

March 29, 2007

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U.S. Army Corps of Engineers, New Orleans District
Hurricane Protection Contracting Division
Attn: Ms. Lee Walker
P.O. Box 60267
New Orleans, LA

Subject: Contract No. DACA45-03-D-0032 (ERS Contract)
Submittal of Phase I Hazardous Toxic or Radioactive Waste Environmental Site Assessment
Report, Revision 2
Federal Project Number: LPV 111 New Orleans East Back Levee – CSX Railroad to
Michoud Canal East Floodwall

Dear Ms. Walker:

Enclosed is the second revision of the Phase I Hazardous Toxic or Radioactive Waste (HTRW) Environmental Site Assessment (ESA) Report for Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX Railroad to Michoud Canal East Floodwall. We have included two hard copy reports and one electronic report.

This revision takes into account the comments provided by the USACE on the draft version of the report, provided to Earth Tech on February 26, 2007. These comments and our strategy for incorporating them into the updated document were discussed among Steve Johnson, Bill Bersson, and me on February 28, 2007 in New Orleans.

Please note that the Phase I HTRW ESA Report satisfies the SOW provided by USACE as follows.

USACE SOW TASK	PERTINENT SECTION IN REPORT
Task 1 Environmental Database Search	Section 5.0
Task 2 Site Inspection/Interviews	Sections 6.0 and 7.0
Task 3 Draft Report Preparation	Sections 6.0, 7.0, 8.0, 9.0, and 10.0
Task 4 Review Draft Phase I ESA Report	Not Applicable
Task 5 Final Report/Distribution and Formal Presentation	Not Applicable

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Earth Tech, Inc. appreciates the opportunity to provide services to the U.S. Army Corps of Engineers. If you have any questions or require further information, please call me at (850) 862-5191.

Sincerely,



Alec Macbeth
Project Manager

Enclosure: Phase I HTRW ESA Report, Revision 2, LPV 111 New Orleans East Back Levee – CSX
Railroad to Michoud Canal East Floodwall

Phase I Hazardous Toxic or Radioactive Waste Environmental Site Assessment

**Federal Levee Reach LPV 111, New Orleans East Back Levee – CSX RR To Michoud
Canal East Floodwall
New Orleans, Louisiana**

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March 28, 2007

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1.0 SUMMARY

This Phase I Hazardous Toxic or Radioactive Waste (HTRW) Environmental Site Assessment (ESA) report for the Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX RR to Michoud Canal in 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 Hurricane Protection Office (HPO). 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 or Radioactive Waste (HTRW) Guidance for Civil Works Projects” (USACE, 1992).

Federal Levee Reach LPV 111 represents the formal Property, as defined in American Society for Testing and Materials (ASTM) Standard E1527-05, for this Phase I HTRW ESA (ASTM, 2005). However, the USACE requested that the ESA include the entire area that falls within a 1,000-foot footprint extending from either side of the centerline of the levee. Therefore, the Contractor evaluated any residences, businesses, and open area within this footprint extending from the levee crown. The Contractor drove and observed from the roads all of the parcels (industrial, commercial, and residential, if any) within the 1,000-foot footprint of Federal Levee Reach LPV 111. 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 Services ([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. Seven figures ([Figures B-1 through B-7](#)) that depict aspects of this report are included in [Appendix B](#).

The professional practices that the Contractor used to determine if any recognized environmental conditions (RECs) existed in connection with the Federal Levee Reach LPV 111 and its 1,000-foot footprint included visual inspections, interviews with selected individuals who might have knowledge of RECs, a review of readily available historical information such as aerial photographs and fire insurance maps and topographic maps, a drive-by inspection of accessible adjacent parcels, 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.

In light of the objective of the environmental records review (to obtain and review records that would help identify RECs in connection with Federal Levee Reach LPV 111), in the professional opinion of the Contractor, no review of additional environmental record sources is required.

Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX Railroad to Michoud Canal East Floodwall is located in Orleans Parish, Louisiana and runs generally northeast from the west end of the Michoud Canal East Floodwall along the north side of the Intracoastal Waterway, then north to the CSX Railroad ([Figures B-1 through B-3](#)).

No obvious signs of major contamination were discerned during the inspection of Federal Levee Reach LPV 111. No known or suspected RECs were observed on the Federal Levee Reach LPV 111 itself.

Suspected RECs exist at three facilities within the 1,000-foot footprint because of either past environmental violations, management of relatively high volume and movement of fuels or other hazardous materials (for example, BOC Gases), or by the nature of the business increasing the chances of associated environmental impact (for example, Canal Pump House No. 1).

The Contractor has included the locations of the former registered underground storage tanks (USTs) and historical leaking underground storage (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 done correctly, and approved by the Louisiana Department of Environmental Quality [LDEQ]). One historical suspected REC was identified for a site where the former activities, by their nature, may have caused environmental degradation.

The effects of Hurricane Katrina throw a wild card in identifying RECs. Anecdotal discussions describe potentially hazardous material being dislodged and moved about during the storm. Information obtained during this Phase I HTRW ESA indicates that such unsecured containers were properly managed and transported off site.

The findings below are based upon the information obtained during this ESA, and discussed in the previous sections of 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.

Known or Suspect Recognized Environmental Conditions

No known or suspected RECs were observed on the Federal Levee Reach LPV 111 itself. Similarly, no known REC was identified within or adjoining the 1,000-foot footprint. Three suspected RECs were identified within the 1,000-foot footprint of LPV 111, as follows:

- The former BOC Gases facility (metals, petroleum products and potentially solvents);
- The Canal Pump House No. 1 located approximately midway along the northeast-trending stretch of the levee (petroleum products and potentially solvents); and
- One abandoned port-a-john (human wastes).

The locations of these suspected RECs are shown on [Figure B-7](#).

Historical Known or Suspected Recognized Environmental Conditions

No known or suspected historical RECs were observed on the Federal Levee Reach LPV 111 itself. The following site is identified both as a historical REC (because of past releases) and a historical suspected REC (because of former USTs) within the 1,000-foot footprint:

- The former BOC Gases facility (metals, petroleum products and potentially solvents).

The location of this historical REC and historical suspected REC is shown on [Figure B-7](#).

The following sites are identified as historical suspected RECs whose locations have not been specifically determined, but that may be within the 1,000-foot footprint:

- Dufour Petroleum (petroleum products) and
- Groendyke Transport, Inc. (petroleum products).

Known or Suspect De Minimis Environmental Conditions

A 55-gallon drum and several 5-gallon containers of tar-like material shown on [Figure B-5](#) may contain residual petroleum products or hazardous material and are considered a de minimis environmental condition.

Other Environmental Concerns

The site formerly occupied by BOC Gases is on the list of sites with an Activity and Use Limitation (AUL). A notice of contamination (nature and levels of contaminants) and restriction of the use of that parcel to non-residential use has been placed in the conveyance records for the site.

Also, the diesel fuel ASTs at the Canal Pump Houses Nos. 1 and 2 could become a REC in the future if a leak were to occur.

Based upon all of the information obtained, the environmental professionals who conducted this ESA believe that the suspect environmental conditions identified in Section 8.0 have not resulted in an impact to the soil or groundwater quality within the Federal Levee Reach LPV 111 itself. Therefore, the Contractor sees no need to collect soil or groundwater quality samples with regard the levee reconstruction efforts within the current levee footprint. The Contractor would suggest, however, being vigilant during any invasive or ground breaking activities for physical signs of contamination. Also, if any of the soil will be moved off site, the USACE is encouraged to follow appropriate characterization protocols.

If the USACE extends the footprint of the levee onto the location of the suspected RECs, the historical REC, or the historical suspected RECs that are located within the 1,000-foot footprint area, the Contractor recommends that the USACE consider collecting soil and/or groundwater quality samples at those locations. The locations where sampling should be considered are shown on [Figures B-7](#).

At the request of USACE-HPO, Earth Tech, Inc. has performed a Phase I HTRW ESA in accordance with the Scope of Services attached in [Appendix A](#) and in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 of the Federal Levee Reach LPV 111. Any exceptions to, or deletions from, the ASTM Standard Practice are described in Chapters 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 suspected RECs, historical RECs, and historical suspected RECs have been identified within the 1,000-foot footprint.

2.0 INTRODUCTION

The USACE is rehabilitating and improving the flood protection system of southeastern Louisiana. As part of this work, Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX RR to Michoud Canal East Floodwall would be enlarged with compacted fill to authorized grade. The footprint of this enlarged levee reportedly would not exceed the limits of the existing right-of-way at this time; however, if this levee is eventually brought to the 100-year flood elevation, 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. The location and current extent of Federal Levee Reach LPV 111 is shown in [Figures B-1 through B-3](#). (All figures referenced in this report are included in [Appendix B](#).)

This Phase I HTRW ESA report for the Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX RR to Michoud Canal East Floodwall, New Orleans, Louisiana (the “Property”) was prepared by the Contractor for USACE-New Orleans District Hurricane Protection Office (HPO), 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 Federal Levee Reach LPV 111 represents the formal Property, as defined in ASTM E1527-05. However, the USACE requested that the 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 residences, businesses, and open area within this footprint extending from the levee crown. The parcels located contiguous to the 1,000-foot footprint are considered adjoining parcels. The various environmental database search minimum search distances, as required in the Scope of Services ([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.

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

- 1.1.1 *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 Federal Levee Reach LPV 111 and does not include the entire area encompassed by the 1,000-foot footprint. After discussions with the USACE and senior technical personnel employed with the Contractor, 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 Federal Levee Reach LPV 111 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, commonly, more information (for example sampling and analytical data) is 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.

This report is intended for use only as a complete document. It is based upon the Scope of Services ([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 the proposed construction of Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX RR to Michoud Canal East Floodwall, to ensure that suitable and safe fill materials would be utilized for levee construction. The extents of LPV 111 and the 1,000-foot footprint described above are shown on

Figures B-2 and B-3. 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);
- USACE Engineering Report ER 1165-2-132, "Hazardous, Toxic and Radioactive Waste Guidance for Civil Works Projects", (USACE, 1992); and
- USACE Engineering Report ER 405-1-12, *The Real Estate Handbook* (USACE, 2000).

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 ESA was to review existing and past historical information regarding the Federal Levee Reach LPV 111, the 1,000-foot footprint, and the adjoining parcels. The ESA documents the current and historical uses of the assessment areas to determine the potential presence of any HTRW.

2.2 Detailed Scope of Services

The detailed Scope of Services provided by the USACE for this ESA, as well as the Contractor's proposal, are in [Appendix A](#). The standard professional practices that the Contractor conducted to determine if any RECs existed in connection with the Federal Levee Reach LPV 111 included, among other things, a visual inspection of the area, interviews with selected individuals who might have knowledge of its RECs, a review of readily available historical information such as aerial photographs and fire insurance maps that depict it, a drive-by inspection of accessible adjacent parcels, 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 for indications of the presence of hazardous substances or petroleum products on Federal Levee Reach LPV 111 or on nearby parcels from which those substances might migrate to the levee in other than vapor form.

In general, the Scope of Services 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 discussed in Section 11.0.

2.3 Significant Assumptions

In preparing this report, the Contractor has relied upon certain verbal information and representations provided by government employees and others, information and documents provided by the owners and/or operators of nearby businesses, and a computer search of government databases by a firm whose business is to provide that service. Except as discussed, the Contractor relied upon that information and has not attempted to independently verify its accuracy or completeness. Except as noted in the following text, the Contractor has not recognized any inconsistencies or omissions that might call into question the validity of any of the information obtained. 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 Federal Levee Reach LPV 111, and the 1,000-foot footprint, and conditions of concern on adjoining parcels as they existed at the time of this ESA, and of the conclusions drawn based upon the information obtained and assumptions made during the assessment process. This ESA was restricted to the Scope of Services 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 Property (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 Federal Levee Reach LPV 111 and the 1,000-foot footprint, but was not identified during the 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 Services, this 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 Services.

2.6 User Reliance

This report is intended for use only as the complete document. It is based upon the Scope of Services, 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 Federal Levee Reach LPV 111 New Orleans East Back Levee – CSX Railroad to Michoud Canal East Floodwall running generally east from the west end of the Michoud Canal East Floodwall along the north side of the Intracoastal Waterway, then north to the CSX Railroad. Its location is depicted on [Figures B-1 through B-3](#). The western terminus of the levee reach is at latitude 30.01646 degrees north and longitude 89.9005 degrees west. The eastern terminus is at 30.05687 degrees north and longitude 89.8327 degrees west.

The levee reach can be accessed from Interstate 10 by taking exit number 246 and traveling south on Interstate 510 approximately 2 miles to U.S. Highway 90 (Chef Menteur Highway). Turn east (left) on U.S. Highway 90 and continue approximately 3 miles to the intersection with Industrial Boulevard. Turn south (right) and proceed approximately 0.6 miles to the intersection with Intracoastal Drive. Turn southwest (left) and follow the road to a dirt turnaround area. There is a levee gate at this location ([Photograph 1](#) in [Appendix C](#)). This levee gate represents the western terminus of the LPV 111. Additional description of the physical characteristics of levee reach LPV 111 is presented in Section 3.4.

3.2 Property and Vicinity General Characteristics

The entire extent of Federal Levee Reach LPV 111 extends approximately 5.5 miles. The area encompassing the levee reach and the 1,000-foot footprint is approximately 1,332 acres. The levee reach extends northeastward from the Michoud Canal approximately 4.7 miles and then turns sharply northward until it meets the CSX Railroad. Most of the levee is bounded on both sides by undeveloped land; however, some industrial parcels are located near its western end. The intracoastal waterway parallels the levee reach on the south. Bayou Sauvage Wildlife Refuge is present south of the canal along the entire northeast-trending stretch of the levee reach. In the southwestern part of this stretch the terrain north of the levee is the New Orleans Regional Business Park (NORBP). The Bayou Sauvage Wildlife Refuge is located east of this Park ([Figure B-4](#)). The levee reach terminates at its intersection with the CSX Railroad, which runs east and west roughly parallel to Chef Menteur Highway.

3.3 Current Use of the Property

According to information obtained from the Orleans Levee District (Gillen, 2006; USACE, 1981), parts of Federal Levee Reach LPV 111 were constructed during the middle 1900s. The floodwalls of Federal Levee Reach LPV 111 described in Section 3.4 were constructed around 1981. Since that time, the levee reach has been used for flood control to protect nearby neighborhoods and businesses from the waters of Lake Borgne.

3.4 Detailed Property Description

Most of the levee is bounded on both sides by undeveloped land. However, some industrial parcels are located near its western end. The nearest of these is a site formerly occupied by BOC Gases. BOC Gases, Chemical Express, Siemens Water Technologies Corp. (formerly US Filter Recovery Services), Acergy Company, and a parcel formerly occupied by Waste Management, Inc. are all located to the north and west and are either within the 1,000-foot footprint of the levee or adjacent to it ([Figure B-5](#)). Cashman Company is located to the southwest and just within the 1,000-foot footprint of the levee. The levee runs

generally east from the eastern end of the Michoud Canal East Floodwall along the north side of the Intracoastal Waterway for approximately 4.2 miles, then north for approximately 1.3 miles to the CSX Railroad.

Federal Levee Reach 111 ranges from approximately 10 to 16 feet in height. It is constructed of earth, with a gravel roadway on top for essentially its entire length, except for its western portion, which is composed of a levee floodwall.

No gates or other structures bar access to the Federal Levee Reach LPV 111.

Information gathered during the Property inspection and background research indicated that the following stationary aboveground storage tanks (ASTs) and underground storage tanks (USTs), excluding water tanks, are known to presently be or formerly have been within the 1,000-foot footprint of LPV 111:

Tank No.	Type	Location	Contents	Age
1	UST	BOC Gases	Diesel-8,000 gal	Removed 01/01/90
2	UST	BOC Gases	Gasoline-6,000 gal	Removed 03/01/90
3	UST	BOC Gases	Diesel-10,000 gal	Removed 09/22/03
4	UST	BOC Gases	New/Used Oil-500 gal	Removed 01/01/95
5	AST	Canal Pump House No. 1	Diesel – 1,000 gal (estimated)	Unknown
6	AST	Canal Pump House No. 2	Diesel – 300 gal (estimated)	Unknown

Note: Tank numbers were arbitrarily assigned for use in this report.

The BOC Gases parcel, which is located within the 1,000-foot footprint of LPV 111, has experienced multiple releases of contaminants to the environment. These included chromates in cooling water, diesel fuel, and used oil.

The potential exists for an abandoned UST that is not discussed above to be present within the 1,000-foot footprint for which no visual, documentary, or anecdotal evidence of its existence was found during this Phase I HTRW ESA.

3.5 Current Uses of Adjacent and Surrounding Parcels

The Federal Levee Reach LPV 111 is bounded on the north at its west end by a former BOC Gases parcel, a former Waste Management, Inc. parcel, and Siemens Water Technologies Corp (formerly US Filter Recovery Services; [Figure B-5](#)). To the east of the former BOC Gases parcel the north side of the levee is bounded primarily by unimproved land. At approximately the mid-point of the northeast-trending stretch of the levee, there is a canal pump house (referred to as Canal Pump House No. 1 in this report). Beyond this point eastward, the north side of the levee is bounded primarily by marshland and a large lake of the Bayou Sauvage Wildlife Refuge, which also borders the west side of the levee following its northward turn toward the CSX Railroad. This portion of the levee is bounded on all sides by marshland. Another Canal Pump House (No. 2) is located on the western side of this north-trending stretch of LPV 111. The south side of the northeast-trending stretch of the levee is bounded by the Intracoastal Waterway ([Figure B-6](#)). Historical usages of those parcels within the 1,000-foot footprint that may have involved the use or release of hazardous substances or petroleum products in significant quantities (e.g., large quantity

generators of hazardous waste (LQGs) or current/former use of USTs) include BOC Gases and Siemens Water Technologies Corp. The locations of these parcels are shown on [Figure B-5](#).

Other parcels that are near or adjacent to the Property and 1,000-foot footprint, and whose historical usages may have involved the use or release of hazardous substances or petroleum products in significant quantities (LQGs and current/former uses of USTs), include Siemens Water Technologies Corporation (formerly US Filter Recovery Services), D.A.S. Properties, and Air Products and Chemicals, Inc. ([Figure B-5](#) and EDR Focus Map 32 as shown in [Appendix F](#)). (The precise location of D.A.S Properties could not be determined.) However, no nearby or adjacent parcel was judged to have a realistic potential for a significant adverse impact on the environmental condition of Federal Levee Reach LPV 111.

Both D.A.S. Properties and Air Products and Chemicals, Inc. have had leaking underground storage tanks (LUSTs); however, no evidence was found that these releases were large or that they had impacted the Property.

4.0 USER-PROVIDED INFORMATION

4.1 Title Records

In accordance with the Scope of Work (SOW; [Appendix A](#)), a title record search was not included in this Phase I HTRW ESA.

4.2 Environmental Liens or Activity Use Limitations

Representatives of the User reported no environmental liens, activity use limitations, or comparable encumbrances upon the Federal Levee Reach LPV 111 or parcels within the 1,000-foot footprint. The environmental database search did include a search for any environmental liens imposed by the LDEQ ([Appendix D-1](#)).

4.3 Specialized Knowledge

The User 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 Federal Levee Reach 111 or the 1,000-foot footprint. The Contractor pursued this type of information through field visits, interviews, and evaluating other databases (e.g., those provided by the LDEQ).

4.4 Valuation Reduction for Environmental Issues

The User provided the Contractor no information regarding a reduction in the value of the Federal Levee Reach LPV 111 due to environmental issues.

4.5 Owner, Property Manager, and Occupant Information

According to the Orleans Levee District, Federal Levee Reach 111 was constructed by the USACE, and it is currently maintained by the Orleans Levee District (Gillen, 2006; [Appendix F](#)).

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](#)). Federal Levee Reach LPV 111 would reportedly be enlarged with compacted fill to authorized grade. The footprint of this enlarged levee would not exceed the limits of the existing right-of-way at this time; however, if this levee is eventually brought to the 100-year flood elevation, 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.

4.7 Other User Information

The User provided no other information material to this Phase I HTRW ESA.

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 Federal Levee Reach LPV 105 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 one 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 Property, but not precisely locatable from the address information in the databases. The Contractor evaluated the information available for each Orphan site, and identified those that are or have the possibility of being within the associated minimum search distance (Based on database) of the 1,000-foot footprint. One such site was found as shown on [Table B-2](#).

The Contractor has evaluated the information in the EDR report in conjunction with the results of the LPV 111 inspection and the evaluation of its setting.

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), US 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 VRPS (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 Services ([Appendix A](#)). The databases searched and associated search distances included the following (all noted search radii are based on the edge of the 1,000-foot footprint):

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

Facilities located west of the Michoud Canal are not included in the following discussion, because the canal acts as a barrier to soil or groundwater migration onto the Federal Levee Reach LPV 111 and the 1,000-foot footprint. It is also anticipated that the USACE will not extend the Federal Levee Reach LPV 111 across the canal.

No sites on the Federal Levee Reach LPV 111 itself, within the 1,000-foot footprint, or within the appropriate minimum search radii 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);
- Hazardous Materials Information Reporting System (HMIRS);
- 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);
- EPA Listing of Brownfields Sites (US BROWNFIELDS)
- CERCLA Consent Decrees (CONSENT);
- Records of Decision (ROD);
- Uranium Mill Tailings Sites (UMTRA);
- Open Dump Inventory (ODI);
- Toxic Substances Control Act (TSCA);
- FIFRA/TSCA Tracking System (FTTS);
- Section 7 Tracking Systems (SSTS);

- Integrated Compliance Information System (ICIS);
- PCB Activity Database System (PADS);
- Material Licensing Tracking System (MLTS);
- RCRA Administrative Action Tracking System (RAATS);

State and Local Records

- State Haz. Waste;
- LDEQ-Approved Debris Sites (DEBRIS);
- Recycling Directory (SWRCY);
- Leaking Underground Storage Tank Sites (LUST);
- Environmental Liens (LIENS);
- Spills and/or Releases Reported to the Emergency Response Section (SPILLS)
- Voluntary Remediation Program Sites (VRPS);
- Drycleaners.

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. The latitude and longitude coordinates for all sites discussed in this report are presented in [Table B-3](#).

CERC-NFRAP Sites

The database search report does not indicate that Federal Levee Reach LPV 111 or any Orphan site was originally on the CERCLIS list but has been removed from it and transferred to the CERC-NFRAP list because of a decision of No Further Remedial Action Planned by the EPA. However, BOC Gases, which is located within the 1,000-foot footprint of LPV 111 and US Filter Recovery Services, which is located within one-fourth mile of it, are both on the CERC-NFRAP list.

RCRA Corrective Action Sites

Neither Federal Levee Reach LPV 111 nor any facility located within the 1,000-foot footprint is identified as being a CORRACTS site. The database search report contains information on one site located within one mile of the Property that is on the CORRACTS list. Based upon the information and maps in the database search report, US NASA/Lockheed Martin appears to be within the search radius. The potential impact of NASA/Lockheed Martin upon the Property is judged to be low because the database search report states that “migration of contaminated groundwater [was] under control” as of March 30, 2001. The facility is also on the other side of Michoud Canal and the potential for contaminants to migrate across the canal is low.

RCRIS Hazardous Waste Generator Sites

The Federal Levee Reach LPV 111 itself is not identified as having filed a RCRA notification as a hazardous waste Generator.

Two sites located within one-fourth mile are identified as having filed RCRA notifications as Large Quantity Generators (LQGs) of hazardous waste: Air Products and Chemicals, Inc. NOLA, and US NASA/Lockheed Martin. Air Products and Chemicals is located about one-fourth mile northwest of the Property and is potentially hydraulically upgradient from it. US NASA/Lockheed Martin is located about one-fourth mile west of the Property. Six sites located within one-eighth mile filed RCRA notifications as Small Quantity Generators (SQGs), and one Orphan site filed a notification as an SQG. Based upon the partial address information and maps in the database search report, this orphan site, Transwood

Logistics, Inc. may be located within one-eighth mile of the Property and topographically or hydraulically upgradient from it (Table B-2). The potential impact of the identified nearby hazardous waste generators upon the Property is considered to be moderate because of their distance from the Property. The locations of these sites are shown on Figure B-5. It should be noted that Air Products and Chemicals, Inc. has two adjacent addresses: 14701 Intracoastal Drive, listed as an LQG, and 14700 Intracoastal Drive.

RCRIS Hazardous Waste TSD Facility Sites

One site located within one mile of the Property is identified as being a RCRA Treatment, Storage, or Disposal (TSD) Facility: US NASA/Lockheed Martin is located about one-fourth mile west of the Property. No Orphan sites were identified as being TSD Facilities. The potential impact of the identified TSD Facility upon the Property is judged to be low because of its distance from the Property and the fact that US NASA/Lockheed Martin and the Property are separated by the Michoud Canal.

Leaking UST Sites

No current site that has reported a leak involving a UST system (LUST site) is identified as being located within one-half mile of Federal Levee Reach LPV 111. No sites that have reported a leaking UST are on the list of Orphan sites.

One historical LUST site, BOC Gases, was identified within the 1,000-foot footprint. Four historical LUST sites were identified within one-half mile of the 1,000-foot footprint: P.I.E. Nationwide Parkway, D.A.S. Properties, Air Products and Chemicals, and Groendyke Transport. Of these, only one, Groendyke Transport, appears to possibly have been located adjacent to the 1,000-foot footprint. The exact location is uncertain because Groendyke Transport could not be precisely located during the site inspection, and some sites that were observed during the site inspection appear to be mislocated in the EDR report. The approximate location of the former facility is shown on Figure B-5. The EDR report states that soil contamination was noted on 01/14/1993 following the removal of a UST used to store diesel fuel. The report also states that, based on a site report dated 01/06/1995, no further action (NFA) is necessary.

Registered UST Sites

No registered USTs were identified on the Federal Levee Reach LPV 111.

Registered USTs are identified as being, or having been, located at six sites within one-eighth mile of the 1,000-foot footprint. The nearest with USTs currently in service that are, or might be, hydraulically upgradient is Air Products and Chemicals, located about one-eighth mile to the northwest of the levee (Figure B-5). Seven additional sites that registered as containing one or more USTs are on the list of Orphan sites. Based upon the partial address information and maps in the database search report, none of these orphan sites are interpreted to be within one eighth mile of the 1,000-foot footprint. In the event of a release, the potential for the nearby sites with registered USTs to have a significant adverse impact on soil or groundwater on the Federal Levee Reach LPV 111 is considered to be moderate because of the proximity of Air Products and Chemicals to the reach.

Other Lists of Sites of Concern

The site formerly occupied by BOC Gases is on the list of sites with an Activity and Use Limitation (AUL). A notice of contamination (nature and levels of contaminants) and restriction of the use of that parcel to non-residential use has been placed in the conveyance records for the site.

No additional concern was identified by a review of the database search report. The Property is not on any of the other lists searched. No other located site is identified as being near the Property and in a location that is, or might be, upgradient from it, and represent a realistic potential concern with respect to its environmental condition. Also, no other Orphan site was determined to actually be located within an applicable search radius of the Property and potentially upgradient of it.

5.2 Additional Environmental Record Sources

In light of the objective of the records review (to obtain and review records that would help identify RECs in connection with the Property), in the professional opinion of Earth Tech no review of additional environmental record sources was required.

5.3 Physical Setting

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

The shallow-most 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 is unsuitable for potable uses (Boniol and others, 1989).

The elevation of the terrain within and surrounding the study area is within a few feet of sea level. Much of the area is marsh and standing water is common. Therefore any changes in elevation are slight. Depth to groundwater is anticipated to be within a few feet below ground surface. The direction of the shallow-most groundwater movement is anticipated to mimic the topography. But, because the topography is so gentle in the area, the hydraulic gradients and therefore the rate of the shallow groundwater movement are expected to be very low.

5.4 Historical Use Information

5.4.1 Aerial Photographs

Aerial photographs were reviewed for the years 1952, 1972, and 1985. These aerial photographs are in [Appendix D-2](#). Recent aerial photographs from 2006 were also reviewed. These photographs represent the base maps for [Figures B-2](#), and [B-4](#) through [B-7](#). 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 fire insurance maps exist for Federal Levee Reach LPV 111 and its 1,000-foot footprint.

5.4.3 Historical Topographic Maps

Historical topographic maps were obtained for the Federal Levee Reach LPV 111 for 1951, 1967, 1972, 1979, 1994, and 1998. These maps are shown in [Appendix D-3](#). 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

The Contractor obtained historical Polk City Directories at the New Orleans Public Library. The years 1956, 1964, 1979, 1985, 1991, 2002, and 2005 were reviewed. Only one business, not otherwise discussed in this report, was identified as potentially being within the 1,000-foot footprint. This was Dufour Petroleum, which was identified as being present in 1991 and 1985 at 15551 Intracoastal Drive. Several other sites are shown whose former locations may have been adjoining the 1,000-foot footprint. A summary of these sites is shown on [Table B-4](#). A complete set of the copied material obtained from the library is on file at the Contractor's Fort Walton Beach office and can be obtained upon request.

5.4.5 Additional Historical Sources

No additional historical sources were reviewed.

5.5 Composite Historical Timeline

The following discussion pertains to the levee reach, the land within the 1,000-foot footprint and the land adjacent to the footprint.

Year	Source	Discussion
1951	Historical Topographic Maps (Appendix D-3)	U.S. Hwy 90 and CSX Railroad are present. Land is unimproved east of Michoud Canal. Federal Levee Reach LPV 111 not constructed yet.
1952	Aerial Photograph (Appendix D-2)	The site currently occupied by Federal Levee Reach 111 is unimproved marshland, with the exception of the CSX Railroad. Some developed parcels appear on the south side of Chef Menteur Highway.
1967	Historical Topographic Maps (Appendix D-3)	Federal Levee Reach LPV 111 is constructed.
1972	Aerial Photograph	BOC Gases, US NASA/Lockheed Martin, and Air Products appear on the photograph. Other areas have not been developed.
1972	Aerial Photograph	An apparent residential area appears north of US NASA/Lockheed Martin, across Chef Menteur Highway.
1985	Aerial Photograph	The Property and surrounding sites appear much as they do today.

Historical Summary:

A levee system has been in place east of New Orleans since the middle 1900s. However, it appears from the historical topographic maps that LPV 111 was initially constructed in the middle 1960s. Most of this levee is bordered by marshland on the north and the Intracoastal Waterway on the south. The only developed areas are in the vicinity of the west end of the levee. All of these developed areas are industrial sites.

5.6 Historical Use Information on Adjacent Parcels

Historical uses of adjacent parcels are discussed in the Composite Historical Timeline, in Section 5.5 above.

6.0 RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Mr. Jerry Murphy and Mr. Nathan Craig conducted a visual reconnaissance of accessible parts of the Federal Levee Reach LPV 111, the 1,000-foot footprint, and the adjacent parcels on November 29, 2006 through December 4, 2006. One hundred percent of the Levee Reach was either walked or slowly driven in a vehicle. Similarly, the industrial parcels were visited, and interviews or walking site visits were performed. All observed transformers were mapped and documented. [Table B-1](#) in [Appendix B](#) identifies each of the transformers identified. No leaking or possibly leaking transformers were observed within the 1,000-foot footprint of LPV 111.

Attempts were made to contact owners and request permission to access all of the commercial and light industrial facilities. If no permission was obtained, a "fence line" reconnaissance was performed on appropriate businesses. Pertinent environmentally related observations and findings are described in the following sections.

6.2 General Property Setting

The height of the existing levees along LPV 111 ranges from approximately 10 to 16 feet above mean sea level (MSL). The Intracoastal Waterway represents sea level. The terrain of the 1,000-foot footprint is mostly flat marshland on both sides of the levee, with essentially no slope ([Figure B-3](#)).

There are bodies of surface water along both sides of much of LPV 111. The Intracoastal Waterway is located south of LPV 111. Marshes and an unnamed lake are located north of the east end of the levee. Shallow groundwater is expected to be encountered within 0 to 5 feet below grade, based upon surface topography. The shallow groundwater flow directions are interpreted to mimic the surface topography, albeit slowly under a low hydraulic gradient.

The inferred direction of shallow groundwater flow in the area, based upon the Property inspection and an examination of the topographic map, is generally southward, although conditions on the Property and nearby parcels, and sewer lines and/or other buried utility lines, may be significantly affecting the local flow pattern. Based upon the inferences regarding hydraulic conductivity and the local hydraulic gradient, shallow groundwater would be expected to move at a slow rate.

6.3 Exterior Observations

The following discussion includes descriptions of facilities associated with this ESA that represented some potential of environmental risk. Businesses that represented little environmental risk (on the basis of the site reconnaissance and the historical environmental records) are not mentioned in this section.

During the site reconnaissance, the effects of Hurricane Katrina were commonly observed. The physical effects included trash, construction debris, and damaged structures (commercial and industrial buildings). No obvious signs of environmental contamination directly attributable to the hurricane were observed. It appears, on the basis of anecdotal information, however, that the hurricane dislodged some or many containers of potentially hazardous material. Different sources of information (for example, anecdotal interviews and LDEQ data) support the conclusion that these containers were appropriately managed and

disposed of by government personnel (mainly EPA contractors). Earth Tech did not observe any such "unsecured" containers.

No obvious signs of major contamination were discerned during the inspection of Federal Levee Reach LPV 111. The following bullets summarize the relevant observations on or very near the levee:

- One damaged 55-gallon drum and some 5-gallon containers of a tar-like substance ([Photograph 4](#) in [Appendix C](#))
- One "port-a-john" located near the western end of LPV 111 ([Photograph 5](#) in [Appendix C](#)).
- Damaged and abandoned industrial parcels near the west end of LPV 111 (including BOC Gases and Waste Management, Inc.).
- Two canal pump houses were identified near the levee reach. These facilities contained discarded filters, minor surface staining, lead acid batteries, some drums labeled for storage of diesel and lubricants, and lawn equipment ([Photographs 7](#) through [11](#) in [Appendix C](#)). The facilities also contained ASTs labeled as containing diesel fuel.

The locations of these features noted along LPV 111 are shown on [Figures B-5](#) and [B-6](#).

Stormwater runoff from LPV 111 apparently is via sheet flow to either side of the levee. Standing (pooled) water was observed in several locations, primarily near the eastern end of the levee reach.

The railroad that marks the eastern terminus of Federal Levee Reach LPV 111 is owned by CSX. According to CSX, no environmental concerns have been identified associated with railcar transportation activities (Boland, Kevin, 2006).

Earth Tech also observed and noted the locations and conditions of all transformers within the 1,000-foot footprint of Federal Levee Reach LPV 111 ([Table B-1](#)). No leaking or possibly leaking transformers were observed during the inspection of Federal Levee Reach LPV 111.

6.4 Interior Observations

Federal Levee Reach LPV 111 has no interior conditions. No interiors of buildings associated with LPV 111, with the exception of Canal Pump House No. 1, were evaluated as part of this ESA. Inside the Canal Pump House No. 1, the material described in the fourth bullet above (in Section 6.3) was in disarray apparently caused by flooding.

7.0 INTERVIEWS

The Contractor conducted interviews with as many pertinent individuals as possible during the site inspections, using a standard interview form/questionnaire. The interviewees' information was generally corroborated by other independent sources of information (for example, the EDR Report). Subsection 7.1 describes important interviews in detail. Records of all interviews conducted are presented in [Appendix F](#).

7.1 Interviews With Owners or Occupants

Mr. Glenn Bryant, President of Houseman Group Real Estate, stated that his company has purchased the former BOC Gases site and is going to develop an industrial park on the site. He stated that the site is approximately 27 acres and was developed approximately 30 years ago. He also stated that the operations conducted on the site by BOC Gases were cryogenic and industrial gas production. He was not aware of any existing environmental contamination on the site.

Ms. Becky Jordan, Senior Environmental Staff, US NASA/Lockheed/Martin, described current and historical uses of the site. She stated that the facility is primarily involved with manufacture of space shuttle components. Since 1962, the facility has manufactured various items for the United States space program. For example, since the middle 1970s, the facility has manufactured external fuel tanks for the space shuttle. Ms. Jordan noted that Higgins boats were produced during World War II. She stated that the site was developed in 1943, was a plantation prior to that year, and contains 832 acres. She stated that the site has a history of soil and groundwater contamination, including trichloroethylene (TCE) and polychlorinated biphenyls (PCBs).

Ms. Judy Wade, Process Engineer, Siemens Water Technologies Corp., described current and historical uses of that facility. She stated that Siemens has owned the site for approximately fifteen years, and collects used oil, parts washer solvent, and oil filters for recycling at another location. She was not aware of any significant environmental concern on or near it.

Mr. William Glover, General Supervisor, Acergy Company, described current and historical uses of the site. He stated that Acergy (and a corporate predecessor) has owned the site for approximately 25 years, and that the site occupies 8 to 10 acres. Acergy builds concrete structures for oil fields. He was not aware of any significant environmental concern on or near it. According to him, hazardous substances and petroleum products that have been stored or used on the site include diesel fuel for cranes and used oil.

Mr. Penross Jackson, Supervisor, of Cashman, Inc., described current and historical uses of the site. He stated that Cashman occupies approximately 10 acres, but he was not sure how long the company had occupied the site. The site was occupied by a company called Trinity prior to Cashman. He stated that the facility provides cleaning and storage of barges. Some barges damaged by Hurricane Katrina were brought there for unloading. He was not aware of any significant environmental concern on or near it. According to him, hazardous substances and petroleum products that have been stored or used on the site include diesel fuel and lubricants.

7.2 Interviews With Local Government Officials

Earth Tech interviewed employees with the New Orleans Fire Department ([Appendix F](#)). Captain Hellmers, with the New Orleans Fire Department HAZMAT unit (504-858-7005), had no recollection of any incident of an environmental nature specific to the Federal Levee Reach LPV 111. However, he did

note that after Hurricane Katrina, several containers of potentially hazardous material were collected in the area. Captain Hellmers thought the containers were empty and that EPA checked them out and removed them. Tom Papa, Chief of 4th District New Orleans Fire Department, was not aware of any potential environmental concerns along Federal Levee Reach LPV 111.

7.3 Interviews With Others

No interviews were conducted with facilities adjoining the 1,000-foot footprint, because none of these properties were occupied.

8.0 FINDINGS

This section presents the various types of RECs (known, suspected, historical known, and historical suspected), as well as de minimis conditions, associated with Federal Levee Reach LPV 111 identified by the Contractor during this Phase I HTRW ESA. These findings are based on a comprehensive review of data available to the Contractor. These data include the environmental records review (Section 5.0), site reconnaissance observations (Section 6.0), and interviews with knowledgeable personnel (Section 7.0).

No known or suspected current or historical RECs were identified on Federal Levee Reach LPV 111 itself. Similarly no known RECs were identified outside of LPV 105 but within the 1,000-foot footprint.

Suspected RECs exist at three facilities within the 1,000-foot footprint because of either past environmental violations, management of relatively high volume and movement of fuels or other hazardous materials (for example, BOC Gases), or by the nature of the business increasing the chances of associated environmental impact (for example, Canal Pump House No. 1).

The Contractor has included the locations of the former registered USTs 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 done correctly and approved by the LDEQ). Historical suspected RECs were also identified for sites where the former activities, by their nature, may have caused environmental degradation.

The effects of Hurricane Katrina throw a wild card in identifying RECs. Anecdotal discussions describe potentially hazardous material being dislodged and moved about during the storm. Information obtained during this ESA indicates that such unsecured containers were properly managed and transported off site.

Although no obvious contamination was observed during the walkovers, the sediments in areas on both sides of the levee could have been impacted by the storm activities and its aftermath.

Although subsurface impacts are known to exist on the US NASA/Lockheed Martin parcel located to the west of Federal Levee Reach LPV 111, that site is not considered to represent a concern with respect to the levee reach or the adjacent 1,000-foot footprint because it is separated from Federal Levee Reach LPV 111 by the Michoud Canal.

The findings below are based upon the information obtained during this ESA, and discussed in the previous sections of 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.

Known or Suspect Recognized Environmental Conditions

No known or suspected RECs were observed on the Federal Levee Reach LPV 111 itself. Similarly, no known REC was identified within or adjoining the 1,000-foot footprint. Three suspected RECs were identified within the 1,000-foot footprint of LPV 111, as follows:

- The former BOC Gases facility (metals, petroleum products and potentially solvents);
- The Canal Pump House No. 1 located approximately midway along the northeast-trending stretch of the levee (petroleum products and potentially solvents); and
- One abandoned port-a-john (human wastes).

The locations of these suspected RECs are shown on [Figure B-7](#).

Historical Known or Suspected Recognized Environmental Conditions

No known or suspected historical RECs were observed on the Federal Levee Reach LPV 111 itself. The following site is identified both as a historical REC (because of past releases) and a historical suspected REC (because of former USTs) within the 1,000-foot footprint:

- The former BOC Gases facility (metals, petroleum products and potentially solvents).

The location of this historical REC and historical suspected REC is shown on [Figure B-7](#).

The following sites are identified as historical suspected RECs whose locations have not been specifically determined, but that may be within the 1,000-foot footprint:

- Dufour Petroleum (petroleum products) and
- Groendyke Transport, Inc. (petroleum products).

Known or Suspect De Minimis Environmental Conditions

A 55-gallon drum and several 5-gallon containers of tar-like material shown on [Figure B-5](#) may contain residual petroleum products or hazardous material and are considered a de minimis environmental condition.

Other Environmental Concerns

The site formerly occupied by BOC Gases is on the list of sites with an Activity and Use Limitation (AUL). A notice of contamination (nature and levels of contaminants) and restriction of the use of that parcel to non-residential use has been placed in the conveyance records for the site.

Also, the diesel fuel ASTs at the Canal Pump Houses Nos. 1 and 2 could become a REC in the future if a leak were to occur.

9.0 OPINIONS

Based upon all of the information obtained, the environmental professionals who conducted this ESA believe that the suspect environmental conditions identified in Section 8.0 have not resulted in an impact to the soil or groundwater quality within the Federal Levee Reach LPV 111 itself. Therefore, Earth Tech sees no need to collect soil or groundwater quality samples with regard to the levee reconstruction efforts within the current levee footprint. Earth Tech would suggest, however, being vigilant during any invasive or ground breaking activities for physical signs of contamination. Also, if any of the soil will be moved off site, the USACE is encouraged to follow appropriate characterization protocols.

If the USACE extends the footprint of the levee onto the location of the suspected RECs, the historical REC, or the historical suspected RECs that are located within the 1,000-foot footprint area, the Contractor recommends that the USACE consider collecting soil and/or groundwater quality samples at those locations. The locations where sampling should be considered are shown on [Figure B-7](#).

10.0 CONCLUSIONS

At the request of USACE-HPO, Earth Tech, Inc. has performed a Phase I HTRW ESA in accordance with the Scope of Services attached in [Appendix A](#) and in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 of the Federal Levee Reach LPV 111. Any exceptions to, or deletions from, the ASTM Standard Practice are described in Chapters 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 suspected RECs, a historical REC, and historical suspected RECs have been identified 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), or to approximately 1940.

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:

- Recorded Land Title Records
- 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

No interviews were conducted with business operators outside of the 1,000-foot footprint. Such interviews are not required by ASTM Standard E1527-05, and the observed businesses adjacent to the 1,000-foot footprint were unoccupied. Therefore, the lack of these interviews is not considered a data gap.

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.

13.0 REFERENCES

- ASTM, November 1, 2005. "ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, E 1527-05", Philadelphia, Pennsylvania.
- Boland, Kevin, CSX Rail Road, Personal Communications with Earth Tech, January 4, 2007.
- Boniol, D., Autin, W.J., and Hanson, B.C., September 1989. *Recharge Potential of Louisiana Aquifers*, Open File Series No. 88-07 Louisiana Geological Survey, Baton Rouge, Louisiana.
- Casanova, Joe, Orleans Levee District, Personal Communications with Earth Tech, December 21, 2006 (see also [Appendix F](#)).
- Environmental Data Resources, Milford, Connecticut, *EDR® Corridor Study Package Report*.
- Gillen, Gerry, Orleans Levee District, Personal Communications with Earth Tech, December 28, 2006 (see also [Appendix F](#)).
- Saucier, R.T., 1994. *Geomorphology and Quaternary Geologic History of the Lower Mississippi Valley*, U.S. Army Waterways Experiment Station.
- U.S. Army Corps of Engineers, March 1981. *Lake Pontchartrain Barrier Plan New Orleans East Back Levee, Orleans Parish, Louisiana*.
- U.S. Army Corps of Engineers, *Hazardous, Toxic, and Radioactive Waste Guidance for Civil Works Projects*, ER 1165-2-132, June 26, 1992.
- U.S. Army Corps of Engineers, *The Real Estate Handbook*, ER 405-1-12, May 15, 2000.

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:



Jerry Murphy
Project Professional

Reviewed by:



Stuart I. Rixman
Manager, EHS Services
Project Professional

15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The environmental professionals, whose signatures are shown in Section 14.0, declare that, to the best of their professional knowledge and belief, they meet the definition of Environmental Professional as defined in paragraph 312.10 of 40 Code of Federal Regulations (CFR) 312. They have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property (that is the Federal Levee Reach LPV 111). They have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Resumes of the environmental professionals named in Chapter 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.