Beacon Enterprises, Inc.	3228 7th Street	Figure B-26
Danny and Clyde’s #16	4320 Clearview Parkway)	Figure B-20
Walgreen’s #2468	4545 West Esplanade Avenue	Figure B-20
Jim’s Clearview Shell #137464	4400 Clearview Parkway	Figure B-20
Circle K #8271	4524 Clearview Parkway	Figure B-20

All of these sites are either located topographically downgradient from the Jefferson Lakefront Levee or are greater than 0.15 miles from the 1,000-foot footprint. Therefore, the likelihood of

contamination associated with these sites to impact the Jefferson Lakefront Levee or the 1,000-foot footprint is considered low.

No Orphan USTs were identified by EDR as being located on the Jefferson Lakefront Levee itself or within the 1,000-foot footprint. One Orphan UST site was identified within the minimum search distance (0.5 miles), E-Z Serve #7149 (3630 West Esplanade/Causeway Boulevard). Additionally, Mr. Wayne Desselle, LDEQ SE Region Surveillance Division Environmental Scientist Staff, stated that the LDEQ records showed a UST removal from the former USCG Station at 8001 Lakeshore Drive on 15 April 1986; however, there were no additional records relating to the leaking or non-leaking status of this former UST in the LDEQ EDMS files (Figure B-33). Both of these sites are located greater than 0.15 miles of the 1,000-foot footprint and hence are not considered an environmental threat to the Jefferson Lakefront Levee or the 1,000-foot footprint.

#### **5.1.6 Spill Sites (ERNS and LDEQ EDMS)**

The LDEQ EDMS online records reviewed indicated that the following spill occurred adjacent to the eastern terminus of the Jefferson Lakefront Levee:

- Release of 250 gallons of hydraulic oil into the 17th Street Canal on 22 October 2006 when a USACE contractor pump failed during testing. Booms and absorbent pads were deployed by Mobility Water Industries to aid in the recovery of approximately 250 gallons of hydraulic oil from the water. The spill report stated that “No further action will be conducted concerning this release.”

Although Jefferson Lakefront Levee is not on the ERNS list, the Treasure Chest Casino (5050 Williams Boulevard) is listed on the ERNS database twice and is located within the 1,000-foot footprint.

- Release of one (1) gallon of old engine oil from the grid catwalk on the connecting Treasure Chest Casino barge to Lake Pontchartrain on 20 September 2003. Per the ERNS report, the spill was allowed to dissipate naturally.
- Release of two (2) quarts of hydraulic oil into Lake Pontchartrain on 25 September 2000 when the “Z” drive was removed from the boat during repairs. Per the ERNS report, absorbents were applied and the material spilled contained.

Based on a review of the online LDEQ EDMS and EDR ERNS information, the three spills are not considered a threat to the Jefferson Lakefront Levee. Two additional release events on or near the Jefferson Lakefront Levee were identified by local agencies and are discussed in Section 7.2.

#### **5.1.7 Dry Cleaners**

One facility, Camellia Cleaners, was identified by EDR as an LDEQ dry cleaning site located within the 1,000-foot footprint (Figure B-26). Lakeview Cleaners is listed in the Polk City Directory within the 1,000-foot footprint at Two Lakeway Center, 3850 N. Causeway, and is not listed in the EDR report.

Four other sites located outside of the 1,000-foot footprint were identified on the Drycleaner Facility listings, Mai’s Cleaners (3544 West Esplanade Avenue); Tailors Cleaner (3648 West Esplanade Avenue); Mr. G’s Drycleaner and Laundry (3216 West Esplanade Avenue); and Royal Cleaner and Laundry, Inc. (3600 Severn Avenue). All four of these sites are located either topographically

downgradient of the Jefferson Lakefront Levee or greater than 0.15 miles from the 1,000-foot footprint. The Royal Cleaners site is currently a vacant lot without a building (Photo 57).

Additional dry cleaning sites are discussed in Section 5.4.4 “Historical City Directories”.

### **5.1.8 Water Wells and Oil and Gas Wells**

The EDR Report lists 24 water wells within the 1,000-foot footprint (Appendix D-1). The total depths of these wells range from 220 to 760 feet below land surface. EDR also lists one recovery well, located just west of the Causeway Bridge along the shoreline of Lake Pontchartrain. This well is listed to be only 15 feet below land surface. It was not observed during the site reconnaissance. A potable water well is located at each of the four Jefferson Parish Pumping Stations.

EDR also lists 20 oil and gas wells. One of these wells is located near the levee within the 1,000 foot-footprint in the eastern portion of the Study Area near the intersection of Sigur Street and the Jefferson Lakefront Levee (Appendix D-1, EDR Oil & Gas Well Location Map). One of the twenty wells is located in Kenner, south of Rue Place Pontchartrain and Teton approximately 1,000 feet south of the southern limits of the 1,000-foot footprint. Two additional wells are shown in St. Charles Parish outside of the 1,000 foot-footprint. Four additional wells are located along and outside of the northern perimeter of the 1,000 foot-footprint in Lake Pontchartrain. The remaining wells are located outside of the 1,000-foot footprint and within EDR’s search radius.

The Contractor did a general comparison of the EDR oil and gas well locations against oil and gas well locations presented on the Louisiana Department of Natural Resource Office of Conservation’s SONRIS oil & gas well online GIS maps and noted differences in the plotted locations of the wells. The Contractor recommends that additional Louisiana Department of Natural Resource research be conducted to ascertain the legal surveyed location of each oil and gas well, drilling pad and production facility, and the type and operating status (active or plugged and abandoned) of each oil and gas well located on or adjacent to the levee and near the northern and southern perimeter of the 1,000-foot footprint, prior to conducting invasive construction activities in or near those areas.

### **5.1.9 Other EDR Listed Sites of Concern**

No additional concern was identified during the EDR database search report review. The Jefferson Lakefront Levee is not present on any of the other lists searched. No other located site is identified as being near the levee and in a location that is, or might be, topographically upgradient from it, and represent a realistic potential concern with respect to its environmental condition.

Also, no other Orphan site of concern was determined to actually be located within an applicable minimum search distance of the Jefferson Lakefront Levee and potentially upgradient of it. Although, the EDR Report lists many Orphan sites within the Focus Map pertaining to the Jefferson Lakefront Levee (Appendix D-1), the Contractor identified only one site that could possibly lie within the minimum search distances for the pertinent databases. This Orphan site is the EZ Serve #7149 discussed above.

## **5.2 Additional Environmental Record Sources**

Upon learning of the possibility of former USTs/ASTs at the Old Duncan Pumping Station #4, additional environmental record sources were requested from the Jefferson Parish Environmental

Department (UST and Spill Records) and the Jefferson Parish Drainage Department, but records were unavailable for Contractor Review.

The Louisiana DEQ UST Division and Records Department was also contacted to ascertain if additional records exist for the four (4) Jefferson Pumping Stations and the 17th Street Canal USACE Construction Site (beyond what was initially provided to the Contractor in response to request for files on EDR listed sites). The Contractor went to the local NOLA LDEQ offices and reviewed the additional online records for the Old Duncan Pumping Station #4 and the 17th Street Canal USACE Construction Site. Although the LDEQ printer malfunctioned and records could not be printed, the records review confirmed the information provided by the LDEQ (Section 5.1.4).

At the suggestion of the LDEQ, the Louisiana State Fire Marshall's Office was also contacted to evaluate whether historical AST records were readily available to the public. A representative of the Fire Marshall's Office stated that although this might be possible, the process would be very time-consuming and that he would have to research the Fire Marshall Office's historical record retention policy to provide that information to the Contractor.

In light of the objective and purpose of the records review (to obtain and review records that would help identify RECs in connection with the Jefferson Lakefront Levee), in the professional opinion of the Contractor, and except for LDEQ records previously described, no review of additional environmental record sources was conducted.

As presented in Section 5.1.8, additional Louisiana Department of Natural Resource Office of Conservation Oil & Gas Well research is recommended prior to conducting invasive activities at the Jefferson Lakefront Levee.

### **5.3 Physical Setting**

According to geologic literature, the area of the Phase I HTRW ESA is underlain by soils deposited during a Mississippi deltaic sequence (Saucier, 1994). This sequence includes an inter-layering of material of varying grain size (for example, clays to sands) and composition (for example, quartz, clay minerals, and organic matter) that affects the soils' hydraulic conductivity.

The uppermost aquifer underlying the study area is the Alluvial Aquifer. This aquifer ranges from 20 to 500 feet thick and exhibits hydraulic conductivities ranging from 10 to 530 feet per day. The groundwater in the aquifer is hard to very hard, and has chloride concentrations from 7 to 300 milligrams per liter (mg/L) and dissolved solids of 300 to 1,100 mg/L. The groundwater within this aquifer is unsuitable for potable uses (Boniol and others, 1989).

Depth to groundwater is anticipated to be less than 5 feet below land surface and is considered to be hydraulically connected to the surface waters of Lake Pontchartrain and the various canals in the area. Lake Pontchartrain is tidally influenced (Van Biersel, 2007). Site-specific groundwater investigation reports evaluated as part of this Phase I HTRW ESA show variable groundwater flow directions that generally have easterly and southerly components (Hydrodyne Environmental, Inc., 2007; Hydrodyne Environmental, Inc., 2001; and Lanier and Associates, 2001). The topography slopes very gently away from the Jefferson Lakefront Levee to the approximate edge of the 1,000-foot footprint (near Esplanade Boulevard and associated canal; 1999 topographic map in Appendix D-4). The variability in groundwater flow directions and the flat topography suggest that the hydraulic gradient is very low.

## **5.4 Historical Use Information**

### **5.4.1 Aerial Photographs**

Aerial photographs were reviewed for the years 1951, 1958, 1965, 1978, 1987, and 1998. These aerial photographs are in Appendix D-2. Recent aerial photographs from 2006 were also reviewed. The 2006 photographs represent the base maps for Figures B-2 through B-34. The composite historical timeline in Section 5.5 contains a summary of the observations made from those aerial photographs and other historical sources.

### **5.4.2 Historical Fire Insurance Maps**

After reviewing its files, EDR has certified that no historical Sanborn Fire Insurance Maps exist for the Jefferson Lakefront Levee and the 1,000-foot footprint.

### **5.4.3 Historical Topographic Maps**

Historical topographic maps were obtained for the Jefferson Lakefront Levee for 1891 (partial coverage), 1952, 1966/1967, 1972, 1979, and 1992/1999. These maps are shown in Appendix D-4. The composite historical timeline in Section 5.5 contains a summary of the observations made from those historical topographic maps and other historical sources.

### **5.4.4 Historical City Directories**

Polk City Directory coverage for Jefferson Parish suburbs began in 1954. The Contractor reviewed historical Polk City Directories at the Jefferson Parish Public Library for the portions of the Study Area in both Orleans and Jefferson Parishes. The years 1954-1955, 1965, 1975, 1985-86, 1985-86, 1996-1997, and 2005 of Polk City Directory were reviewed. Table B-3 summarizes the businesses identified in these directories that were located within the 1,000-foot footprint. A complete set of the copied material obtained from the library is on file at the Contractor's New Orleans, Louisiana office and is available upon request.

A 50-year review of Polk's City Directories (on 10-year intervals) for the study area indicated the presence of the following sites of interest on the basis of the type of operations generally conducted at these types of facilities; these sites were not listed in the EDR environmental database search and are located within the 1,000-foot footprint:

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
Clifford Green Sheet Metal Works 1975, 1969	518 Live Oak	Figure B-31
Li'l General Food Store	1001 Live Oak	Figure B-30
Two Lakeway Center: – Lakeview Cleaners – Abbot Laboratories – Voelker Williams Printing Co.	3850 N. Causeway	Figure B-26

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
One Lakeway Center – Enterprise Car Rental	3900 N. Causeway	Figure B-26
Lee King Auto Repairs	3733 N. Causeway	—
Unclaimed Vehicle Distribution (2005) Broadmoor General Contractors (1985)	3101 7th Street	Figure B-26
Lakeside Toyota Collision (1996) Olsen and Kennedy Oil and Lubricants (1985) CONOCO (1975, 1965)	3100 7th Street	Figures B-26 and B-27

The following facilities are located outside the 1,000-foot footprint, but generally within the EDR search radius. These facilities are not listed on EDR’s Environmental Database Search and are listed here because of the types of operations conducted. These facilities are located topographically downgradient from the Jefferson Lakefront Levee and are not likely to threaten the Jefferson Lakefront Levee project. Selected sites are shown on the figures within this report based on their proximity to the southern limits of the 1,000-foot footprint and/or the type of operations generally conducted at these types of facilities (Figure B-12).

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
Cleanerama Dry Cleaners (since 1955)	3050 17th Street	Figure B-28
Former TimeSaver #46	3052 17th Street	Figure B-28
Circle M – formerly Circle K – 2005, 1996 – Seven-Eleven – 1985	4340 Williams Blvd	—
4U Cleaners and Shop-N-Go – formerly Woodworks of Kenner and Alessi Cleaners	4345 Williams Boulevard	Figure B-12
Scotty’s Tire and Auto	4200 Williams Boulevard	—
Entergy Electrical Substation	SEC West Esplanade and Edenborn	Figure B-25
Speedee Oil Change and Tune Up	SEC West Esplanade S and Bonnabel	—
Toyota of Jefferson/Lakeside Toyota	3701 N Causeway	Figure B-27
Colonial Blue Line Prints	3601 N Causeway	—
J and F Auto Sales	3536 N Causeway	—
JP Fire Department Station 8	3430 N Causeway	—
Riviana Foods	3324 N Causeway	—
General Electric Service Center	3300 N Causeway	—
Beacon Enterprise	3228 N Causeway	—
Molenaar and Mele Printing Co	3212 N Causeway	—
Midas Muffler Shop	125 N Causeway	—
Classic Cleaners	4616 W Esplanade	—
Dry Cleaning by Louis	4300 Clearview	Figure B-20

<u>Site Name</u>	<u>Location</u>	<u>Reference</u>
KC Repairs and Appliances	4228 Cleary	—
Various Auto Repair Shops (multiple owners)	3116 Cleary	—
EZ Serve/Time Saver #58	4431 Transcontinental, near W. Esplanade	—
Econo Dry Cleaners	4422 Transcontinental	—
One Hour Martinizing	4410 Transcontinental	—
Discount Zone Gasoline – formerly EZ Serve, Tenneco Oil Co	4309 Transcontinental	—
Multiple Municipal Marinas and Harbors and Boat Launches		Figures B-1 to B-34
Multiple Boat Repair Facilities		Figures B-1 to B-34

The businesses noted above do not include those already discussed in this report unless additional business listings were noted at the same address for other years. The pertinent years of operation for the facilities listed above are shown in the Polk City Directory Summary, Table B-3. Additional businesses are also listed in the Polk City Directory Summary.

#### **5.4.5 Additional Historical Sources**

The Contractor pursued public record information available online to the general public on the Louisiana Department of Environmental Quality’s (LDEQ’s) Electronic Document Management System (EDMS) for E-Z Serve 2093 located at 200 Live Oak Street. According to LDEQ records personnel, the online EDMS records go back to the year 2000. Additional records exist for the Old Duncan Pumping Station #4 and the USACE 17th Street Canal Construction Site from the New Orleans LDEQ’s Southeast Region’s internal EDMS, which contains a complete set of scanned LDEQ records. Due to a malfunctioning printer, the Contractor was unable to print these records from the LDEQ offices. However, the Contractor did review the available records on the NOLA LDEQ Public EDMS computer terminal and that review confirmed the information provided by the LDEQ in previous telephone interviews.

#### **5.5 Composite Historical Timeline**

The following discussion pertains to the Jefferson Lakefront Levee, the land within the 1,000-foot footprint, and the adjacent land.

<b>Year</b>	<b>Source</b>	<b>Discussion</b>
1891	Historical Topographic Map (Appendix D-4)	Land is undeveloped and comprises low swampy terrain. A road system appears to have been developed westerly adjacent to the 17th Street Canal.
1938	Historical Topographic Map (Appendix D-4)	Highway 33 (which runs along shoreline of Lake Pontchartrain) and Williams Boulevard have been constructed. Very little development on west side of 17th Street Canal. No levees have been constructed, but Pumping Station #1/Bonnabel Canal and Pumping Station #2/Suburban Canal have been constructed. New Orleans Municipal Yacht Harbor has been constructed.
1951	Historical Aerial Photographs (1951-A through 1951-F; Appendix D-2)	Land west of Bonnabel Canal is undeveloped. Orthogonal roads are present between Bonnabel and 17th Street Canals (Bucktown area). Buildings are sparse along these roads, but become denser towards 17th Street Canal. Pumping Station #4/Duncan Canal and Pumping Station #3/Elmwood Canal are present and were probably constructed in similar timeframe as Pumping Stations #1 and #2. Levee system paralleling shoreline of Lake Pontchartrain is present. Lagoon at mouth of Suburban Canal is present.
1958	Historical Aerial Photographs (1958-A through 1958-C; Appendix D-2)	Causeway Bridge has been constructed. Land west of Bonnabel Canal remains relatively undeveloped, except for some residential parcels along the east side of Elmwood Canal. No development is present along Causeway Boulevard. Area east of Bonnabel Canal shows increased density of residential parcels. Interior canal system appears to reflect current conditions.
1965	Historical Aerial Photographs (1965-A through 1965-B; Appendix D-2)	Road infrastructure for residential development west of Bonnabel Canal to Elmwood Canal has been largely constructed. Homes beginning to fill in. Some development is present along North Causeway Boulevard. Area west of Elmwood Canal still largely undeveloped, although some residential roadways have been constructed.
1965	(various)	Hurricane Betsy.
1967	Historical Topographic Map (Appendix D-4)	Seawall is present along Lake Pontchartrain shoreline in western part of study area. Businesses continuing to fill in along North Causeway Boulevard.
1969	(various)	Hurricane Camille.
1972	Historical Topographic Map (Appendix D-4)	Jefferson Downs Racetrack just west of Williams Boulevard has been constructed.
1979	Historical Topographic Map (Appendix D-4)	Residential areas west of Bonnabel Canal largely developed.
1987	Historical Aerial Photographs (1965-A through 1965-B; Appendix D-2)	Williams Boulevard Boat Launch and Bonnabel Boat Launch have been constructed. Harbor on west side of 17th Street Canal mouth has also been constructed, but the U.S. Coast Guard Station is absent. Residential and commercial enterprises completely filled in. Office towers at foot of Causeway Bridge have been constructed.
2005	(various)	Hurricane Katrina.

***Historical Summary:***

The Jefferson Lakefront Levee system, including the four pumping stations and the canals, has been in place along the southern shoreline of Lake Pontchartrain since the early-middle part of the 1900s. Information relating to the historical construction dates of the Jefferson Lakefront Levee System was unavailable to the Contractor.

The area within the 1,000-foot footprint was largely undeveloped marshland until the late 1950s, after the Causeway Bridge was constructed, as shown on historical aerial photographs, historical topographical maps, and in historical city directories. Development appears to have originated in the eastern part of the study area (Bucktown) and spread westward. Development seems to have intensified in the 1960s and by the middle 1970s the development was basically established to current conditions. No evidence of large-scale agriculture use has been identified near the Jefferson Lakefront Levee during this Phase I HTRW ESA.

## **6.0 RECONNAISSANCE**

### **6.1 Methodology and Limiting Conditions**

Ms. Darlene Venable, Mr. John Clausen, and Mr. Alec Macbeth conducted visual reconnaissance of accessible parts of Jefferson Lakefront Levee, the 1,000-foot footprint, and the adjoining parcels during the period 14 August 2007 through 7 September 2007. One hundred percent of the Levee Reach was walked and sections were driven through multiple times while escorted by representatives of the East Jefferson Levee District and/or the Jefferson Parish Drainage Department. Similarly, the residential and commercial neighborhoods were driven through, although no interviews or site visits were performed, with the exception of short visits to each of the four Jefferson Lakefront Pumping Stations. All of the publicly accessible leaking transformers were identified and mapped. Table B-1 in Appendix B identifies each of these suspected leaking transformers. Their locations are shown on Figures B-34 and on Figures B-4 through B-33. Table B-2 provides the latitude and longitude of each of these transformers.

In accordance with instruction from the User (Appendix A), no attempts were made to contact owners and request permission to access the privately owned commercial and light industrial facilities within the 1,000-foot footprint or the EDR sites identified within the minimum search distances for applicable databases. Rather, a “public sidewalk and street” reconnaissance was performed on appropriate businesses. Pertinent environmentally-related observations and findings are described in the following sections.

### **6.2 General Property Setting**

As described in Section 3.2, the elevations of the existing Jefferson Lakefront Levees are estimated to average about 15 to 17 feet above MSL, which is represented by elevation of the surface of Lake Pontchartrain waters. The terrain of the 1,000-foot footprint south of the levee is fairly constant, with a very gentle slope southward. The ground elevation of the 1,000-foot footprint decreases inland (southward) from 0 feet above MSL at the base of the levees to approximately 5 to 7 feet below MSL near the Carroll Canal which runs parallel to Esplanade Avenue (1998/1999 topographic maps in Appendix D-4). On the basis of this surface topography, Lake Pontchartrain is considered generally hydraulically upgradient of Jefferson Lakefront Levee. Within the 1,000-foot footprint, groundwater is interpreted to move with a southerly component, albeit slowly, under a low hydraulic gradient. Shallow groundwater is expected to be encountered within 5 feet below grade, based upon surface topography.

The nearest bodies of surface water within the 1,000-foot footprint are four northern-trending canals: Duncan, Elmwood, Suburban, and Bonnabel. The western and eastern terminuses of the Jefferson Lakefront Levee are also bound by northern-trending canals: Duncan Canal (West), which is also known as the Parish Line Canal or West Return Canal, and 17th Street Canal. Two west-trending canals, Canal No. 7 and Canal No. 1, are within the 1,000-foot footprint. These are located in the western part of the study area. Two retention ponds are located just east of Pumping Station No. 4. The locations of these water bodies are shown on the 1998/1999 topographic maps included in Appendix D-4.

The communities near Jefferson Lakefront Levee are provided drinking water and sewer services from the City of Kenner and Jefferson Parish (Metairie). The Contractor did not recognize any individual septic tanks, with the exception of a septic system that was installed for the Duncan Pumping

Station #4 Operator's home, located adjacent to Pumping Station #4. According to Jefferson Parish Drainage District Engineer, the house is now connected to the municipal wastewater treatment plant. Records of the abandonment of this septic system were requested from Jefferson Parish during the interview, but were unavailable. This home is outside of the actual Jefferson Parish Levee footprint, but within the 1,000-foot footprint. Should the USACE projects extend into the footprint of this septic system, the USACE should consider abandoning the septic system in accordance with the Louisiana Department of Health regulations relating to the installation and abandonment of septic systems.

According to the Jefferson Parish Drainage Department Superintendent and visual observations made by the Contractor, a potable water-well is installed at each of the four Jefferson Lakefront Pumping Stations. Water-well installation records were requested, but were unavailable and may have been saturated and lost during Hurricane Katrina according to the Jefferson Parish Drainage District Engineer. The Louisiana Department of Transportation and Development regulates potable water-well installations and may have driller's logs of these four water wells in their files, should they be required by the USACE.

### **6.3 Jefferson Lakefront Exterior Observations: The Levee and Facilities Within the 1,000-Foot Footprint**

No obvious signs of environmental contamination directly attributable to Hurricane Katrina were observed.

No obvious signs of environmental contamination were discerned during the inspection of the Jefferson Lakefront Levee itself.

The following subsections include descriptions of facilities associated with this Phase I HTRW ESA that pose a potential for environmental risk. Businesses that represented little environmental risk (on basis of site reconnaissance and the historical environmental records) are not mentioned in this section.

These subsections describe only the facilities within the 1,000-foot footprint that, on the basis of current or past operations, have a higher potential of an environmental condition than other facilities not described in this section. The Contractor observed many facilities not mentioned in this section. Several of these are listed in the EDR Report (Appendix D-1). The facilities listed in the EDR Report are described in Section 5.0.

#### **6.3.1 Aboveground Storage Tanks**

Each of the four pumping stations along the Jefferson Lakefront Levee stores relatively large amounts of petroleum products in Aboveground Storage Tanks (ASTs) for the operation and maintenance of the storm water drainage pumps. According to information provided in the associated Spill Prevention, Control and Countermeasures (SPCC) Plans (MWH, October 2004a; MWH, October 2004b; MWH, February 2006a; and MWH, February 2006b), and during interviews with Jefferson Parish Drainage Department representatives, the pumping stations maintain the following petroleum product ASTs on their premises:

##### *Pumping Station No. 1 – Bonnabel (Figure B-29)*

- Two 19,200-gallon ASTs containing diesel fuel;
- One 760-gallon AST containing used oil;

- Four 475-gallon ASTs containing diesel fuel;
- Fifty 55-gallon drums containing oil; and
- Safe House – One 750-gallon skid-mounted AST containing diesel.

*Pumping Station No. 2 – Suburban (Figure B-21)*

- Three 16,000-gallon ASTs containing diesel fuel;
- One 7,000-gallon AST containing return diesel fuel;
- One 7,000-gallon AST containing used oil;
- Two 1,000-gallon ASTs containing diesel fuel;
- Three 500-gallon AST containing diesel fuel;
- Forty 55-gallon drums containing oil; and
- Safe House – One 750-gallon skid-mounted AST containing diesel.

*Pumping Station No. 3 – Elmwood (Figures B-15 and B-16)*

- Three 16,000-gallon ASTs containing diesel fuel;
- Two 1,000-gallon ASTs containing diesel fuel;
- Four 500-gallon ASTs containing diesel fuel;
- Forty-four 55-gallon drums containing oil; and
- Safe House – One 750-gallon skid-mounted AST containing diesel.

*Pumping Station No. 4 – Duncan (Figures B-9 and B-10)*

- Three 19,600-gallon ASTs containing diesel fuel;
- One 750-gallon AST containing diesel fuel;
- Five 500-gallon ASTs containing diesel fuel;
- Forty-five 55-gallon drums containing oil; and
- Safe House – One 750-gallon skid-mounted AST containing diesel.

According to the Jefferson Parish Drainage Department, the existing pumping stations were constructed behind the old pumping stations. The old pumping stations were demolished when the new pumping stations were placed on line, with the exception of Old Duncan Pumping Station #4.

- Bonabel Pumping Station No. 1 – Constructed in 1981
- Suburban Pumping Station No. 2 – Constructed in 1985, Modified in 2005
- Elmwood Pumping Station No. 3 – Constructed in 1981, Modified in 2005
- Duncan Pumping Station No. 4 – Constructed in 1986

The current pumping stations were designed and built with secondary containment (concrete) for the ASTs. Some of the existing pumping stations also have detection systems installed to detect fuel leaks that might occur within the secondary containment. Additionally, some of the pumping stations have relocated their AST fuel ports to within the walls of the secondary containment.

The former pumping stations may or may not have had secondary containment for its diesel ASTs and/or may have used USTs to store diesel for their pumps (such as at the suspected location of the former USTs at the Old Duncan Pumping Station #4). Historical records relating to the presence/absence of the Old Duncan Pumping Station #4 and the other three pumping stations' ASTs/USTs were unavailable from the Jefferson Parish Drainage Department, and did not appear on the EDR database search. Limited records were provided by the LDEQ in follow-up records reviews.

Each of these four pumping stations also maintains smaller volume containers housing petroleum products and solvents. The Contractor identified no documentation of historical releases of petroleum products or hazardous materials from these ASTs. No signs of historical releases, such as stressed vegetation (other than that which could be attributed to weed killers) or stained soils, were identified during the brief site reconnaissance of each of the facilities. Currently, no USTs are known to be present at the facilities (Appendix D-1). The four pumping stations are shown in the following photographs:

Duncan Pumping Station #4	Photographs 9, 10, 11
Elmwood Pumping Station #3	Photographs 28, 29, 30
Suburban Pumping Station #2	Photographs 42, 43
Bonnabel Pumping Station #1	Photographs 59, 61, 62

### **6.3.2 USTs/LUSTs Within the 1,000-Foot Footprint**

The EDR database search identified only one of the four Jefferson Lakefront Levee Pumping stations to have historically used an onsite UST. Suburban Pumping Station No. 2 housed a 10,000- to 20,000-gallon UST containing petroleum product prior to November 1994. Jefferson Parish reported a release that occurred in August 1992 (Jefferson Parish, 21 August 1992) to the LDEQ resulting in the facility being considered an historical LUST (Appendix D-1). The UST and approximately 168 tons or cubic yards of soils impacted with petroleum product were removed and appropriately disposed of in November 1994. The LDEQ approved the closure in February 1996 (LDEQ, February 1996). This facility is also listed as a NPDES site in the EDR Report, indicating that periodic monitoring and reporting of storm water discharge may be required (Appendix D-1).

The former EZ Serve #2093, currently Live Oak Discount Zone LLC, at 200 Live Oak Street (Figure B-3) is identified as a historical LUST (Appendix D-1). In July 1991, three USTs at the facility (then EZ Serve #2093) failed a tank tightness test indicating a release of petroleum product into the subsurface (Appendix E; Lanier and Associates, Inc., October 1991). The three USTs were removed and replaced prior to March 1992. Soil and groundwater samples collected during a post removal monitoring program consistently showed low concentrations of petroleum products. In October 1993 the LDEQ granted a termination of passive remediation (Appendix E; LDEQ, October 1993). The EDR Report in Appendix D-1 shows that all of the USTs have either been removed (February 1992) or are temporarily out of service (as of August 2003). However, during the site reconnaissance, the facility was actively selling gasoline, so it can be inferred that operating USTs are currently present at the facility. A service station operated at that location since at least 1955, as presented in the Polk City Directory Summary Table B-3 and discussed in Section 5.4.4.

U-Haul at 3800 North Causeway Boulevard formerly operated three USTs: a 10,000-gallon diesel UST installed in August 1995; a 500-gallon used oil UST installed in January 1982; and a 10,000-gallon gasoline UST installed in August 1980. These USTs were removed in August 1995, November 1993, and August 1995, respectively (Appendix D-1). The location of this U-Haul facility is shown on Figure B-26.

Pelican Pool and Patio at 3824 Ridgelake Drive formerly operated one 1,000-gallon UST containing gasoline. This UST was installed in April 1977 and removed in June 1993 (Figure B-26; Appendix D-1). Currently, this address is a vacant lot (Photograph 55 in Appendix C).

The South Shore Toll Plaza at 3943 North Causeway Boulevard (Figure B-26) formerly operated two USTs: a 550-gallon UST containing diesel that was installed in April 1978 and removed in December

1998, and a 4,000-gallon UST containing gasoline that was installed in April 1980 and removed in December 1998 (Appendix D-1).

Bernard's Car Care at 1013 Live Oak Street (Figure B-30) formerly operated eight USTs, as follows:

- 6,000-gallon UST containing gasoline, installed in May 1971 and removed in October 1997;
- 6,000-gallon UST containing gasoline, installed in April 1966 and removed in April 1986;
- 8,000-gallon UST containing gasoline, installed in May 1971 and removed in October 1997;
- 550-gallon UST containing new or used oil, installed in April 1963 and removed in April 1986;
- 6000-gallon UST containing gasoline, installed in May 1971 and removed in October 1997;
- 8,000-gallon UST containing gasoline, installed in April 1974 and removed in April 1986;
- 500-gallon UST containing new or used oil, installed in May 1971 and removed in October 1997; and
- 6,000-gallon UST containing gasoline, installed in April 1965 and removed in April 1986.

A service station has operated at 1013 Live Oak Street for at least the last 47 years, according to information contained in the Polk City Directory. No groundwater/soil remediation activities have been identified at the facility via an online search of LDEQ's database system or by EDR's database search. The LDEQ signed off on the UST removals with a No Further Action check on their form.

According to the Jefferson Parish Drainage Department (JPDD) Superintendent, he was present during the excavation of the USTs and soil at the Old Duncan Pumping Station #4 in the mid-1980s. An LDEQ representative was present during the UST removal and soil excavation activities, according to the JPDD Superintendent.

The JPDD Superintendent identified the area shown on Figure B-9 and in Photographs 87 and 88 as being the former location of the Old Duncan Pumping Station #4 USTs. Jefferson Parish Environmental Department representatives stated that Jefferson Parish does not maintain records of UST removal activities conducted that many years ago. EDR database search did not identify the Old Duncan Pumping Station #4 as a UST/LUST or historical UST/LUST site.

### ***6.3.3 Eastern Terminus of Jefferson Lakefront Levee***

The U.S. Coast Guard Station that is located on the north side of the levee near its eastern terminus contains a fenced secured storage area (Photograph 68 in Appendix C). Two generators, metal scaffolding, SeaVan containers, buoys, and other miscellaneous material was stored here. The ground surface was unpaved.

Nine covered but unsecured 55-gallon drums were observed just south of the Jefferson Lakefront Levee near its eastern terminus (Figures B-31 and B-36; Photograph 104 in Appendix C). These drums contained fluid and were labeled as containing hydraulic fluid. The surrounding pavement was stained and absorbent material was strewn on the pavement, indicating a limited release in the near past.

### ***6.3.4 Lake Pontchartrain South Shore – Jefferson Lakefront Levee***

The southern shoreline of Lake Pontchartrain just north of the Jefferson Lakefront Levee was also inspected. No signs of significant contamination, including impacted sediment, were observed. Similarly, the Contractor did not identify any literature or other sources of information indicating that

the Lake Pontchartrain sediments near the southern shoreline along Jefferson Lakefront Levee have been impacted.

### **6.3.5 RCRA Small Quantity Generators of Hazardous Waste**

The following facilities were identified as RCRA Small Quantity Generators of Hazardous Waste (SQGs) in the EDR Report (Appendix D-1) and are located within the 1,000-foot footprint:

- Gas Technology Consultants located at 711 Carmenere Street (Figure B-7 and Photograph 7 in Appendix C);
- Jefferson Downs Finish Line at 1300 Joe Yenni Boulevard (Figure B-8);
- Lakeside Toyota at 3701 North Causeway Boulevard (Figure B-27);
- TLC Printing and Copying at 3113 7th Street (Figure B-26);
- Franklin Southland Print Co. at 3212 7th Street (adjoins the 1,000-foot footprint; Figure B-26);
- Impact Mail LLC at 3220 7th Street (adjoins the 1,000-foot footprint; Figure B-26);
- Jet Set Body Shop at 3105 6th Street (Figure B-26);
- DS Glass City at 6th Street and Causeway;
- Marine Power at 1700 Orpheum Street (approximate location shown on Figure B-31); and
- Harry H Philibert, MD, at 213 Live Oak Street (Figure B-31).

None of these facilities have any reported violations and no evidence of environmental impact was observed at the facilities during the site reconnaissance from public sidewalks and public streets.

### **6.3.6 Dry Cleaners Within the 1,000-Foot Footprint**

Camellia Cleaners is located at 3900 North Causeway Boulevard and is listed on the Dry Cleaners Facility Listing (Appendix D-1). Other than its initial notification report of a dry cleaners using tetrachloroethylene in 1995, no information (AI # 39230) was available on this facility from the LDEQ. Per the Polk City Directory, the facility was located within One Lakeway Center in 1996 and Two Lakeway Center in 1985; both centers are high-rise office complexes. Camellia Cleaners is not listed in the 2005 phone book, nor is it obtainable by current 411 directory assistance.

Lakeview Cleaners is listed in the Polk City Directory at Two Lakeway Center, 3890 N. Causeway and is also within the 1,000-foot footprint. Additional Dry Cleaners were identified during the Polk City Directory review and are presented and discussed in Section 5.4.4 and listed in Table B-3.

### **6.3.7 Residential Properties Within the 1,000-Foot Footprint**

The Contractor drove and observed the residential properties within the 1,000-foot footprint of Jefferson Lakefront Levee accessible from public streets and public sidewalks (Figures B-2 through B-34). No obvious signs of environmental contamination were observed, although a few vacant lots contained what appears to be hurricane debris (Figure B-30 and Photograph 102).

### **6.3.8 Transformers Within the 1,000-Foot Footprint**

The Contractor visually identified and mapped the locations of all suspected leaking transformers observed within the 1,000-foot footprint of Jefferson Lakefront Levee from publicly accessible avenues (streets, sidewalks, and levees). These suspected leaking transformers are listed in Table B-1 and B-2. Their locations are shown on Figures B-34 and Figures B-4 through B-33. Visual

observations made during the survey are also provided in Table B-1. The leaking transformer list was e-mailed to Entergy's Hal Beard, with a request that Entergy provide the PCB status of each of the suspected leaking transformers. That e-mail and Entergy's response letter/policy is included as Appendix F-4. Of the 17 leaking transformers, five have been tested and have concentrations of <50 parts per million of PCBs. The remaining 12 transformers have not been tested.

According to Entergy's response letter, "The transformers in question are owned and operated by Entergy Corporation in compliance with all Federal and State Regulatory Guidelines, including those promulgated by the United States Environmental Protection Agency in Part 761 of Title 40, Toxic Substances Control Act. In the event of a spill from said transformers, Entergy Corporation will take the appropriate action.... Entergy's Operation and Maintenance Plan for pole mount and pad mount transformers is that if equipment fails or leaks oil, the unit is replaced or repaired.... Entergy will replace, repair, and clean up any oil leaks from said equipment. Entergy does not want any other entity to manage, disconnect, or clean up oil spills of any of its electrical equipment."

### **6.3.9 Storm Water Drains Within the 1,000-Foot Footprint**

Storm water runoff in the area encompassing the 1,000-foot footprint either percolates through the exposed soil to the groundwater or is transported via storm water drains and culverts to either the various canals in the area (for example, Duncan, Elmwood, Suburban, and Bonnabel Canals) or to Lake Pontchartrain. A storm water line was mapped along the southern base of the Jefferson Lakefront Levee. The location of this storm water line is shown throughout Figures B-4 through B-33, except where coordinates were unavailable to the Contractor.

### **6.3.10 USACE Inclinometers Within the 1,000-Foot Footprint**

Six inclinometers were installed to monitor slope stability along the base of the Jefferson Lakefront Levee, near the St. Charles/Jefferson Parish line, as shown on Figures B-4, B-5, B-6, and B-7. Of these six inclinometers, two were locked (Photo 80) and one was damaged at the hinge (Photo 83), preventing the lock from operating as designed. A fourth inclinometer was visible as a PVC casing, sheared off at ground level (Photo 85). The remaining two inclinometers could not be located. An open gray PVC casing was also noted (Figure B-4, Photo 79). The USACE stated that this gray PVC casing is also an inclinometer.

The Contractor recommends that the owner/operator of these inclinometers rehabilitate the damaged or unlocked inclinometers to locking condition or properly plug and abandon the inclinometers (and gray PVC inclinometer) in accordance with Louisiana Department of Transportation and Development Water Well regulations.

## **6.4 Interior Observations**

Jefferson Lakefront Levee has no interior conditions. No interiors of buildings associated with Jefferson Lakefront Levee were evaluated as part of this Phase I HTRW ESA. However, given the proximity of the Old Duncan Pumping Station #4 to the existing levee, right-of-entry agreements for building structure inspections should be obtained and inspections conducted prior to future construction activities that might encroach on the building's footprint and adjacent facility areas that may have had USTs/ASTs.

## **7.0 INTERVIEWS**

In accordance with the Scope of Work (Appendix A), the Contractor interviewed government representatives (in person, on the phone, or via e-mail) of the East Jefferson Levee District, Jefferson Parish Drainage Department, Jefferson Parish Environmental Department, Louisiana Department of Environmental Quality UST and Surveillance Divisions and the Louisiana State Fire Marshall's Office. Records of the personal interviews conducted are presented in Appendix F, as are relevant emails and faxes.

### **7.1 Interviews With Owners or Occupants**

In accordance with the Scope of Work (Appendix A), no private owners or operators of businesses were interviewed.

### **7.2 Interviews With Local Government Officials**

Interviews with the Senior Maintenance Supervisor of the East Jefferson Levee District indicated that hydraulic oil was released to the soil when a hose on an East Jefferson Levee District wing-mower maintenance tractor ruptured on 25 July 07. The release occurred south of and at the base of the levee, immediately west of Williams Boulevard at Gate L-4 (Figure B-11). Per the East Bank Levee District's request, the Kenner Fire Department responded to the incident and assisted in the clean-up. A summary of that incident is also provided in an email from Mark Fos, EJLD Police dated 27 September 07 (Appendix F-2).

Additionally, both the East Jefferson Levee District Senior Maintenance Supervisor and the Jefferson Parish Drainage District Superintendent II stated that a diesel spill occurred when a USACE contractor ruptured his truck's diesel fuel tank, dripping diesel along the eastern side of the Duncan Pumping Station #4. The Contractor was responsible for the clean-up. The Kenner Fire Department incident reports are maintained for three to four years, after which they are archived with the Louisiana State Fire Marshall's Office. Incident records are filed by date, then address. The EJLD was not able to provide the date or records of this incident prior to the submittal of this report. Records were requested, are being researched and will be reviewed by the Contractor upon receipt.

The Contractor conducted interviews, phone discussions, and e-mail correspondence with Mr. Danny Abadie, Senior Maintenance Supervisor of the East Jefferson Levee District, Mr. Ali Pirsalehy, P.E., for the Jefferson Parish Drainage Department, and Mr. Manny Aspuria, Superintendent III, for the Jefferson Parish Lakefront Levee Pumping Stations. Additionally, the Contractor met with Ms. Kathy Russo of the Jefferson Parish Environmental Department. Telephone interviews were also conducted with Mr. Wayne Desselle, LDEQ SE Region, Surveillance Division Environmental Scientist Staff, regarding the former USCG Station on Lakeshore Drive. Relevant portions of these conversations are presented throughout the applicable sections of this Phase I HTRW ESA Report and in Appendix F-2, F-3, and F-4.

### **7.3 Interviews With Others**

In accordance with the Scope of Work (Appendix A), no other owners or operators of facilities located within the 1,000-foot footprint were interviewed.

## **8.0 FINDINGS**

### **8.1 Recognized Environmental Conditions**

No obvious signs of major contamination were visually observed during the inspection of the Jefferson Lakefront Levee. No known or suspected RECs were observed on the Jefferson Lakefront Levee itself.

For the land outside of Jefferson Lakefront Levee, but within the 1,000-foot footprint, the only definitive visual evidence of current RECs was the 17 leaking or possibly leaking transformers described in Section 6.3 and shown on Table B-1. Latitudes and longitudes of these transformers are provided in Table B-2.

The 17 leaking or possibly leaking transformers identified in Table B-1 represent the only known RECs within the study area of Jefferson Lakefront Levee (but outside of the Property itself). Entergy owns and operates all electrical equipment on or near the Property. Of the 17 leaking transformers, Entergy has tested 5 of these 17 transformers for concentrations of PCBs. All five (5) of these transformers were tested and have <50 parts per million concentration of PCBs. The remaining 12 transformers have not been tested.

The Contractor e-mailed Entergy the list of publicly accessible leaking or potentially leaking transformers in the 1,000-foot footprint of the Property on 29 August 07. Entergy researched its electrical equipment database and provided the Contractor with information related to the fluids within these transformers (Appendix F-4). The leaking (or potentially leaking) transformer locations are shown on Figure B-4 and throughout Figures B-4 to B-33.

Although leaking or potentially leaking transformers may result in PCB impacts to soil and/or groundwater, Entergy's policy regarding its equipment is to replace, repair, and clean up any oil leaks originating from its equipment (Appendix F-4).

### **8.2 Suspected Recognized Environmental Conditions**

Suspected RECs are identified at the following facilities outside of the Jefferson Lakefront Levee, but within the 1,000-foot footprint:

- Pumping Station No. 1 – Bonnabel (management of large quantity of petroleum products, petroleum products), Figure B-29;
- Pumping Station No. 2 – Suburban (management of large quantity of petroleum products, petroleum products), Figure B-21;
- Pumping Station No. 3 – Elmwood (management of large quantity of petroleum products, petroleum products), Figures B-15 and B-16;
- Pumping Station No. 4 – Elmwood (management of large quantity of petroleum products, petroleum products), Figures B-9 and B-10;
- USACE 17th Street Canal Pumping Station and Construction Site, Figure B-31;
- Nine 55-gallon drums (potential releases of hydraulic oil, petroleum products) between Jefferson Lakefront Levee and Metairie Hammond Highway, Figures B-31 and B-36;
- Camellia Cleaners and Lakeview Cleaners (dry cleaning operations, chlorinated volatile organic compounds), Figure B-26;
- Live Oak Discount Zone (formerly EZ Serve #2093, current USTs, petroleum products), Figure B-31; and

- Old Duncan Pumping Station #4 – Former USTs and/or ASTs. Excavated in mid-1980s, per Jefferson Parish Pumping Station Superintendent (LDEQ and Jefferson Parish UST closure records were unavailable, although limited LDEQ records indicate the removal and characterization of impacted soils.) Figure B-9.

*Note: For the purposes of this report, the Old Duncan Pumping Station is being treated as outside of the current levee footprint. However, given its proximity to the existing levee, the Contractor recommends that the USACE survey the existing footprint of the Old Duncan Pumping Station #4 in relation to and prior to proposed invasive groundbreaking activities in this area.*

All of these suspected RECs may have impacted soils and or groundwater near the site. There is also some possibility of the petroleum products associated with the four pumping stations or chemicals from sources outside of the Study Area and along the Lake Pontchartrain shoreline, near boat docks, harbors, and marinas along the length of the 9.5-mile Study Area to have impacted the sediments along the south shore of the lake and within adjacent harbors and canals. The locations of these known or suspected RECs are shown on the previously mentioned figures and on Figure B-34.

### **8.3 Historical Known or Suspected Recognized Environmental Conditions**

The only historical REC identified in the EDR environmental database search within the 1,000-foot footprint is located at the Suburban Pumping Station No. 2. This facility received closure (No Further Action required) from the LDEQ (Appendix E). However, residual contamination that may still be present at the site would be petroleum products impacting the nearby soils and/or groundwater, and in the case of the Suburban Pumping Station #2, possibly sediments of the adjacent Suburban Canal.

The following sites are presented in EDR's Environmental Database Search report and are identified as historical suspected RECs within the 1,000-foot footprint, on the basis of the former presence of a registered UST and/or by the nature of the facilities' operations:

- Pumping Station No. 2 – Suburban (former USTs, petroleum products), Figure B-21;
- U-Haul (former UST, petroleum products), Figure B-26;
- Pelican Pool and Patio (former USTs, petroleum products), Figure B-26;
- South Shore Toll Plaza (former USTs, petroleum products), Figure B-26; and
- Bernard's Car Care (former USTs, petroleum products – gasoline and service station since at least 1965), Figure B-30.

The following sites are identified as historical RECs within the 1,000-foot footprint on the basis of the likely former presence of ASTs or historical USTs or because of the management of relatively high volume and movement of fuels or other hazardous materials and/or by the nature of the facilities' operations:

- Old Bonnabel Pumping Station No. 1, Figure B-29;
- Old Suburban Pumping Station No. 2, Figure B-21; and
- Old Elmwood Pumping Station No. 3, Figures B-15 and B-16.

According to the Jefferson Parish Drainage Department Superintendent, these three former pumping stations were located in front of the current pumping stations and were demolished after the current pumping stations were brought online. Plans showing the former footprints of the building and ancillary equipment were unavailable for review.

Verbal information obtained from the East Jefferson Parish Levee District (EJLD) identified a hydraulic oil release to soils near the levee when a hose on an East Jefferson Levee District maintenance tractor ruptured. The release occurred south of and at the base of the levee, immediately east of Williams Boulevard (Figure B-11). Per the East Bank Levee District's request, the Kenner Fire Department responded to the incident and assisted in the clean-up. Incident records were requested, but were unavailable.

The locations of these historical suspected RECs are shown on the previously mentioned figures and on Figure B-34.

#### **8.4 Known or Suspect De Minimis Environmental Conditions**

No de minimis environmental conditions were identified within the footprint of the existing levee, although it is likely that those conditions exist as portions of the levee are in various stages of modification and de minimis drips of hydraulic oils and petroleum fuels from construction equipment are likely to have occurred.

Known or suspect de minimis conditions exist at each of the four existing pumping stations and the Old Duncan Pumping Station #4 and are represented by operational leaks and drips of diesel fuel and oils from the pumps, onto internal and external surfaces of the pumping stations. Per the pumping stations' Spill Prevention, Control, and Countermeasure (SPCC) Plans, these de minimis drips and leaks are mitigated using drip pans and/or absorbent pads (or absorbent media) to absorb oil from drips/leaks of equipment onto other areas of the pumping station. According to the Jefferson Parish Pumping Station Superintendent, used oil and used absorbent pads are picked up by National Oil, the used oil recycler used by Jefferson Parish.

According to the Jefferson Parish Pumping Station Superintendent, the walls and floors of the pumping station basements are constructed of concrete and are reportedly 2½ feet in thickness. Therefore, it is unlikely that de minimis drips and leaks of oil will migrate to soils or groundwater beneath the pumping stations, when consistently mitigated by absorbent media and where no concrete cracks exist in the walls or the floors of the pumping stations.

#### **8.5 Other Environmental Concerns**

The following current potential RECs were identified during site reconnaissance:

- Marine debris and 55-gallon drums on Live Oak vacant lot (between Cherokee and Aztec), Figure B-30.

The site reconnaissance also identified the following Sites of interest:

- Six (6) Inclinometers
- One (1) Gray PVC Casing (inclimometer)

According to the USACE Project Manger for those levee reaches, the inclinometers were installed to monitor slope stability along the southern base of the Jefferson Lakefront Levee, near the Jefferson and St. Charles Parish line as shown on Figures B-4, B-5, B-6, and B-7. Of these 6 inclinometers, 2 were locked (Photo 80) and 1 was damaged at the hinge (Photo 83), preventing the lock from operating as designed. A fourth inclinometer was visible only as a PVC casing, sheared off at ground level (Photos 85). The remaining two inclinometers could not be located. An open gray PVC casing

was also noted (Figure B-4, Photo 79). The USACE stated that this gray PVC casing is also an inclinometer.

The Contractor recommends that the owner/operator of these inclinometers rehabilitate the damaged or unlocked inclinometers to locking condition or properly plug and abandon the inclinometers (and gray PVC inclinometer) in accordance with the Louisiana Department of Transportation and Development Water Well regulations.

A targeted 10-year interval Polk City Directory review identified the following Sites of Interest within the 1,000-foot footprint:

- Clifford Green Sheet Metal Works (518 Live Oak – 1975, 1969), Figure B-31;
- Li'l General Food Store (1001 Live Oak), Figure B-30;
- Two Lakeway Center (3850 N. Causeway), Lakeview Cleaners, Abbot Laboratories, Voelker Williams Printing Company, Figure B-26;
- One Lakeway Center (3900 N. Causeway), Enterprise Car Rental, Figure B-26;
- Lee King Auto Repairs (3733 N. Causeway);
- Unclaimed Vehicle Distribution (2005) and Broadmoor General Contractors (1985, 3101 7th Street), Figure B-26; and
- Lakeside Toyota Collision (1996), Olsen and Kennedy Oil and Lubricants (1985), and CONOCO (1975, 1965) (3100 7th Street), Figure B-26.

Table B-3 provides the 10-year interval Polk City Directory Summary and provides a selected list of Sites of Interest outside of the 1,000-foot footprint and generally within EDR's search radius.

Multiple boat launches, marine service and repair facilities, harbors, and marinas exist along various sections of the entire Jefferson Lakefront Levee, with concentrations in the following areas:

- Williams Boulevard Boat Launch
- Bonnabel Boat Launch
- New Orleans Municipal Marina
- Southshore Harbor

It should be noted that, given the number and concentration of such facilities within the Study Area and operations generally conducted in those types of facilities, the potential for those facilities to have historically impacted the sediments along the shore should be evaluated prior to initiating construction activities that would disturb sediments in these areas.

The Contractor did a general comparison of the EDR oil and gas well locations against well locations presented on the Louisiana Department of Natural Resource Office of Conservation's SONRIS oil & gas well online GIS maps and noted differences in the plotted locations of these wells. The Contractor recommends that additional Louisiana Department of Natural Resource research be conducted to ascertain the legal surveyed location of each oil and gas well, drilling pad and production facility, and the type and operating status (active or plugged and abandoned) of each oil and gas well located on or adjacent to the levee and near the northern and southern perimeter of the 1,000-foot footprint, prior to conducting invasive construction activities in or near those areas.

## **9.0 OPINIONS**

Based upon all of the information obtained, the environmental professionals who conducted this Phase I HTRW ESA believe that the known or suspected RECs identified in Section 8.0 have not resulted in an impact to the soil or groundwater quality within the existing footprint of the Jefferson Lakefront Levee. Therefore, the Contractor sees no need to collect soil or groundwater quality samples with regard to the levee construction efforts within the current levee footprint. The Contractor would suggest, however, vigilance during any invasive or ground breaking activities for physical signs of soil or groundwater contamination. Additionally, should any of the soil be transported off site, the USACE is encouraged to follow appropriate soil characterization protocols.

However, it is recommended that the USACE attempt to locate and review current and historical facility plans showing the footprints of the former pumping stations and ancillary equipment in relation to proposed projects, prior to invasive groundbreaking activities. Given enough research time, the Louisiana State Fire Marshall's office, the Kenner Building Department and the Jefferson Parish Drainage Department may be able to locate additional historical records relating to the storage of petroleum and chemicals at the old pumping stations, assuming they have not already been destroyed during Hurricane Katrina. The USACE should also search their archives for these types of facility plans.

Additionally, the Contractor noted differences in the plotted locations of the oil and gas wells presented in the EDR report and those presented on the Louisiana Department of Natural Resource's SONRIS online oil and gas well GIS site. The Contractor recommends that additional Louisiana Department of Natural Resource research be conducted to ascertain the legal surveyed location of each oil and gas well, drilling pad and production facility, and the type and operating status (active or plugged and abandoned) of each oil and gas well located on or adjacent to the levee and near the northern and southern perimeter of the 1,000-foot footprint, prior to conducting invasive construction activities in or near those areas.

Should the USACE extend the footprint of the levee onto the location of a known REC, suspected REC, historical known REC, or historical suspected REC that is located adjacent to and within the 1,000-foot footprint area, the Contractor recommends that the USACE consider collecting soil and/or groundwater quality samples at those locations (i.e., the Old Duncan Pumping Station No. 4: structure and AST/UST area within the retaining brick walled area and within current and former footprints of the other three former pumping stations' ASTs, USTs, fuel distribution lines, drum storage areas and canal sediments). Sampling locations could be identified upon receipt and review of available facility plans.

Given the adjacent proximity of the former UST/AST area at the Old Duncan Pumping Station #4 to the existing levee and the lack of records documenting the UST removal/sampling activities of the mid-1980's, the Contractor recommends that a geophysical survey be conducted to evaluate whether a UST exists at the Old Duncan Pumping Station #4 prior to soil and/or groundwater sampling at this location and prior to any invasive or groundbreaking activities. Additionally, the Contractor would suggest vigilance for physical signs of soil and/or groundwater contamination during any invasive or groundbreaking activities. Additionally, should soil be moved offsite, the USACE is encouraged to follow appropriate characterization protocols prior to transport.

Given the history and type of operations conducted at all of the pumping stations, the Contractor recommends that sampling be conducted within the footprints of the other three pumping stations prior to commencing invasive or groundbreaking activities in these areas.

## **10.0 CONCLUSIONS**

At the request of USACE-HPO, the Contractor has performed a Phase I HTRW ESA in accordance with the Scope of Work presented in Appendix A and in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 of the Jefferson Lakefront Levee. Any exceptions to, or deletions from, the ASTM Standard Practice are described in Sections 2.0 and 11.0 of this report. This assessment has revealed no evidence of “recognized environmental conditions” (as that term is defined in ASTM Standard Practice E1527-05) in connection with the levee reach itself, although RECs and suspected RECs (both current and historical) have been identified adjacent to and within the 1,000-foot footprint.

This assessment has revealed no evidence of “recognized environmental conditions” (as that term is defined in ASTM Standard Practice E1527-05) in connection with the levee reach itself, although RECs and suspected RECs (both current and historical) have been identified adjacent to and within the 1,000-foot footprint.

## **11.0 DEVIATIONS/DATA GAPS**

Following is a list of the data gaps and deviations from ASTM Standard Practice E1527-05 that occurred during the performance of this assessment:

### **11.1 Historical Data Gaps/Data Failure**

The history of the Property was researched back to the first developed use (including agricultural use or incidence of import of fill material).

No further historical data sources were evaluated, because: (1) they were not *reasonably ascertainable*, and/or (2) the assessor's experience indicates that additional available sources were not likely to be sufficiently useful, accurate, or complete in terms of satisfying the historical research objectives. Based on these two criteria, the following standard historical sources were not evaluated:

- Property Tax Files
- Building Department Records
- Zoning/Land Use Records
- Other Historical Sources, including miscellaneous maps, newspaper archives, community organizations, local libraries, or historical societies

### **11.2 Other Deviations/Data Gaps**

In accordance with the Scope of Work (Appendix A), no interviews or site visits were conducted with any business operators or residents within or outside of the 1,000-foot footprint, with the exception of the Jefferson Parish Drainage Department (Pumping Stations) and the East Jefferson Levee District, which are local and state government agencies, respectively.

The USACE requested that the following be treated as Acceptable Data Gaps:

- Absence of a complete search for Environmental Liens
- Absence of a search for Recorded Land Title Records
- Absence of a User (USACE) Questionnaire.
- Right-of-Entry was not available for all commercial and residential properties.

No other deviation or data gap was identified that was deemed material to this assessment.

**12.0 ADDITIONAL SERVICES**

No additional services were requested to be included in this Phase I HTRW ESA.

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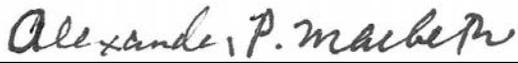
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#### 14.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONALS

Following are the signatures of the environmental professionals who conducted this Phase I HTRW ESA and primarily prepared this report, and who reviewed it.

Prepared by:

Reviewed by:



Alec Macbeth, P.G.  
Senior Geologist



Stuart I. Rixman, CHMM, CPEA, REA  
Manager, EHS Services



Darlene Venable, P.G.  
Project Manager

#### 15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Resumes of the environmental professionals named in Section 14.0 above are in Appendix G.

#### 16.0 APPENDICES

The remainder of this report consists of the appendices that are listed in the Table of Contents.