March 22, 2007

Earth Tech, Inc.
536 Washington Avenue
New Orleans, LA 70130

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 109 New Orleans East Levee – South Point to CSX Rail Road
New Orleans, Louisiana

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 109 New Orleans East Levee – South Point to CSX Rail Road. 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

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,

Alexander P. Macbeth

Alec Macbeth
Project Manager

Enclosure: Phase I HTRW ESA Report, Revision 2, LPV 109 New Orleans East Levee – South Point to CSX Rail Road

Phase I Hazardous Toxic or Radioactive Waste Environmental Site Assessment

Federal Levee Reach LPV 109, New Orleans East Levee – South Point to CSX RR
New Orleans, Louisiana

Prepared for:
U.S. Army Corps of Engineers, New Orleans District
Hurricane Protection Office
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March 22, 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 109 New Orleans East Levee—South Point to CSX Railroad in New Orleans, Louisiana (the "Property") was prepared by Earth Tech, Inc. for 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".

Federal Levee Reach LPV 109 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 1000-foot footprint extending from either side of the centerline of the levee. Therefore, the Contractor evaluated the residences, businesses, and open area within this footprint extending from the levee crown. Any parcels located contiguous to the 1,000-foot footprint are considered adjoining parcels. The various environmental database search minimum 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. Eight figures (Figures B-1 through B-8) that depict aspects of this report are included in Appendix B.

The professional practices that the Contractor conducted to determine if any recognized environmental conditions (RECs) existed in connection with the Federal Levee Reach LPV 109 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 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 109), in the professional opinion of the Contractor, no review of additional environmental record sources is required.

Federal Levee Reach LPV 109 New Orleans East Levee – South Point to CSX RR is located in the eastern part of Orleans Parish. It trends generally southeastwardly from South Point, near the southern end of the Interstate 10 bridge over Lake Pontchartrain, through Irish Bayou. The levee reach crosses U.S. Highway 90 (Chef Menteur Highway; Photographs 8 and 9 in Appendix C) and continues to the CSX RR crossing (Figures B-1 through B-4).

The Contractor drove the entire levee reach as well as nearby roads (U.S. Highway 90, U.S. Highway 11) and observed from the roads all of the parcels (which were light industrial, commercial, or residential) within the 1,000-foot footprint of Federal Levee Reach LPV 109 (Figures B-5 through B-8). No obvious signs of environmental contamination were observed within this area.

No known or suspected current or historical RECs were identified on Federal Levee Reach LPV 109 itself. For the land outside of LPV 109 but within its 1,000-foot footprint, no current or historical recognized environmental conditions (RECs) were identified.

With regard to suspected RECs, the Contractor considers all of the sites that are registered as having current underground storage tanks (USTs) 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 sites because of the relatively high potential of environmental concerns.

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 Louisiana Department of Environmental Quality [LDEQ]).

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. However, no unsecured containers of potentially hazardous material were observed. 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.

Known or Suspect Recognized Environmental Conditions

No known RECs were identified within the study area of LPV 109.

Four USTs at Schaffer's Grocery were documented as being "Active" as of March 23, 2001. The potential exists that these USTs are still in place and that a release may have occurred from one or more of them. There could also have been a release due to water displacing petroleum when the area was flooded.

Two abandoned "Port-a-Johns" identified in Figure B-5 may contain human waste. Abandoned boats identified in Figures B-6 and B-7 may still contain fuels and lubricants, and may also contain hazardous substances. The potential exists for a release from one or more of these boats.

Therefore, the suspected RECs are identified at the following facilities:

- Schaffer's Grocery (four USTs);
- Abandoned "Port-a-Johns";
- Abandoned house; and
- Abandoned boats.

The locations of these suspected RECs are shown on Figure B-8.

Historical Known or Suspected Recognized Environmental Conditions

Four USTs at Barney Johnston, Jr. were removed as of August 1, 2000, and five USTs at Phillips 66 CO #009838 were listed as closed as of April 24, 1986. No evidence was found of releases from any of these USTs, therefore no historical RECs were identified within the study area of LPV 109.

Earth Tech has included the locations of the former registered USTs as historical suspected RECs, because of the potential that some soil or groundwater impacts may exist, even though the tank removals and closures were done correctly and approved by the LDEQ. The following sites are identified as historical suspected RECs, on the basis of the former presence of a registered UST:

- Barney Johnston, Jr., four USTs were removed as of August 1, 2000;
- Phillips 66 CO #009838, five USTs were listed as closed as of April 24, 1986.

The locations of these historical suspected RECs are shown on Figure B-8.

Known or Suspect De Minimis Environmental Conditions

No known or suspect de minimis environmental conditions were identified within the study area of LPV 109.

Other Environmental Concerns

The diesel fuel ASTs on the O'Meara site 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 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 Federal Levee Reach LPV 109 itself. Therefore, the Contractor sees no need to collect soil or groundwater quality samples with regard to the levee reconstruction efforts within the current levee footprint. The Contractor would suggest, however, vigilance during any invasive or ground breaking activities for physical signs of contamination. Also, if any of the soil will be moved offsite, the USACE is encouraged to follow appropriate characterization protocols.

If the USACE extends the footprint of the levee onto the location of one of the suspected RECs or historical suspected REC that is located within the extended 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-8.

At the request of USACE-HPO, the Contractor 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 109. 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 (both current and historical) 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 109 New Orleans East Levee – South Point to CSX RR 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 no more than 1,000 feet on either side of the levee crown. The location and current extent of levee reach LPV 109 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 109 New Orleans East Levee – South Point to CSX RR in 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 109 represents the formal Property, as defined in ASTM E1527-05. However, the USACE requested that the Phase I HTRW ESA include the entire area that falls within a 1000-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 radii, 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 radii 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 (RECs)* - 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 109 and does not include the 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 109 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). Several derelict structures (port-a-johns and abandoned boats) which represent a potential for unmanaged wastes are also included as suspected RECs in this report.

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 Levee Reach LPV 109 New Orleans East Levee – South Point to CSX RR, to ensure that suitable and safe fill materials are utilized for levee construction. The extents of LPV 109 and the 1000-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 Phase I HTRW ESA was to review existing and past historical information regarding the levee reach LPV 109, the 1000-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 109 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 109 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. 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 109, 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 levee reach (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 109 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 109 New Orleans East Levee – South Point to CSX Railroad running generally south from the east end of Federal Levee Reach LPV 108 to the CSX Railroad. Its northwestern terminus is located at South Point near the southern end of the Interstate 10 bridge crossing Lake Pontchartrain. It can be recognized by an acute angle change in orientation from northeasterly (LPV 108) to southwesterly (LPV 109). The northwestern terminus of Federal Levee Reach 109 is at latitude 30.14747 degrees and longitude 89.8806 degrees. The levee reach is approximately 7.5 miles and trends generally south-southeast over Interstate 10 and U.S. Highway 11 (in the southern portion of Irish Bayou). It continues over ponds and wetlands of the Bayou Sauvage Wildlife Refuge and then crosses U.S. Highway 90 (Chef Menteur Highway), bends eastward and southeastward and continues to the CSX RR crossing. Its southeastern terminus is at latitude 30.05726 and longitude 89.8327

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 5.5 miles to the crossing of LPV 109 over U.S. Highway 90. The location of LPV 109 is depicted on Figures B-2 and B-3 in Appendix B. Additional description of the physical characteristics of levee reach LPV 109 is presented in Section 3.4.

3.2 Property and Vicinity General Characteristics

Levee Reach LPV 109 extends approximately 7.5 miles. The area encompassing the levee reach and the 1,000-foot footprint is approximately 1,800 acres. Most of the levee is bounded on both sides by salt marsh; however, it intersects U.S. Highway 11 at Irish Bayou and also crosses U.S. Highway 90 (Chef Menteur Highway). 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

Levee Reach LPV 109 is used for flood control to protect the northeastern side of New Orleans from the waters of Lake Pontchartrain.

3.4 Detailed Property Description

Most of the levee is bounded on both sides by salt marsh and ponds (Photograph 3 in Appendix C). However, it intersects U.S. Highway 11 on the south side of Irish Bayou and also crosses U.S. Highway 90 (Chef Menteur Highway) and then runs parallel to Chef Menteur Highway for approximately 1.5 miles before turning south, at which point it is again bounded by marsh on both sides and terminates at its intersection with the CSX Railroad. One industrial parcel, BOH Brothers Construction, was observed near the intersection of LPV 109 and U.S. Highway 11 at Irish Bayou. At the intersection of LPV 109 and Chef Menteur Highway and to the east for approximately 1.5 miles, there are several commercial and industrial parcels, most of which are located on the north side of Chef Menteur Highway (Photograph 7 in Appendix C). These include a National Guard storage yard, Textron Marine and Land, Chef Seafood, Gill's Crane and Dozer, Inc., Garner Environmental Services, Pearl River Navigation, Inc. and O'Meara, Inc. There are also several industrial parcels in this area that are severely damaged and have no sign indicating the name of the former occupant.

Federal Levee Reach 109 ranges from approximately 15 to 20 feet in elevation above mean sea level (MSL). It is constructed of earth, with a gravel roadway on top for essentially its entire length (Photograph 6 in Appendix C). Access to the levee reach is restricted at the highway and railroad crossing via locked gates managed by the Bayou Sauvage Wildlife Refuge.

3.5 Current Uses of Adjacent and Surrounding Parcels

The Property is bounded on the north at Irish Bayou by BOH Brothers Construction and a few residences along U.S. Highway 11 to the north of the levee (Figure B-6). The Property is bounded by a National Guard storage yard on the west side of the levee at its intersection with Chef Menteur Highway, and on its east side by Textron Marine and Land at Chef Menteur Highway (Figure B-7). 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 Textron Marine and Land, Gill's Crane and Dozer Services, Pearl River Navigation, Inc. and O'Meara, Inc. The locations of these parcels are shown on Figure B-7.

Other parcels that are near or adjacent to the Property and 1000-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), may include some of the unidentified industrial parcels along Chef Menteur Highway east of its intersection with LPV 109 (Figure B-7). However, no nearby or adjacent parcel was judged to have a realistic potential for a significant adverse impact on the environmental condition of Levee Reach LPV 109.

Several transformers are also located within the 1,000-foot footprint of LPV 109. These are summarized in Table B-1.

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.

4.2 Environmental Liens or Activity Use Limitations

Representatives of the User reported no environmental liens, activity use limitations, or comparable encumbrances upon the Levee Reach LPV 109 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 109 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 109 due to environmental issues.

4.5 Owner, Property Manager, and Occupant Information

According to the Orleans Levee District, Federal Levee Reach 109 was constructed by the USACE, and it is currently maintained by the Orleans Levee District (Gillen, 2006; Appendix F). According to the historical topographic maps, the Federal Levee Reach LPV 109 was originally constructed between 1951 and 1967 (Appendix D-3).

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. Federal Levee Reach LPV 109 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 1000 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 109 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 none that are or have the possibility of being within the applicable minimum search distance (based on the orphan's database) of the 1,000-foot footprint.

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).

No sites on the Federal Levee Reach LPV 109 itself, within the 1,000-foot footprint, or within the appropriate 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);
- CERCLIS NFRAP;
- RCRA Corrective Action (CORRACTS);
- RCRIS Hazardous Waste TSD Facility;
- 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);
- 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;
- 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);
- US Brownfields;
- Toxic Chemical Release Inventory System (TRIS); and
- Mines.

State and Local Records

- LDEQ-Approved Debris Sites (DEBRIS);
- Recycling Directory (SWRCY);
- Environmental Liens (LIENS);
- Voluntary Remediation Program Sites (VRPS);
- Potential and Confirmed Sites List (SWHS);
- Solid Waste Facilities/Landfill Sites (SWF/LF);
- Leaking Underground Storage Tanks (LUST);
- Spills and/or Releases (SPILLS);
- Activity and Use Limitations (AUL); and
- Drycleaner Facility Listing.

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. Table B-2 lists the latitude and longitude coordinates of all sites discussed in this report.

RCRIS Hazardous Waste Generator Sites

The Federal Levee Reach LPV 109 itself is not identified as having filed a RCRA notification as a hazardous waste Generator. No site located within one-fourth mile or an Orphan site is identified as having filed a RCRA notification as a Large Quantity Generator (LQG) of hazardous waste.

Four sites located within the 1,000-foot footprint of LPV 109 filed RCRA notifications as Small Quantity Generators (SQGs) of hazardous waste. All four sites are located north and topographically upgradient of the levee: Bayou Sauvage Boat Lift, Inc.; Gill's Crane and Dozer Service, Inc.; U.S. Marine, Inc.; and Garner Environmental Services, Inc. All four sites are Conditionally Exempt Small Quantity Generators. The locations of these sites, where known, are shown on Figure B-7.

One SQG site was identified within one-fourth mile of the 1,000-foot footprint, Halter Marine, Inc. (19501 Chef Menteur Highway). This site is located topographically downgradient of the levee.

No orphan sites filed notifications as SQGs.

The potential impact of the identified nearby hazardous waste generators upon Federal Levee Reach LPV 109 itself is considered to be low because no LQGs are located within one-fourth mile of the levee. No documentation of violations has been identified for the SQGs located north of the levee, except for United States Marine, Inc., which received three general-all requirements (oversight) violations in September 1996. Compliance was achieved in December 1997.

Registered UST Sites

No registered USTs were identified on the Federal Levee Reach LPV 109 itself.

Three sites with registered USTs are identified as being within the 1,000-foot footprint, however. All three are located topographically upgradient of the levee reach: Schaffer's Grocery, Barney Johnston, Jr., and Phillips 66 CO #009838. According to the EDR report, the four USTs located at Schaffer's Grocery were still active as of March 23, 2001. The four USTs at Barney Johnston, Jr. were removed as of August 1, 2000, and the five USTs at Phillips 66 CO #009838 were listed as closed as of April 24, 1986. The locations of these sites are shown on Figure B-7.

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 LPV 109 is considered to be high because the four USTs located at Schaffer's Grocery may still be active and are located within the 1,000-foot footprint.

Other Lists of Sites of Concern

No additional concern was identified by a review of the database search report. The Federal Levee Reach LPV 109 is not on any of the other lists searched. No other located site is identified as being near LPV 109 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 LPV 109 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 Federal Levee Reach LPV 109), in the professional opinion of the Contractor, 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, since the topography is so gentle in the area, the hydraulic gradients and therefore the rate of the shallow groundwater movement is expected to be very low.

5.4 Historical Use Information

5.4.1 Aerial Photographs

Aerial photographs (in Appendix D-2) were reviewed for the years: 1952, 1972, and 1985. Recent aerial photographs from 2006 were also reviewed. The composite historical timeline in Section 5.5 contains a summary of the observations made from those aerial photographs.

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 109 and its 1,000-foot footprint.

5.4.3 Historical Topographic Maps

Historical topographic maps were obtained for the Federal Levee Reach LPV 109 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, and 2002 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 Fort Walton Beach office and can be obtained upon request.

On the basis of the review of the historical city directories, the following businesses that used to be present within the 1,000-foot footprint and warrant note are as follows:

- Trans Gulf Sea Plane Rentals (current occupant unknown) at 19685 Chef Menteur Highway;
- Paillot Construction (current occupant unknown) at 19761 Chef Menteur Highway.

The businesses noted above do not include those already discussed in this report. The pertinent years of operation for these facilities are shown on Table B-3.

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 Map	Federal Levee Reach LPV 109 has not been constructed yet. No businesses are shown along the north side of Chef Menteur Highway east of its intersection with U.S. Highway 11 in the southern part of the reach.
1952	Aerial Photograph	The site currently occupied by BOH Brothers Construction has not been developed. Parcels to the north along U.S. Highway 11 appear to be residences, boat yards and boat slips.
1952	Aerial Photograph	Only a few developed parcels appear on the north side of Chef Menteur Highway and east of U.S. Highway 11. These appear to be commercial and industrial parcels.
1967	Historical Topographic Map	Federal Levee Reach 109 has been constructed. Very few buildings are shown along the north side of Chef Menteur Highway east of its intersection with U.S. Highway 11 in the southern part of the reach. Interstate 10 is constructed.
1972	Aerial Photograph	The site currently occupied by BOH Brothers Construction has not been developed. Additional residences, boat yards and boat slips appear along U.S. Highway 11 north of the levee. No development appears south of the levee.
1972	Aerial Photograph	Much of the north side of Chef Menteur Highway and east of U.S. Highway 11 is developed. A small portion of the land currently occupied by Textron Marine and Land is developed.
1985	Aerial Photograph	The site currently occupied by BOH Brothers Construction has not been developed. With this exception, most of the land to the north of the levee along U.S. Highway 11 appears as it does today. No development appears south of the levee.
1985	Aerial Photograph	The north side of Chef Menteur Highway and east of U.S. Highway 11 appears much as it does today, with predominantly commercial and industrial development on the north side of the highway and little development on the south side.

Historical Summary:

A levee system has been in place east of New Orleans since before 1950. However, the historical topographic maps don't show the presence of Federal Levee Reach LPV 109 until 1967. The levee reach was reprocured circa 1991 (USACE, 1991). Most of this levee is bordered by marsh land of the Bayou Sauvage Wildlife Refuge on both sides. The only developed areas are in the community of Irish Bayou along U.S. Highway 11 north of the levee and the north side of Chef Menteur Highway from its intersection with U.S. Highway 11 to the east for approximately 1.5 miles. Development in both of these areas was sparse until approximately 1972.

5.6 Historical Use Information on Adjacent Parcels

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

6.0 RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Mr. Nathan Craig and Mr. Jerry Murphy conducted a visual reconnaissance of accessible parts of the Federal Levee Reach LPV 109, the 1000-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 transformers identified during the site reconnaissance are documented in Table B-1. No leaking or possibly leaking transformers were observed on the Federal Levee Reach LPV 109 or within its 1,000-foot footprint.

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 109 ranges from approximately 15 to 20 feet above mean sea level (MSL; USACE, 1991). Lake Pontchartrain represents sea level. The terrain of the 1,000-foot footprint is mostly flat marshland on both sides of the levee, with a very gentle slope southward (Figure B-3).

There are bodies of surface water along both sides of much of LPV 109. Lake Pontchartrain and the Chef Menteur Pass are located east of LPV 109. Marshes are located west 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 buildings and other 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. Sites 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 (homes, apartment buildings, and commercial 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 109. The following bullets summarize the relevant observations on or very near the levee reach:

- Two "port-a-johns" located near the northern end of LPV 109 (Figure B-5);
- An abandoned house (apparently dislodged and moved by Hurricane Katrina) on the east side of LPV 109, south of Interstate Highway 10 (Figure B-6; Photograph 2 in Appendix C);
- Two abandoned boats on the west side of LPV 109, south of Interstate Highway 10 (Figure B-6; Photographs 2 and 3 in Appendix C);
- An abandoned boat on the east side of LPV 109, southeast of the community of Irish Bayou (Figure B-6);
- Five abandoned shrimp boats and one barge on the north side of LPV 109, south of Chef Menteur Highway (Figure B-7; Photographs 4 and 5 in Appendix C).
- Two abandoned shrimp boats on the south side of Chef Menteur Highway (Figure B-7).

Storm water runoff from the Property apparently is via sheet flow to either side of the levee. Standing (pooled) water was observed in numerous locations on both sides of the levee.

Earth Tech also observed and noted the locations and conditions of all transformers within the 1,000-foot footprint of Federal Levee Reach LPV 109 (Table B-1). No leaking transformers were observed during the inspection of federal levee Reach LPV 109.

6.4 Interior Observations

Federal Levee Reach LPV 109 has no interior conditions. No interiors of buildings associated with LPV 109 were evaluated as part of this ESA.

7.0 INTERVIEWS

The Contractor conducted interviews with as many business operators and employees as possible during the site inspections, using a standard interview form/questionnaire. Interviewees consistently indicated no awareness of current environmental concerns at their facilities. Their information was generally corroborated by other independent sources of information (for example, the EDR Report and LDEQ environmental records). 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

Records of interviews that contain information beyond that summarized in this Section are in Appendix F.

Mr. Chuck Wolfe, Bridge Maintenance Superintendent with BOH Brothers Construction, described current and historical uses of the site. He stated that BOH Brothers Construction has owned the site for approximately 25 years, and conducts bridge maintenance using boats. 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.

Mr. Tommy Nguyen, Owner of Chef Seafood, described current and historical uses of the site. He stated that Chef Seafood has owned the site for approximately 25 years, and was a seafood wholesaler prior to Hurricane Katrina. He was not aware of any significant environmental concern on or near it. According to him, no hazardous substances or petroleum products have been stored or used on the site.

Mr. Ken Legici, Manager of O'Meara, Inc., described current and historical uses of the site. He stated that O'Meara, Inc has owned the site since approximately 1994, and provides boat maintenance and boat storage. 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, lubricants and paints. O'Meara has two 1,000-gallon diesel fuel aboveground storage tanks (ASTs).

Mr. Lloyd Vix, Manager of Gill's Crane and Dozer Service, described current and historical uses of the site. He stated that Gill's Crane and Dozer Service has owned the site for approximately 10 to 12 years, and provides bulkhead and piling construction services. 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.

Mr. Lance Pacet, of Pearl River Navigation, described current and historical uses of the site. He stated that Pearl River Navigation has owned the site for approximately 3 to 4 years, and does oil field work. 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.

Mr. Perry Bergeron, Environmental Health and Safety Manager of Textron Marine and Land, Inc., described current and historical uses of the site. He stated that Textron Marine and Land, Inc. has owned the site since 1981, and produces armored vehicles. 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, lubricants, paints, adhesives and sealants.

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 (504-858-7005), had no recollection of any incident of an environmental nature specific to the Levee Reach LPV 109. However, he did note that after Hurricane Katrina, several containers of potentially hazardous material were collected in the area. Also, a barge designed to contain solvents was found adjacent to LPV 109, south of Chef Menteur Highway (Figure B-7). Captain Hellmers thought the container was empty and that EPA checked it out and removed it. Tom Papa, Chief of 4th District New Orleans Fire Department, was not aware of any potential environmental concerns along Levee Reach LPV 109.

7.3 Interviews With Others

No interviews were conducted with facilities located outside of the 1000-foot footprint.

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 109 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 109 itself. For the land outside of LPV 109 but within its 1,000-foot footprint, no current or historical recognized environmental conditions (RECs) were identified.

With regard to suspected RECs, the Contractor considers all of the sites that are registered as having current USTs 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 relatively high potential of environmental concerns.

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. However, no unsecured containers of potentially hazardous material were observed. 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.

Known or Suspect Recognized Environmental Conditions

No known RECs were identified within the study area of LPV 109.

The four USTs at Schaffer's Grocery were documented as being "Active" as of March 23, 2001. The potential exists that these USTs are still in place and that a release may have occurred from one or more of them. There could also have been a release due to water displacing petroleum when the area was flooded.

The abandoned "Port-a-Johns" identified in Figure B-5 may contain human waste. Abandoned boats identified in Figures B-6 and B-7 may still contain fuels and lubricants, and may also contain hazardous substances. The potential exists for a release from one or more of these boats.

Therefore, the suspected RECs are identified at the following facilities:

- Schaffer's Grocery (four USTs);
- Abandoned "Port-a-Johns";
- Abandoned house; and
- Abandoned boats.

The locations of these suspected RECs are shown on Figure B-8.

Historical Known or Suspected Recognized Environmental Conditions

Four USTs at Barney Johnston, Jr. were removed as of August 1, 2000, and five USTs at Phillips 66 CO #009838 were listed as closed as of April 24, 1986. No evidence was found of releases from any of these USTs, therefore no historical RECs were identified within the study area of LPV 109.

Earth Tech has included the locations of the former registered USTs as historical suspected RECs, because of the potential that some soil or groundwater impacts may exist, even though the tank removals and closure were done correctly and approved by the LDEQ. The following sites are identified as historical suspected RECs, on the basis of the former presence of a registered UST:

- Barney Johnston, Jr., four USTs were removed as of August 1, 2000;
- Phillips 66 CO #009838, five USTs were listed as closed as of April 24, 1986.

The locations of these historical suspected RECs are shown on Figure B-8.

Known or Suspect De Minimis Environmental Conditions

No known or suspect de minimis environmental conditions were identified within the study area of LPV 109.

Other Environmental Concerns

The diesel fuel ASTs on the O'Meara site 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 known or suspected RECs identified in Section 8.0 have not resulted in an impact to the soil or groundwater quality within the Federal Levee Reach LPV 109 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, vigilance during any invasive or ground breaking activities for physical signs of contamination. Also, if any of the soil will be moved offsite, the USACE is encouraged to follow appropriate characterization protocols.

If the USACE extends the footprint of the levee onto the location of one of the suspected REC or historical suspected REC that is located within the extended 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-8.

10.0 CONCLUSIONS

At the request of USACE-HPO, the Contractor 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 109. 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 (both current and historical) 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 1950.

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 were rather innocuous with regard to potential environmental concerns. 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

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U.S. Army Corps of Engineers, *Hazardous, Toxic, and Radioactive Waste Guidance for Civil Works Projects*, ER 1165-2-132, June 26, 1992.

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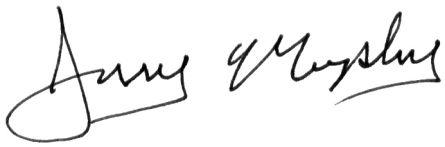
Saucier, R.T., 1994. *Geomorphology and Quaternary Geologic History of the Lower Mississippi Valley*, U.S. Army Waterways Experiment Station.

14.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONALS

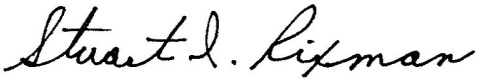
Following are the signatures of the environmental professionals who conducted this Phase I HTRW ESA and primarily prepared this report, and who reviewed it.

Prepared by:



Jerry Murphy
Project Scientist

Reviewed by:



Stuart I. Rixman
Manager, EHS Services

15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

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.