

FINAL

Phase I Environmental

Site Assessment

Inner Harbor Navigational Canal (IHNC) Levees and Floodwalls
IHNC AND GULF INTRACOASTAL WATER WAY (GIWW)
New Orleans, Louisiana 70117 and 70126

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1.0 SUMMARY

At the request of United States Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), AECOM has performed a Phase I Environmental Site Assessment (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 Inner Harbor Navigation Canal (IHNC) and Gulf Intracoastal Water Way (GIWW) levees and floodwalls located along the IHNC and GIWW, and nine small staging areas in the vicinity of the levees and floodwalls, in New Orleans, Louisiana (the "Property"). The Property is being investigated as the USACE will potentially be restoring/reinforcing portions of the levee system along these water bodies. The existing levee system is designated with "station" numbers which represent a standard basis of measurement in engineering. The term "stations" refers to a form of measurement that marks distance in 100-ft increments along the longitudinal axis of the levee. The deficient portions of the levee system discussed in this report will be identified by their designated station numbers. The staging areas were investigated as potential equipment and materials storage areas to be used temporarily during these repairs. Any exceptions to, or deletions from, the ASTM Practice are described in Chapter 2.0 of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) (as that term is defined in ASTM Standard Practice E1527-05) in connection with the Property, except for the following:

Known or Suspected Recognized Environmental Conditions

Station Gate W-1

Former USCG Facility at 4640 Urquhart Street, New Orleans, LA 70117

Soils potentially impacted by hazardous substances or petroleum products by adjacent facility.

Coordinates: 29° 58' 1.65"N, 90° 1' 38.77"W

Station 18-28+85

Southern Scrap/Southern Recycling

Soils potentially impacted by hazardous substances or petroleum products by adjacent facility.

Coordinates: 29° 58' 54.16"N, 90° 1' 11.60"W

Historical Recognized Environmental Conditions

Adjacent properties which have had historical leaks or spills include (but are not limited to): the Port of New Orleans, 6201 France Road; UPS, 5700 Morrison Road; Southern Recycling, 4801 Florida Avenue; Baroid Drilling Fluids (currently Halliburton), 8000 Jourdan Road; NASA, 13800 Old Gentilly Road; and Seabrook Marine, 5801 France Road.

Known or Suspect De Minimis Environmental Conditions

Station 79

Adjacent to the Elaine Street Pump Station

Soils potentially impacted by hazardous substances or petroleum products by historical and adjacent facilities.

Other Environmental Concerns

Stations along the northern end of the IHNC

Soils potentially impacted by hazardous substances or petroleum products by adjacent facilities.

Station 247

Soils potentially impacted by hazardous substances or petroleum products by a liquid gas pipeline or the maintenance thereof.

It should be noted that the potential exists for an abandoned UST that is not discussed above to be present on or adjacent to the Properties for which no visual, documentary, or anecdotal evidence of its existence was found during this ESA.

The standard professional practices that AECOM conducted to determine if any RECs existed in connection with the Property included, among other things:

- Conducting a visual reconnaissance of the Property;
- Interviewing individuals who might have knowledge of its present and/or historical RECs;
- Reviewing readily available historical information such as aerial photographs, topographic maps and fire insurance maps that depict the Property;
- Conducting a drive-by inspection of accessible adjacent parcels;
- Reviewing environmental records that were made available to AECOM; and
- Reviewing a computer search of selected Federal and State environmental databases for indications of the presence of hazardous substances or petroleum products on the Property or on nearby parcels from which those substances might have migrated to the Property in other than vapor form.

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 the CEMVN and its legal counsel. No other person or organization is entitled to rely upon any part of it without the prior written consent of AECOM. USACE or its legal counsel 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 AECOM, such third party agrees that it shall have no legal recourse against AECOM 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.

2.0 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) report for the Inner Harbor Navigation Canal (IHNC) floodwalls and levees and nearby staging areas located adjacent to the IHNC and Gulf Intracoastal Water Way (GIWW), New Orleans, Louisiana (the “Property”) was prepared by AECOM for the CEMVN, who is the “User” of this report, as that term is defined in ASTM Standard Practice E1527-05 for a Phase I Environmental Site Assessment. In this report, the term User includes any legal counsel or other representative of the User.

The format of this report generally follows the recommendations in ASTM Standard Practice E1527-05. The following definitions from that Standard Practice are important for understanding this report. Terms in italics are defined in that Standard Practice.

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

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

- 3.2.52 *material threat* - a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional*, is threatening and might result in impact to public health or the environment.

- 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, ground water, 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 report has been formatted similar to the ASTM Standard Practice E1527-05 recommended outline. However, the database and historical sources sections (Sections 5.1.1 – 5.1.4 and 5.4.1 – 5.4.4, respectively) were divided into subsections (Station Grouping 1, 2, and 3 and staging areas) grouping nearby or adjacent stations. The project area was divided because of its overall length and the non-contiguous parcels (Figure 1, Appendix B). The station groupings were organized according to proximity so that the historical sources would be the same. Table 1 shows the station grouping, the stations within each station grouping, the estimated length, and the report sections specific to the station groupings. Each station has a separate description, photo log, and adjacent property interview section.

Table 1. Location of the individual parcels within the Phase I ESA document, showing the groupings of the nearby or adjacent stations.

Station Grouping	Type	Estimated Length (feet)	Station	Report Sub-Section
1	Levee	500	28+85	5.1.1/5.4.1
1	I-wall	300	18+00	5.1.1/5.4.1
1	Gate	100	W-1/1+44	5.1.1/5.4.1
2	Gate	1000	E-14	5.1.2/5.4.2
2	I-Wall	1,000	20+00	5.1.2/5.4.2
2	I-Wall	1,000	30+00	5.1.2/5.4.2
2	Gate	500	32+00	5.1.2/5.4.2
2	I-Wall	200	73+00	5.1.2/5.4.2
2	L-Wall	3,000	79+00	5.1.3/5.4.3
2	Earthen	1,600	247+00	5.1.3/5.4.3
2	T-Wall	500	268+00	5.1.3/5.4.3
2	I-Wall	400	270+00	5.1.3/5.4.3
2	I-Wall	400	278+00	5.1.3/5.4.3
2	I-Wall	600	406+00	5.1.3/5.4.3
2	I-Wall	400	449+00	5.1.3/5.4.3
2	I-Wall	400	454+00	5.1.3/5.4.3
2	I-Wall	1000	525+00 to 535+00	5.1.3/5.4.3
3	I-Wall	600	268+00	5.1.2/5.4.2
3	I-Wall	1,000	258+00	5.1.2/5.4.2
3	I-Wall	1,000	256+00	5.1.2/5.4.2
3	I-Wall	800	248+00	5.1.2/5.4.2
3	I-Wall	600	200+00	5.1.2/5.4.2
Staging areas	Open Space	3.4 acres total	A-H	5.1.4/5.4.4

2.1 Purpose

The primary purpose of this ESA was to provide the intended recipients with information about the general environmental character of the Property.

To the extent applicable, another purpose of this ESA was to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitations on CERCLA liability (hereinafter, the “*landowner liability protections*,” or “*LLPs*”). An ESA in conformance with ASTM E1527-05 constitutes “*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice” as defined at 42 United States Code (U.S.C.) §9601(35)(B). Terms in italics in this paragraph are defined in the U.S.C.

2.2 Detailed Scope of Services

The detailed Scope of Services for this ESA is in Appendix A. The standard professional practices that AECOM conducted to determine if any RECs existed in connection with the Property included, among other things:

- Conducting a visual reconnaissance of the Property;
- Interviewing individuals who might have knowledge of its present and/or historical RECs;
- Reviewing readily available historical information such as aerial photographs, topographic maps and fire insurance maps that depict the Property;

- Conducting a drive-by inspection of accessible adjacent parcels;
- Reviewing environmental records that were made available to AECOM; and
- Reviewing a computer search of selected Federal and State environmental databases for indications of the presence of hazardous substances or petroleum products on the Property or on nearby parcels from which those substances might have migrated to the Property in other than vapor form.

For the purpose of this evaluation, all of the discontinuous parcels (Station Grouping 1, 2, and 3 and staging areas) are referred to collectively as “the Property”.

In general, the Scope of Services has been completed in accordance with the scope and limitations of ASTM Standard Practice E1527-05. Any deviations from the ASTM Standard Practice are discussed in Chapter 11.0.

2.3 Significant Assumptions

In preparing this report, AECOM has relied upon certain verbal information and representations provided by Government employees and others, documents provided by the Property owner and/or operator, and a computer search of government databases by a firm whose business is to provide that service. Except as discussed, AECOM has relied upon that information and did not attempt to independently verify its accuracy or completeness, but did not detect any inconsistency or omission of a nature that might call into question the validity of any of it. 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. AECOM 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 AECOM.

The investigators assumed that the Property itself, consisting of levees, floodwalls, and floodgates, was occupied and not abandoned because it is periodically checked by the CEMVN and maintained by the Orleans Levee Board (now part of the Southeastern Flood Protection Authority). Additionally, it was assumed that the recent use of the Property would not have caused any environmental impacts. The materials imported for the initial construction of the structures on the Property were assumed to be “clean”, containing no waste, petroleum products, or hazardous materials.

2.4 Limitation and Exceptions

During the site reconnaissance, some portions of the Property could not be fully assessed due to access constraints. These Portions of the property were observed as closely as possible from the fence-line. Additionally, although attempts were made to identify previous occupants of abandoned and unused buildings adjacent to the Property, the information was not always available. Site visits at abandoned adjacent properties were not performed, due to potentially dangerous conditions and lack of access or permission to access. As access was only granted to the Property itself, in depth site visits were not performed on adjacent occupied properties. Attempts were made to interview the occupants/owners of adjacent properties that could be identified and contacted. The site visits were followed up with emails and/or phone calls to the adjacent property owners and operators of interest. If calls were not answered on the second attempt, a message was left if possible. If the phone or email message was not returned, a reasonable attempt was considered to have been made.

Desktop and database research was considered sufficient for properties not immediately adjacent to the Property.

A Freedom of Information Act (FOIA) request was not submitted to either the Louisiana Department of Environmental Quality (LDEQ) or the United States Environmental Protection Agency (USEPA). However, these agencies were contacted via telephone to request information for the Property. These

requests rely on address-specific information. The floodwall and levee stations in question do not have addresses; therefore, they could not be located by these agencies within a FIOA request. A record of these communications is contained in Appendix F.

This report is limited to representations of identified RECs on and near the Property 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 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 ESA is not intended to be a definitive investigation of existing or potential adverse environmental impacts, and thus it is possible that such an impact exists on the Property 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 AECOM.

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 and its legal counsel. No other person or organization is entitled to rely upon any part of it without the prior written consent of AECOM. USACE or its legal counsel 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 AECOM, such third party agrees that it shall have no legal recourse against AECOM 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 Properties are located along the IHNC and GIWW, New Orleans, Louisiana. Their general locations are depicted on the map in the database search report in Appendix D-1. Appendix B contains figures showing their essential features. In the figure, the levee stations are identified as reaches, which is the official term for the portions of the levees, depending on which side of the IHNC and GIWW they are located. The station groupings in the following discussion are not the same, as stations were grouped according to proximity, which occasionally includes stations from more than one reach.

The User did not provide a legal description or survey of the Property to AECOM.

3.2 Property and Vicinity General Characteristics

Most of the Properties are either floodwalls or earthen levees located on the IHNC or the GIWW within the City and Parish of New Orleans, Louisiana. The staging areas are mowed or paved areas adjacent to or near the levee stations. The majority of the Property sections are located in industrial or heavy industrial areas. One is located between an industrial and residential area (Station Grouping 2, Stations 268-256-258 and 200), and one is located in relatively open space (Station Grouping 3, Station 247). Section 3.4 describes each section in detail.

The database search report did not contain a summary of the results of tests for the presence of radon gas at the levee and floodwall locations. Due to the nature of the Property and the absence of buildings or future plans for enclosed buildings on the Property, radon gas information was not considered relevant.

3.3 Current Use of the Property

The Property consists of a narrow strip of land parallel to the IHNC and GIWW, which is the location of levees and floodwalls constructed to protect inland areas from flooding from those water bodies. The Property also includes nine smaller properties located close to, but not within, the levee and floodwall corridor, which will be used as staging areas for materials and equipment during future levee and floodwall improvement activities. The current use of the Property (the levees and floodwalls and associated Right of Way [ROW]) is for flood protection for the City of New Orleans and the surrounding area. For the purposes of this report, 'the Property' includes the ROW, although there are no structures on it. The staging areas are paved or mowed open space nearby. No hazardous substances are currently stored on the Property. Hazardous substances may be used on a station during routine maintenance activities. Any spills of hazardous substances during maintenance activities would be immediately reported to the Southeastern Flood Protection Authority or the Orleans Levee Board environmental coordinator and addressed in compliance with all USACE, Federal and State policy, laws, and guidance.

3.4 Detailed Property Description

Photographs of portions of the Property are in Appendix C. Aerial maps and figures are found in Appendix B. Each station of levee or floodwall (Station) has its own photo log and aerial figure (2 -13). Due to their small size, the staging areas have been combined into two figures (14 and 15).

3.4.1 Station Grouping 1

Levee Stations 18+00 and 28+85

This station consists of a levee, floodwalls and floodgates adjacent to Southern Recycling (formerly Southern Scrap) near the intersection of Harbor Road and Florida Avenue (Photos 1-27, Appendix C and Figure 2, Appendix B). The general character of the surrounding area is heavy industrial. At the bend in the levee there is a floodgate, which provides access to Bayou Bienvenue and the outfall canal. This

floodgate is flanked on both sides by a short section of floodwall and associated levee joint. At the most southerly end of this reach, there is an additional section of floodwall and associated joint. This floodwall continues on to another floodgate providing access to Florida Avenue. At the time of the site visit, the levee was vegetated with mowed grass and in good condition. No tanks, transformers, or other items which would be of environmental concern were observed on the Property itself.

Southern Scrap immediately abuts the levee and floodwall on the flood side for the entire length of the station investigated. This facility recycles used cars, refrigerators, and other large metal materials, including barges and ships. There were many piles of debris, both metal and non-metal, observed throughout the site, as well as near the levee and floodgates. Several tanks were observed near the levee during the site visit, but none were immediately adjacent to the Property boundary. These tanks were above ground, approximately 300 to 500-gallons in size, rusted, and not equipped with secondary containment. Based on the poor condition of the tanks, their location and configuration on the property, and the nature of the business performed at the facility (metal recycling), it is assumed that these tanks were empty, and were staged onsite for recycling. As access to the Southern recycling facility was not granted, these tanks were not inspected in detail, but only seen from the top of the levee and during the escorted car ride through the Southern Recycling facility. While being escorted through the facility to get to the levee station, one 500 gallon propane tank, one 1000 gallon gasoline tank and one 500 gallon diesel tank were observed. These tanks were not immediately adjacent to the property.

On the northern end of this levee station, there is a roadway immediately adjacent, between the Southern Recycling operations and the levee. On the southern end, there is a stand of trees between the levee and the Southern Recycling facility. These trees do not appear to be stressed. The Southern Scrap facility flooded during Hurricane Katrina and a site worker reported that a ship ended up in the center of the property.

The protected side of the levee on the southern end is adjacent to a narrow, undeveloped space and Bayou Bienvenue. Further south is the large main outfall canal into which the Florida Avenue pump station discharges. During the site visit, this pump station appeared to not be in use and the intake appeared to be in disrepair. The Norfolk Southern Railroad tracks lie between the pump station and the levee station. On the northern end of the levee on the protected side is a small dirt road with a large wooded area further east. Satellite imagery reveals a landfill operation approximately 500 feet further east. This landfill was later identified as the Southern Recycling fluff landfill from records found in the LDEQ database (see Section 5.2). The fluff landfill was observed during the second site visit. It consists of a very large pile of soft and/or plastic car parts, at least 20 feet high in some places. During the site visit, it was being reconfigured to ensure that runoff from the pile would be contained within the landfill and not runoff into the surrounding area. The road leading to the landfill was also littered with fluff, presumably from falling off the trucks on the way to the landfill.

Gate W-1

This portion of the Property is a floodwall adjacent to the IHNC lock between the St. Claude and North Claiborne Avenue bridges (Photos 270-410, Appendix C and Figure 3, Appendix B). On the protected (western) side of the floodwall, there are railroad tracks immediately adjacent. Further to the west and southwest are a large warehouse and a residential area. There are many pole-mounted transformers, owned by Entergy, supplying the residential area, which are not on the Property. These transformers were not investigated as they were not on the Property, nor are they immediately adjacent. To the south, on the protected side, are portions of the IHNC lock property and the former United States Coast Guard (USCG) administrative buildings. The Lock Master, Mr. Richard McKinsie, reported that there were asbestos containing materials (ACM) in the abandoned USGC buildings.

On the flood side of the floodwall, to the north and east, are the IHNC lock and the former USCG operations buildings. Further to the east is the IHNC itself. The southeastern end of the floodwall station in question is adjacent to the IHNC lock command building at the northern end of the lock. The lock extends southwards from here. Approximately in the center of the lock are a monitoring well and a two-

inch pipe protruding from the ground, adjacent to a manhole. This well is not on the Property itself. According to the Lock Master this is one of several wells which are part of a piezometer system which is used when the lock is being de-watered. The water level in the wells is checked to make sure the lock is not being pushed out of the ground during de-watering. He had no specific knowledge of the other various protruding pipes along the lock, other than some of these were also used by the engineers for data collection.

Adjacent to the southeastern end of the Property is a 500-gallon diesel tank (above ground) associated with a generator, which is in secondary containment. This tank is on the Property itself. The building adjacent to the generator has external electrical boxes abutting the levee associated with the lock.

In the center of the east-west running portion of the floodwall there is a floodgate, providing access to the former USCG operations area. To the north of the floodwall is a docking area, used by both the IHNC lock personnel and the former USCG facility. This dock area is not on the Property itself, but adjacent. At the time of the first site visit, a large barge filled with soil, debris, and used tires was moored to the dock. During the second visit, this barge was being unloaded onto another vessel. The pilings for this docking area appear to be made of creosote-coated timbers. The dock area has many unidentified pipes protruding from it at intervals along its entire length.

On the southern end of the USCG facility, there are three foundations indicating former buildings; two of these foundations are on the Property itself, the third is adjacent, between the dock and the other foundations. The foundation to the southwest does not appear to have any piping associated with it. The foundation just north of this one consists of a series of upright concrete walls. The foundation closest to the dock area has pipes protruding from it, which appear to be water plumbing. This foundation also has three layers of nine-by-nine-inch tile, which could be ACM. Between this foundation and the dock area, on the southern end, is a small shed containing machinery and pipes, including pipelines leading to and from the shed.

Further to the north, in the former USCG facility, there are four standing buildings. Two are metal, one is brick, and the fourth is concrete. The building to the southwest (building #1) has a sign on the southwest corner denoting a confined space underground (Photo 352). This entire building is on the Property itself. The confined space is covered with a rusted metal plate. Also in this area are two 10-gallon plastic buckets of an unknown corrosive material, evidenced from the partial remains of a hazard label (Photo 348). A concrete foundation behind this building may have been a containment and stand for a former aboveground storage tank (AST). There was no AST present at the time of the site visit. There is heavy machinery in this part of the building and behind it, possibly associated with underground storage tanks (USTs) related to the confined space and other pipes protruding from the ground in the vicinity. No record of a UST at this location was found in the LDEQ database, however, the confined space and multiple pipes adjacent suggest the possibility. The confined space may also provide access to equipment and machinery underground. This area was not investigated during the site visit, due to potentially dangerous conditions.

Other portions of this building contain several unlabeled 55-gallon drums and many smaller unlabeled containers, both open and sealed. The building also contains debris and abandoned machinery and parts throughout. In one room there is a metal floor grate which was not possible to see through. In an adjacent room, with many machinery parts on the floor, are two five-gallon oil buckets that are leaking onto the concrete. There are also several five-gallon gas buckets in this room, with unknown contents. Some areas had access to an upper floor; these floors were not investigated due to safety reasons. This building has numerous pipes in multiple combinations and configurations in the rear which are connected to the ground along the building's entire length.

The second former USCG building (building #2), immediately adjacent, to the east, was in similar condition. This building is adjacent to the Property. There are three 55-gallon drums labeled as containing hydraulic fluid; actual contents are unknown. There are numerous additional 55-gallon drums

that are not labeled; contents unknown. On the eastern side of this building there are three two-by-two-foot concrete foundations with two-inch pipes protruding from them. There are also three breaker boxes protruding from the ground with additional electrical conduit nearby which may have been connected to the breaker boxes previously. Outside, between this building and the next, is a large square access panel adjacent to several pipes protruding from the ground. Also in this vicinity are several smaller access holes labeled gas and water. Adjacent to the large access panel is a rusted metal panel at ground level with a pipe protruding from it; contents unknown (Photos 385-387).

The third former USCG building (building #3) is older and constructed of bricks. This building is not on the Property itself, but is immediately adjacent. This building is also filled with debris and containers of all sizes. One 55-gallon drum is labeled as containing compressor fluid; this drum is open to the air. The southern-most room has four four-by-three-foot metal plates in the concrete floor, with handles for access to the underneath. The previous use for these is unknown. There are five-gallon cans of diesel fuel cleaner in one room, and six large batteries on a wooden pallet in another. The batteries were adjacent to a sealed plastic tub which may also contain batteries. There is a five-by-five-foot stain on the floor in this room, next to the batteries and the tub. In an adjacent room there are two metal five-gallon buckets of unknown contents, one of which is leaking onto the concrete and adjacent debris. This building has a second floor throughout which was not investigated due to safety reasons.

The fourth USCG building is much smaller and constructed of concrete. It is a one story, two-room building with concrete floors. One room is entirely filled with a metal dumpster. The other room has some debris and a single paint can in it. This may have been a garage.

To the west of the third and fourth USCG buildings is an open area with large piles of debris. This area also has concrete foundations which may have been stands and containment for ASTs. Later investigations using the LDEQ database revealed that this area was the hazardous waste storage area, which also contained a fuel tank. In this area, there are three pole-mounted transformers. These transformers have been disconnected from the buildings, but are still wired to the power source. They were presumed to be owned by Entergy, were unlabeled and had no indication of Polychlorinated Biphenyls (PCB) content. The transformer pole is located approximately 200 feet to the northwest of the Property. At the northern end of the yard, under the North Claiborne Avenue Bridge, is a pad-mounted transformer and associated electrical panels. This transformer is approximately 600 feet to the north of the Property. It was not possible to ascertain the ownership of this transformer as it was behind a fence, approximately 15 feet away.

3.4.2 Station Grouping 2

Gate E-14

This portion of the Property is the floodgate at the northern end of Jourdan Road. This is on the eastern bank of the IHNC (Photos 28-44, Appendix C and Figure 4, Appendix B). The gate provides access from Jourdan Road to Hayne Boulevard. The general character of the surrounding area is industrial. It is a large mechanized closure structure. During the site visit, the road and adjacent areas were flooded from an unknown source. Immediately to the north of the gate are the Southern Railroad tracks and an additional floodgate. There is an electrical transfer box on the southern side of the tracks containing batteries.

To the southeast, on the protected side, immediately adjacent, is the Catholic Charities Archdiocese of New Orleans warehouse. There is a single pole-mounted #25 transformer (numbered 181062) immediately adjacent to the Catholic Charities Warehouse (Photo 33). This transformer is on the Property and was not labeled as to PCB content. Pole-mounted transformers line the length of the floodwall ROW on the protected side; these are not on the Property, but are adjacent. To the south of the Catholic Charities warehouse is another unidentified warehouse facility. The front of this facility has signs advertising its availability for lease. There are a series of relief wells and a six-inch Polyvinyl chloride (PVC) pipe protruding from the ground on the protected side of the floodwall, next to the

unoccupied facility. Relief wells are installed along portions of levees within the project area to relieve possible excess hydrostatic pressure exerted by the adjacent water body. They consist of a well screen and filler material, which allows water to flow in and out; thus they do not contain any hazardous materials or petroleum products.

To the southwest, on the flood side, is the Halliburton facility. This is an industrial facility with several silos, hoppers, belts, a large parking area, and large piles of gravel. There are several buildings which appear to be industrial or temporary in nature. ASTs were visible from the fence line, including a 100-gallon diesel AST, welding equipment, 55-gallon drums with unknown contents, and four-inch pipes protruding from the ground at the northern end of the facility. The diesel AST and the 55-gallon drums are in secondary containment. Several pole-mounted transformers are found along the western side of Jourdan Road (Photos 34 and 35). These transformers are not on the Property itself, but are approximately 200 feet to the southwest.

Stations 20+00, 30+00 and 32+00

This portion of the Property is a floodwall along the eastern bank of the IHNC (Photos 45-81, Appendix C and Figure 5, Appendix B). The general character of the surrounding area is heavy industrial. The western side of the stretch is abutted by Jourdan Road with train tracks adjacent to the road, further to the west of the Property. The eastern side has various industrial and warehouse facilities. The northern end of this stretch abuts a slip on the west and warehouses, including Prime Source Building Materials to the east.

Further south, west of the Property, across Jourdan Road, is the Morrison Road Wharf Storage Yard, which appears to be abandoned. This site contains several tanks with unknown contents stored along the Storage Yard fence line (Photo 49). These tanks are not on the Property, nor are they immediately adjacent, but are across Jourdan Road and the train tracks. They do not appear to be leaking and their contents are unidentified. There are five sets of pipes protruding from the ground along the access road to the Storage Yard indicating possible USTs. The buildings are constructed of sheet metal and are in extreme disrepair. Further south, is a large open space between the Morrison Wharf and US Gypsum which is on the southern end of the Property. In this area, there are shallow gas, water, and sewer lines crossing the railroad tracks. The lines are buried underground, so the condition of the pipes was not ascertainable during the site visit.

To the east of the floodwall adjacent to the Wharf Storage yard are UPS and Riverside Lumber. The UPS truck washing station is approximately 300 feet from the floodwall centerline. This facility appears to be in good condition. Adjacent to UPS on the north is an abandoned property with piles of debris and discarded machinery. On the southern end of the Property to the east of the floodwall is the US Gypsum facility. There is a gate in the floodwall, which provides rail access to US Gypsum. This facility has a large equipment storage area with rail cars, a pad-mounted transformer, silos, and four-inch pipes protruding from the ground. These items appeared to be in good condition and no spills or leaks were evident from the investigators' view from the floodwall. A large AST is located between the UPS parking area and the US Gypsum work area, adjacent to the floodwall, approximately 75 feet from the gate providing rail access to the US Gypsum facility. This AST has no secondary containment; however, the LDEQ database has records of this facility stating they have no hazardous substances on site. Therefore, the AST may contain water. The southern end of the US Gypsum facility is occupied by large silos, which are connected to a barge off-loading area on the IHNC with a series of overhead conveyor belts.

This portion of the floodwall is also lined on the eastern side with relief wells protruding from the ground. These are spaced approximately 100 feet apart and are occasionally accompanied by a smaller 6- or 12-inch PVC pipe. The eastern side is also lined with pole-mounted transformers immediately adjacent to the Property, serving the facilities abutting the floodwall. These transformers were a mixture of old and new units, some numbered and some not numbered. None of them appeared to be leaking. Their

numbers were not noted due to access difficulties. Their PCB content is unknown as they were not labeled with this information.

Station 73+00

This portion of the Property is a floodwall on the east bank of the IHNC, adjacent to the IHNC itself (Photos 82-103, Appendix C and Figure 6, Appendix B). The general character of the surrounding area is industrial. At the northern-most end of the stretch, there is a storage building that appears to be abandoned, containing various hoses, pipes, and machine parts. There is a 12-inch pipe running underground on the southwest corner of this building, proceeding under the floodwall to the IHNC. The contents of this pipe are unknown.

Immediately adjacent to this building there is a closure structure in the floodwall. This structure was closed at the time of the site visit. Access to the western side of the floodwall was not attempted; however, investigators were able to look over the floodwall in some areas. On the other side of the closure structure is an abandoned pier and building, both in disrepair. The pier is constructed of what appear to be creosote-coated pilings and there are four-inch pipes running along the remains of the pier to the building. The contents of the pipes are unknown. Between the abandoned building and Jourdan Road, there is a pad-mounted transformer, with power lines running to the Entergy property. There were no labels on this transformer. This transformer was considered adjacent to the Property. Additionally, there are two poles with transformers to the north of the abandoned building (one with four and one single), neither the poles nor the transformers were labeled. These transformers were also considered adjacent to the Property.

To the east of the closure structure, on the protected side, there is a large manhole, which was being worked on during the site visit. The contractor (Stewart Construction) informed the investigators that they were using the manhole to access a culvert running from the IHNC to the Entergy property across Jourdan Road. They were using divers to build a frame into which concrete would be poured in order to seal off the culvert and prevent the flooding of the Entergy property. The Entergy facility is across Jourdan Road from the floodwall, approximately 600 feet away, and appeared to be non-operational at the time of the site visit. Further south, on the east side of the floodwall, is another large manhole providing access to the same culvert. This manhole is in a large open space with mown grass and small shrubs and trees. Adjacent to the open area is a slight depression, which may be a stormwater retention area. During the site visit to the Entergy Michoud Plant, the investigators were informed by Gus Von Bodungen and Sandra Bradford of Entergy that the facility on the IHNC was inoperable and that the culvert work had been completed as of 8 July 2010.

Further south, there is a drainage canal and associated pumps and pipes. Three pole-mounted transformers are located approximately 20 feet from the pumps along the canal. The pipes from the pumps and canal run through the floodwall, approximately half way up. The southernmost adjacent property is Dupuy Storage. Access to the floodwall at this point was blocked by a fence. Immediately adjacent to the floodwall behind Dupuy Storage is a large grass-covered area with one railroad track extending almost all the way to the Property. This facility appears to have a raised concrete containment area in the rear of the buildings, but there was no storage tank observed in the containment area at the time of the site visit.

Stations 268+00, 258+00, 248+00 and 256+00

This portion of the Property is a floodwall along the western bank of the IHNC (Photos 205-241, Appendix C and Figure 7, Appendix B). The general character of the surrounding property is both residential and heavy industrial. To the west of the floodwall is a residential area, on the other side of the Property ROW. The ROW on the protected side of the floodwall has a series of relief wells protruding from the ground along the entire length of the floodwall. On this side, there are also a series of pole-mounted transformers in the residential area; these are not immediately adjacent to the Property, but are on Congress Drive. On the east side of the floodwall is France Road and several industrial facilities, both

in use and non-operational. The investigators concentrated on the industrial side of the floodwall, as impacts from the residential area were considered very unlikely.

At the northern end of the floodwall is a floodgate allowing access between Hayne Boulevard and France Road. The northernmost facility is the former Shavers-Whittle property, which is currently fenced off and inaccessible. There are two buildings on the property; the rest of it is either paved or covered with grass or small shrubs. There are three pole-mounted transformers on the entryway to this area. To the south of this property is an open space, which is highly overgrown. Adjacent is the parking and staging area for Cat 5 Composites, LLC. This company designs, builds and repairs boats. The Cat 5 building is a metal industrial building which houses offices and facility operations. Across the parking area, near the shoreline, there are six transformers on an elevated platform and a single pole-mounted transformer. These transformers are 600 feet from the ROW, and were not labeled.

Immediately south of Cat 5 is the Pontchartrain Landing Recreational Vehicle (RV) Park. This area is well kept, and has three pole-mounted transformers across France Road from the property. Northeast of the RV park is a slip which has foundations of previous buildings next to it. This area is where the transformers behind Cat 5 are located. The foundation slab immediately to the south of the transformers appears to be stained. To the west of this foundation is a concrete structure that may have been the base for a large AST. There are piles of rubble and unknown fill material on both sides of the slip. According to LDEQ records this area has a restriction on the use of the property as non-residential only, due to a previous UST leak which could not be fully remediated.

To the south of the RV park is Seabrook Marine, a facility which repairs boats and larger vessels. There is one pole-mounted transformer across France Road from the Property for this facility. The yard is somewhat overgrown, and there are large amounts of machinery and vessels in various states of repair throughout. Several warehouse buildings area also present. No tanks were visible at Seabrook Marine from France Road. To the south of Seabrook Marine is a non-operational facility with a sign reading KYE. A large warehouse, a guardhouse, and a parking area were observed through the fence.

Station 200+00

This portion of the Property is a floodwall and floodgate on the western shore of the IHNC adjacent to the Chef Menteur Bridge (Photos 242-269, Appendix C and Figure 8, Appendix B). The general character of the surrounding area is industrial with a small portion of a residential area to the west. The western part of the floodwall abuts a residential area to the west on the other side of the onramp to the bridge. South of the floodwall is the Chef Menteur Bridge and an access road. North of the floodwall is the Trinity Yachts property. Immediately adjacent to the western part of the floodwall is a pole-mounted transformer on France Road. France Road runs over the floodwall approximately 200 feet north of the station investigated. The north-south running station of the floodwall has a small dirt road and railroad tracks next to it, followed by the Trinity facility further east.

The Trinity facility manufactures luxury yachts. It is very large and contains several large warehouse buildings and many smaller buildings. Immediately adjacent to the western end of the floodwall station is a very large warehouse. To the north, where France Road descends to the other side of the floodwall, is a 500-gallon diesel tank located within secondary containment. To the east of this tank, abutting a larger warehouse, there are several electrical boxes and a pad-mounted transformer. South of this building there are additional chemicals and electrical boxes adjacent to another building. The chemicals appear to be welding supplies.

The next more southern building is a work area with several 55-gallon drums with unknown contents. Further south, there is a hazardous materials storage area, approximately 100 feet from the corner in the floodwall. This area is immediately adjacent to the Property. This area contains a 500-gallon used oil tank, six 55-gallon drums with unknown contents and a dumpster for used oil filters. The tanks and drums are elevated, appear to be in good condition and are in secondary containment. There are also two

concrete structures in this double-fenced area of unknown use. Closer to the corner in the floodwall is a large piece of machinery with several valves and pipes protruding from the ground.

The east-west portion of the floodwall also abuts the Trinity property, with the access road for the Chef Menteur Bridge on the southern (protected) side. This portion of the floodwall is elevated and reinforced with rip rap. On the Trinity property there are a high voltage area within a secondary fence, some possibly stained soil and large pieces of ships. No tanks or other containers were observed on this side of the Trinity Property. On the protected side of the floodwall, approximately half way to the IHNC, there is a manhole labeled 'COX' possibly indicating underground cabling within the levee embankment. There are three pole mounted transformers at the eastern end of the floodwall (pole number 41245499067). They were not individually numbered or labeled as to PCB content. Additionally, there is a bundle of pipes (possibly cables) which run through the floodwall towards the IHNC at this end (Photos 266 and 269).

3.4.3 Station Grouping 3

Station 79+00

This portion of the Property is a floodwall along the northern bank of the GIWW (Photos 104-139, Appendix C and Figure 9, Appendix C). The general character of the surrounding area is heavy industrial. The eastern end of the property abuts the GIWW on the south, with two apparently abandoned barge loading areas to the south. On the northern side of the wall in this area there is a dirt road and a large grassy area. Further north, there is an area which appears to have been used to burn trash and a slab foundation from a prior structure. In the distance, many tanker trailers belonging to Heniff are parked. Near the center of the property is a floodgate which allows access to the GIWW and the two barge loading areas, one to the east and one to the west. To the north of the gate is a 1,000-gallon diesel tank adjacent to the access road. The contents of this tank are unknown; it does not appear to be in use and there is no secondary containment. This tank is approximately 100 feet from the Property, to the north of the floodgate. There are no signs of leaks or spills.

On the flood side of the gate there is a pier and one building made of concrete; both of which appear abandoned. The pier pilings appear to be constructed of creosote-coated poles. The shore line in this area appears stained and there is a petroleum odor. This area is on the Property itself, and immediately adjacent, depending on water levels.

Further west on the flood side of the wall is the second barge loading area, which also appears to be abandoned. There are large piles of debris under this structure, some of which appear to be oil booms. The western end of the property consists of the joint where the floodwall joins an earthen levee. Adjacent to the joint is an area where the barge loading facility crosses over the levee to the protected side. There is a large pile of what appear to be creosote-coated timbers approximately 200 feet from the joint.

Immediately to the west of the gate, on the protected side, is the Elaine Street pump station operated by the Sewerage and Water Board of New Orleans (S&WB). This station has been removed and is currently undergoing renovation. There is a small fenced area with two temporary buildings and storage containers currently occupied by the contractors renovating the pump station on the east side of Elaine Street, just inside the floodgate. The pump station drainage pipes run through the floodwall approximately 50 feet from the floodgate. There is a pad-mounted transformer adjacent to the gate and the pump station, which appeared to be non-operational. No labels regarding the PCB content of this transformer were observed. There are additional pipes and pumping machinery mounted on a concrete platform next to the transformer.

On the protected side of the floodwall, occupying the entire area, there is a large industrial area, mostly occupied by Heniff. This company transfers materials from train cars to tanker trucks. This industrial area is both adjacent to the Property and on portions of it. It is unclear which company operates which portions of the adjacent property. The Heniff operations center is located approximately 300 feet to the north of the Property, but tanker trucks and other equipment are staged throughout the area. Some of this equipment appears abandoned and ownership was not established by the investigators. There is a large propane tank located on the access road from Elaine Street to the Heniff facility, approximately 300 feet north of the Property. There are three pole-mounted transformers adjacent to the propane tank. Additionally there are ASTs adjacent to the tanker loading building, also 300 feet north of the Property.

Another facility near the floodgate, on the protected side, makes asphalt. This facility is adjacent to and on portions of the Property. This company has large piles of asphalt, silos, earth moving machinery, and an AST from Tri-State Oil Company. This AST was approximately 50 feet north of the Property. It was not observed in detail due to the facility operations which involved traffic associated with large earth moving equipment. Additional plastic-wrapped cubic yards of black sandy material are present all around this yard and are presumed to be used by the asphalt company. Much of the entire area is covered with debris of various types. Three pole-mounted transformers are lying on the ground next to what appears to

be an abandoned conveyor belt machine. They are labeled as non-PCB containing, but are not numbered or marked with the owner's name.

Approximately 300 feet to the north of the floodgate, on the eastern side of Elaine Street, there is a large excavated area. There are large piles of asphalt and debris, surrounding standing water. There is no apparent sheen in the water and a pumping device was observed on the northern end of the ponded area.

Station 247+00

This portion of the property is an earthen levee on the northern side of the GIWW (Photos 140-153, Appendix C and Figure 10, Appendix B). The general character of the surrounding area is open space. To the south of the levee is the GIWW. To the north is a large open area with tall vegetation and further north, a drainage canal. The eastern end of the levee is adjacent to the Paris Road Bridge. Immediately adjacent the bridge, where there is a bend in the levee, there is an underground pipeline owned by LDH Energy. This pipeline begins in a canal on the north side of the levee, continues through the levee itself and crosses the GIWW. This pipeline is reported to contain liquid natural gas. The vegetation covering the levee over this pipeline appears to be stressed, unlike the rest of the area.

The levee continues west without interruption. At the western end of the station is an additional pipeline, which crosses over the levee. The contents of these pipes are unknown; however, there are valves on them which are labeled 'siphon breaker'. It is presumed that they are drainage pipes. Across from these pipes, north of the levee, there are earthmoving machines operating in an undeveloped area. The levee under the pipes appears to be eroding on both sides.

Further west along the levee is the Grant Avenue pump station, operated by the S&WB. This area is adjacent to the station investigated. The pump station appears to be under renovation. The drainage pipes from the pump station also run over the levee to the GIWW. There is a large industrial facility visible to the west. This company appears to be an off-loading facility for barges on the GIWW, with a large expanse of storage area occupied mostly by construction materials. The facility was later identified as the Boh Brothers Almonaster Yard.

Stations 268+00, 270+00 and 278+00

This portion of the Property was visited on 8 July after permission was obtained from Entergy. This portion of the Property is a floodwall on the northern shore of the GIWW, just east of the Paris Road Bridge (Photos 154-183, Appendix C and Figure 10, Appendix B). Some of the information provided in this description was provided during the site visit by Gus Von Bodungen and Sandra Bradford, Senior Lead Environmental Analysts for Entergy. The Entergy facility is both immediately adjacent to the Property and on the Property. The Entergy Michoud Plant produces power using natural gas, with the option to use heavy bunker oil if necessary. The facility has several large buildings. There are many ASTs throughout the site with associated pipelines. There are four very large ASTs on the north eastern corner of the Entergy property. Only one of these currently contains bunker oil. Two of them have been cleaned out and the third is empty, but has not been cleaned out. All four tanks are within a secondary containment berm.

The eastern end of the floodwall is adjacent to a turning basin with the Michoud National Aeronautics and Space Administration (NASA) facility (discussed below) on the other side of the basin. A turning basin is a widened portion of a canal or waterway which allows larger vessels using the waterway to turn around. To the south of this portion of the floodwall is the outfall canal which receives water from both the cooling towers and the plant's internal storm drain system. The storm water is collected in a series of ponds and is pumped into the canal when it reaches a certain level. The cooling water is not collected in surface pools prior to discharge, but it is monitored for temperature and particulates. The canal is reported to be a popular fishing spot for local fisherman.

To the south of the cooling tower discharge, on the flood side, is a fuel oil off-loading area. This portion of the facility is not currently used, because the facility normally runs on natural gas, but the bunker oil

receiving facility is still functional and can be used if necessary. Adjacent to the offloading area is the former site of the heating oil storage tanks. These tanks were removed after Hurricane Katrina and were replaced by the tanks in the northwest corner of the plant. The offloading area is connected to both the plant itself and the storage tanks with large pipes which transfer the oil. These pipes are currently empty, but can be also used if needed.

To the west of the offloading facility is the plant's cooling water intake machinery. These machines pump water from the GIWW to the cooling towers. On the flood side of the Property, in between two flood gates, are four 10,000-gallon tanks, which are part of the intake system. Two of these tanks are empty, one contains bleach and one contains sodium hypochlorite. These chemicals are used as anti-biofouling agents for the intake and cooling towers. On the flood side of the intake are two blowdown pools. Blowdown pools are surface ponds where the water used for cleaning the boilers is stored until it can be released. The boilers and water cooling system must be periodically cleaned as mineral deposits can build up during the plant process. At the Entergy site, this water is treated for solids and metals and is tested prior to release through the stormwater outfall system.

There are many transformers of various sizes on the Entergy site. Most of these are on the other side of the facility from the Property. The Entergy Michoud Plant is regulated by the LDEQ and has permits regulating the discharge of water and air emissions, as well as the use and storage of hazardous substances on site. Housekeeping and maintenance activities were observed to be very good.

Station 406+00

This portion of the Property is a floodwall on an earthen levee on the northern shore of the GIWW, within the Michoud Canal (Photo 411, Appendix C and Figure 12, Appendix B). The Property is on the National Aeronautics and Space Administration (NASA) facility and adjacent to a pump station which appears to be under renovation. The NASA property is a large federal facility which manufactures external fuel tanks for the space shuttle program. There are no hazardous substances or petroleum products stored on or adjacent to the Property. The pump station renovation staging area is across a drainage canal from the Property, approximately 200 feet to the east. Any materials stored at this staging area would not have impacted the Property. During the site visit, to the south east of the Property, construction of an additional berm was underway along the GIWW. Many large earthmoving machines and other construction equipment were observed at this work site.

Stations 449+00 and 454+00

This portion of the Property is a floodwall along the western bank of the Michoud Canal (Photos 184-204, Appendix C and Figure 11, Appendix B). The general character of the surrounding area is industrial. The floodwall is bounded on the east by the canal. It is too high to look over and no other observation point was available, so no observations could be made on the flood side of the wall in this area. On the protected side, the floodwall is bounded to the north by Copart Salvage. This is an auto salvage facility ("junk yard") with a very large parking lot containing salvaged vehicles. This portion of the floodwall was fenced off and could not be accessed. The only observable feature on this parcel was a relief well.

On the southern portion, the floodwall is adjacent to the NASA Michoud Facility. Several relief wells were observed along this stretch. On the NASA property, the floodwall is adjacent to a large grassy area which slopes to a drainage canal. Approximately half-way down the reach, across the canal, is a building housing propane tank truck trailers. Further south is a loading dock area. Approximately 1,500 feet to the southwest of the end of the floodwall reach are eight very large ASTs with unknown contents. These tanks were in secondary containment and appeared new and in good condition (Photos 176 and 183).

Station 525+00 to 535+00

This portion of the Property is a floodwall on an earthen levee on the eastern shore of the Michoud Canal, adjacent to Air Products and Chemical Inc. (Photos 412-417, Appendix C and Figure 13, Appendix B). This facility manufactures liquid gas chemicals, such as liquid hydrogen. It abuts this portion of the Property for its entire length. On the northern end of the Property there is a floodgate allowing access

from the facility to the Michoud Canal. On the flood side there are two very large spherical tanks containing liquid hydrogen. There is also piping associated with these tanks running over the floodwall. This area floods during high tide and large pools of standing water were present during the site visit.

To the south of these tanks there is a concrete dock area which is no longer used, with pipelines for off-loading and on-loading materials. Further to the south is a very large tank pad which formerly was the base of an Ammonia tank. The pipelines formerly associated with this tank are also still present, although not currently in use. Immediately to the south of this portion of the floodwall is a cement company, which also has gate access to the canal and various loading facilities along the water.

On the protected side of the floodwall, the Air Products facility has many tanks and pipelines running throughout. Several rail tankers are stored adjacent to the Property; these are empty Carbon Dioxide containers. This material is no longer used at the plant. Other smaller tanks, including 500 gallon diesel tanks and welding equipment, are present near the property, but not immediately adjacent. The entire facility was observed to be secure and well maintained, with very good housekeeping.

Staging areas

The temporary staging areas would be used for equipment and materials storage during potential upgrades to the existing levee stations included in the Property. The temporary staging areas are spread out along the IHNC and GIWW adjacent to or near the floodwall and levee stations to be upgraded (Photos 418-455, Appendix C and Figures 14 and 15, Appendix B),

Station Grouping 1/Reach 1 - adjacent to Florida Avenue Bridge (A)

This temporary staging area is just south of Florida Avenue on the eastern side of the IHNC (Figure 14). Currently it is mowed regularly and has little vegetation. This area has not previously been developed. It is located on a small strip of land between Surekote Road and Jourdan Ave which is only approximately 100 feet wide. At the time of the site visit, it was used by the neighborhood as a parking area. No hazardous materials or petroleum products were observed during the site visit.

Station Grouping 1/Reach 3 – IHNC lock area (H and I)

These staging areas are near the IHNC lock (Figure 14). The staging area under the North Claiborne Avenue Bridge (H) is adjacent to a rail yard and an abandoned warehouse. It appears to be used occasionally for material storage by the rail road. There is a large pile of timbers on the northern end which appear to be coated with creosote. Further to the north is a track area which contains many train tanker trailers with unidentified contents. It is likely that these trailers are moved often, therefore the contents would be changing constantly. This staging area has been a rail yard and used for industrial purposes for decades. Currently it is a weedy gravel and sand area with a storm drain and a small paved road for access. There are three pole mounted transformers adjacent to the north of the Property. No hazardous substances or petroleum products were observed at the time of the site visit.

The staging area adjacent to the IHNC lock and the former USCG facility (I) is currently a parking area for the IHNC lock employees (Figure 14). There are also materials stored on the Property such as a pile of timbers which are possibly creosote coated, a dumpster, some machinery parts and some empty five gallon buckets. It is mostly paved with asphalt, but has some grassy areas around the edges which are mowed and maintained regularly. No hazardous substances or petroleum products were observed at the time of the site visit.

Station Grouping 2/Reach 2 – IHNC eastern shore (B and C)

These staging areas are both adjacent to the non-operational Entergy power plant on the eastern shore of the IHNC, midway between the Seabrook and Chef Menteur bridges (Figure 15). The staging area to the east of Jourdan Road (B) is a mowed grassy area with several power lines crossing over it. One pole with three transformers and one pole with one transformer were observed on the Property. As it was not possible to access this site, it was not possible to note the number and no label indicating PCB content was observed. This property is presumed to be owned by Entergy. Immediately to the north, the Dwyer

Road pump station is under renovation. There are two 1000 gallon diesel tanks immediately adjacent to the north on the pump station property. It is presumed that these tanks will remain as part of the emergency pumping operations after the renovation is complete.

The staging area to the west of Jourdan Road (C) is a partially cleared grassy area which has been overgrown with weeds. At the intersection of the access road and Jourdan Road there is a single pole mounted transformer on the Property. It is not labeled as to PCB content. No hazardous substances or petroleum products were observed at the time of the site visit.

Station Grouping 2/Reach 3 – Claiborne Avenue Bridge (G)

This staging area is under the Claiborne Avenue Bridge, just south of the Trinity Yachts property (Figure 14). It is a paved area which appears to have a pile of asphalt on the north east corner. The gravel is stained a dark color throughout, which may be asphalt particles from this pile or others that have been stored here recently. The bridge recently underwent repairs; this may have been a staging area for the repair project. There are weedy areas around the edges, but it is mostly paved or gravel covered. There are three pole mounted transformers to the east of the Property, adjacent to the IHNC, they are not individually numbered or labeled as to PCB content. No hazardous substances or petroleum products were observed at the time of the site visit.

Station Grouping 2/Reach 3 – Morrison Playspot (F)

This staging area is in a mowed grassy area just to the east of Congress Drive (Figure 15). It has been used as a recreational area since the development of the Pontchartrain Park neighborhood. There are plans to develop a portion of this area into a community garden. It has also been used as an access route for CEMVN floodwall construction activities. It is currently mowed and well maintained. No hazardous substances or petroleum products were observed at the time of the site visit.

Station Grouping 3/Reach 2 – Michoud Canal (E)

This staging area is on the NASA property, immediately adjacent to another pump station which is also under renovation (Figure 15). It is currently used as a staging area for this renovation. It is partially paved with gravel and very little vegetation is present. Immediately to the east of the Property is a very large mowed grassy expanse. There is a single power pole with no transformer and two metal pipes protruding from the ground. One of these pipes appears to have severed electrical wire in it, the other is sealed with a metal cap. Additionally, there is an eight inch PVC pipe protruding from the ground in this area. This pipe has a valve in it, it is possibly a water line. No hazardous substances or petroleum products were observed at the time of the site visit.

Station Grouping 3/Reach 2 – Paris Road Bridge (D)

This staging area is under and immediately adjacent to the Paris Road Bridge on the eastern side (Figure 14). It is also immediately adjacent to the Entergy Michoud Plant and reportedly owned by the Louisiana Department of Transportation. It is mostly paved and used as a parking area by some of the NASA contractors. There are some weedy areas, but it is mostly gravel. The two blowdown ponds and the water intake system are adjacent to the east on the Entergy property. Some illegal dumping was observed in the area, including five gallon buckets with unidentified contents which were leaking onto the ground. The area under the bridge, however, appears to be well maintained and clear of trash and debris.

Transformers

The following table contains information on transformers found on or adjacent to the Property. Many of these were not labeled with numbers or PCB content information. Transformers that were not immediately adjacent are not included.

Table 2: Transformers encountered either on the Property or adjacent to it, including numbers, pole numbers (if available) and whether they were on or adjacent to the Property.

Station Group	Number/Description	On Property or Adjacent
1	Three pole-mounted transformers on the northern end of the USCG facility, no numbers	Adjacent
1	Three pole-mounted transformers to the north of staging area H, numbers 1323668, 1323667 and 1323674	Adjacent
2	Near Trinity Yachts, one pole-mounted, 552083	Adjacent
2	Near Trinity Yachts, one pole-mounted, where floodwall crosses France Road, pole number 41245499067	Adjacent
2	Three pole-mounted, to the east of staging area G, pole number 4131449024	Adjacent
2	Near Seabrook Bridge, three pole-mounted, numbers 114787, 1147861, 1147860	Adjacent
2	Between Seabrook bridge and Cat 5 Composites, one pole-mounted, number 653609	Adjacent
2	At Cat 5 Composites, three pole-mounted, pole number 4104749709	Adjacent
2	At Pontchartrain Landing RV Park, three pole-mounted, no number, labeled non-PCB containing	Adjacent
2	At Seabrook Marine, one pole-mounted, number 1174750	Adjacent
2	Just south of Seabrook Marine, one pole-mounted, number 653595	Adjacent
2	At Gate E-14, protected side, one pole-mounted, number 181062	On Property
2	Series on the eastern side of the IHNC floodwall, on the bottom of the levee toe, pole-mounted, no numbers visible from ROW.	Unknown
2	Three pole-mounted transformers and a single pole mounted transformer, numbers not visible from fence line, adjacent to staging area B	Adjacent
2	One pole-mounted transformer at the corner of Jourdan Road and the access road, number 724986.	On Property
3	At the Heniff facility, three pole-mounted, on ground, labeled non-PCB containing	Adjacent
3	At the Heniff facility access road, three pole-mounted, numbers 1256162, 1256310, 125614(X) last number not visible due to drainage canal	Adjacent
3	On the Entergy property, many different sized, numbers not observed.	Adjacent

3.5 Current Uses of Adjacent and Surrounding Parcels

See Section 3.4 above. A description of adjacent properties was included in the description of the subject Property.

4.0 USER PROVIDED INFORMATION

4.1 Title Records

The User did not provide any title records, or comparable legal records of current and/or historical ownership.

4.2 Environmental Liens or Activity Use Limitations

No representative of the User reported any environmental lien, activity use limitation, or comparable encumbrance upon the Property. A lien search was not part of the computerized search conducted by EDR®.

4.3 Specialized Knowledge

Documents describing previous assessments/investigations pertaining to the environmental condition of the Property that the User provided to AECOM included:

- USACE. 2009. Phase I Environmental Site Assessment Report, Inner Harbor Navigational Canal (IHNC) Floodwall Alignment East and West Banks, Jourdan and France Roads. New Orleans, La Orleans Parish, Louisiana, February 2009.
- USACE. 2006. Final Phase I – Environmental Site Assessment Report November, 2006 Seabrook Site, New Orleans, Louisiana MMG #2848-ACE
- Materials Management Group, Inc. (MMG). 2007. Final Phase I ESA Report. Confined Disposal – Staging Facility and Wetland Restoration Site, Orleans Parish, Louisiana. Prepared For USACE, New Orleans District, Environmental Services IAW, DACW29-03-D-0014 Task Order #0042, November 05, 2007
- MMG. 2007. Final Phase I ESA Report. Graving Site, Orleans Parish, Louisiana. Under Contract to U.S. Army Corps of Engineers – New Orleans District, Environmental Services IAW. DACW29-03-D-0014 Task Order #0042. November 05, 2007
- MMG. 2008. Phase II Environmental Site Assessment Report PIIESA – Michoud Canal – GIWW IHNC Hurricane Protection Program, New Orleans, Louisiana, Under Contract to U.S. Army Corps Of Engineers – New Orleans District. Environmental Services IAW, DACW29-03-D-0014 Task Order #0047. July 29, 2008
- USACE. 1997a. Mississippi River – Gulf Outlet. New Lock and Connecting Channels. HTRW Initial Assessment Report. Part I.
- USACE. 1997b. New Lock and Connecting Channels. Evaluation Report. Main Report and Environmental Impact Statement.
- R. Christopher Goodwin and Associates. 1992. A Land Use History of Areas Adjacent to the Inner Harbor Navigational Canal Lock, New Orleans. Prepared for USACE New Orleans District.

Environmental highlights of the information in the documents listed above are:

- No RECs were identified in the IHNC area (Set 2) in the 2009 investigation. As the construction would occur in between the floodwall and the residential area on the west bank, no concerns were associated with this side. However, the report suggests further investigation into leaking UST records and Halliburton on the eastern bank. These conditions were not considered highly important as the construction was to be conducted on the protected side (USACE, 2009).
- The violations at Halliburton prior to 2006 were related to hazardous waste generation and transportation (USACE 2006).
- No RECs were identified in the mitigation area for the IHNC lock replacement project. This area is close to the property on Florida Avenue (Station Grouping 1) and across the IHNC from the Michoud Canal (Station Grouping 3) (MMG, 2007).
- No environmental concerns were identified at the Graving Site, where portions of the new lock will be built. This site is near the Paris Road Bridge, north of the GIWW, near stations 247 and 268-270-278 (MMG, 2007).
- The 1997 Hazardous Toxic and Radioactive Waste (HTRW) report listed nine sites that were on the National Priorities List (NPL). Of these, only two were of high priority, the USCG facility and the New Orleans Military Terminal, both near the IHNC lock. The other seven sites were given a low priority or had no further remedial action planned. The USCG facility has operated since 1934, and is assumed to have generated small quantities of hazardous waste throughout its operation. Substances reported include lead acid batteries, paint and paint thinner, waste oil and solvents. No recommendation was filed for this site (USACE, 1997a)
- The Military Terminal adjacent was described as having three 10,000-gallon USTs, buildings with ACM, transformers with possible PCBs, and 'spill prone areas'. Monitoring wells were installed for the USTs. Motor vehicle fuel constituents were discovered near one of these USTs, west of building 63. A gas plume was discovered of approximately 8,500 square feet associated with this UST. Surface soil concentrations of total petroleum hydrocarbons were below the recommended LDEQ cleanup criteria. Recommendations included the removal of the UST and the disposal of the soil generated. Groundwater samples were also collected, but the results were not included in this report. The transformer fluids were tested and determined to be non-PCB containing and ACM tests were positive, but it was determined to be non-friable (USACE, 1997a).
- This report also determined that 229 spills occurred near the IHNC lock between 1985 and 1993. Seventy-eight spills occurred at the France Road Terminal, 40 at the CSX Rail Yard on Almonaster Avenue, and 25 occurred at the Norfolk Southern Rail Yard. A variety of other information was included in the report, such as sites with USTs, groundwater remedial action sites, permitted facilities and a list of facilities operating on the IHNC (USACE 1997a).
- The report also included the results of a Phase II Environmental Site Assessment conducted over the project area. Elevated organic contamination was logged at the northeast bank of the IHNC (between Florida and North Claiborne Avenues) and at the Coast Guard Terminal. Lead and petroleum were also found along the northeast bank of

the IHNC. The sediments in the canal itself were sampled and it was determined that they would not require special handling (USACE 1997a).

- The New Lock and Channels main report summarized conditions at the USCG facility and the east bank of the IHNC. Analytical results at the USCG property and the existing lock property showed volatiles, semi-volatiles, metals, and pesticides in nine locations. Soils and groundwater were not considered hazardous by federal regulations, but State regulations may require remediation if construction were to commence on the new lock (USACE 1997b).
- The land use history report made use of several of the same sources that a conventional Phase I ESA would use, including Federal and State databases, owner records, historical Sanborn maps and city directories. The report states that there is evidence from Sanborn maps of several USTs in the area that the LDEQ has no record of, possibly because they were installed prior to 1950. Additional concerns were raised due to the presence of nearby rail yards and tracks, due to their use of oils, pesticides, and cleaning operations. There is a high concentration of industrial sites in the IHNC new and existing lock areas noted in the report, dating from 1937 to 1990 (R. Christopher Goodwin and Associates, 1992)
- Of particular concern to this study were the Public Belt Railroad yard, between Japonica and North Prieur Streets; the Poland Street Car Barn, at Poland and St. Claude Avenues; many motorized vehicle maintenance facilities throughout the area; demolition and salvage companies operating along the IHNC; the USACE at the lock; the USCG just north of the lock; and the New Orleans Public Belt Railroad and associated tracks, with a large yard just north of the North Claiborne Avenue Bridge. Figures in the report indicate that the entire western bank of the IHNC between the St. Claude and North Claiborne Avenue bridges could be contaminated from past and adjacent uses of the parcels. On the eastern bank, just south of the Florida Avenue Bridge, the report lists Boland Marine, a ship repair facility with a warehouse and storage facility, as a potential source of contaminants (R. Christopher Goodwin and Associates, 1992). The Galvez Street Wharf has since been demolished and removed. Remediation of this site as part of the IHNC lock replacement has since been completed (USACE, 2009b).
- A Phase II ESA was prepared for the eastern side of the Michoud Canal, near its confluence with the GIWW. This was done because BOC Gases and US Filter had records of leaking USTs. Additionally, previous sampling in this area had indicated that selenium, chromium, Total Petroleum Hydrocarbons – Diesel range (TPH-D), Total Petroleum Hydrocarbons - Oil range (TPH-O), and several Polycyclic Aromatic Hydrocarbons (PAHs) were detected above the LDEQ RECAP screening standards in groundwater samples. In this more recent Phase II, metals were detected at background levels. One sample had benzene at levels above the LDEQ screening standards. Further investigations in this area were recommended in surface soils only (MMG. 2008).

Based upon the information in these documents, the area surrounding the existing IHNC lock (adjacent to Gate W-1) and the area to the south of the Florida Avenue Bridge, on the eastern bank of the IHNC (south of Station 18-28) have the potential for the presence of hazardous substances and petroleum products due to the extensive use of the area by heavy industry for many years.

4.4 Valuation Reduction for Environmental Issues

The User did not provide AECOM with any information related to a reduction in the value of the Property due to environmental issues.

4.5 Owner, Property Manager, and Occupant Information

According to the User, the Property is currently owned by the Orleans Levee Board (now part of the Southeastern Flood Protection Authority), and occupied by levees, floodwalls, and floodgates. The Orleans Levee Board is responsible for managing the Property. The staging areas are owned by a variety of parties, ownership information was not supplied by the User.

4.6 Reason for Performing the Phase I ESA

According to the User, the Phase I ESA that resulted in this report was performed in contemplation of modifying the existing levees, floodwalls, and floodgates.

4.7 Other User Information

The User did not provide any other information that was material to this Phase I ESA.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

Government databases that identify sites of potential environmental concern were reviewed via a computerized search conducted by EDR[®], a commercial database service, to determine if the Property was listed or if any listed site was nearby. EDR[®] has represented that its procedures conform to, or exceed, the requirements of ASTM Standard Practice E1527-05. Most of the information in this section has been extracted from the report in Appendix D-1 that describes the results of that search. That report includes information about sites close to the Property, and also about Orphan sites that are in the vicinity but are not precisely locatable from the address information in the databases. The information in the search report has been evaluated in conjunction with the results of the Property inspection and the evaluation of its setting. Except as specifically discussed, listed sites that were estimated not to be actually or potentially upgradient from the Property were judged not to represent an environmental concern with respect to the Property. The databases included in the EDR[®] report are listed in Table 3.

Table 3. The list of databases searched by EDR[®]

Database	Explanation
Federal Sources	
NPL	National Priority list
PROPOSED NPL	Proposed National Priority List sites
DELISTED NPL	National Priority List deletions
NPL Liens	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Reports under Resource Conservation and Recovery Act (RCRA)
RCRA-TSDF	Treatment, storage or disposal facility of hazardous waste
RCRA-LQG	Large quantity generators, producing over 1000 kilograms (kg) of hazardous waste per month
RCRA-SQG	Small quantity generators, producing between 100 and 1000 kg of hazardous waste

Database	Explanation
RCRA-CESQG	Conditionally exempt small quantity generators, producing 100 kg of waste per month
RCRA-NonGen	Former RCRA Generators
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering controls sites list, caps foundations, liners, etc.
US INST CONTROL	Sites with Institutional controls, groundwater and construction restrictions, etc.
US CDL	Clandestine Drug Labs
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Navy Land Use Control Information System
CONSENT	Superfund/CERCLA Consent Decrees
ROD	Records of Decision for NPL sites
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System - Administrative and enforcement actions related to pesticides
FTTS INSP	FIFRA/TSCA Tracking System - Inspections related to pesticides
HIST FTTS	FIFRA/TSCA Tracking System – administrative case listing
DOT OPS	Transportation Incident and Accident Data
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
FINDS	Facility Index System
US BROWNFIELDS	Federal Listing of brownfields sites
SSTS	Section 7 Tracking Systems (insecticides, fungicides and rodenticides)
MLTS	Material Licensing Tracking System
RAATS	RCRA Administrative Tracking System
BRS	Biennial Reporting System (generation and management of hazardous waste)
COAL ASH DOE	Steam-Electric Plant Operation Data
FEMA UST	Federal Emergency Management Agency (FEMA) Underground Storage Tank Listing
US HIST CDL	National Clandestine Laboratory Register
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
FEDERAL FACILITY	Federal Facility Site Information listing
TSCA	Toxic Substances Control Act (manufacturers and importers)

Database	Explanation
State Sources	
LUST	Leaking Underground Storage Tanks
HIST LUST	Underground Storage Tank Case History Incidents
UST	Registered Underground Storage Tanks
SHWS	Inactive Hazardous Waste Disposal Sites
SWF/LF	Solid Waste Disposal Facility Register
SPILLS	Spills Information Database
VCP	Voluntary Cleanup Agreements
DRYCLEANERS	Drycleaner facility listing
DEBRIS	LDEQ Approved Debris Sites
AUL	Listing of Institutional and/or Engineering Controls
UIC	Underground Injection Wells Listing
SWRCY	Recycling Directory
LIENS	Environmental Liens
NPDES	LPDES Permits Database
COAL ASH	Coal Ash Disposal Sites
ASBESTOS	Asbestos Projects List

Additional databases searched included 19 Tribal Records databases, Manufactured Gas Plants, Orleans Parish Brownfields Inventory, Oil and Gas Pipelines, Sensitive Receptors, Public Schools, Private Schools, Nursing Homes, Medical Centers, and AHA Hospitals.

Approximate minimum search distances for the researched databases were in accordance with ASTM Standard Practice E1527-05, with the following exceptions:

- Due to the large size and widely distributed Properties, all databases were searched within a one-mile radius of the Property boundaries. Using address information, a Global Information System (GIS), ground-truthing, and local knowledge, the investigators ascertained actual distances from the Properties.

In this Section, “Orphan” means a site not precisely locatable by EDR[®] from the information in the database, and any *[text in italics within brackets]* is explanatory information obtained by the assessor.

For ease of use, the database records were split into three station groupings, one including the IHNC lock and the station adjacent to the Florida Avenue Bridge (Station Grouping 1), the second set including the northern stations on the IHNC (Station Grouping 2), and the third set including the Michoud Canal and the two stations in the GIWW (Station Grouping 3). Due to their proximity to the levee stations, the staging areas were included in the appropriate Station Groupings during the database review. For example, Staging area A is included in the discussion of Station Grouping 1. For the purposes of the database review, all stations of a station grouping were included in the review together; they were not separated into individual sub-topics as in Section 3.4 – Detailed Property Description.

5.1.1 Station Grouping 1

Gate W-1 and Stations 18-28+85 (IHNC lock and Florida Avenue Bridge Area)

NPL, Proposed NPL, Delisted NPL, NPL Liens, and Consent Sites

The Property is not identified as being an NPL, Proposed NPL, Delisted NPL, NPL Liens, or CONSENT site. No sites on the Proposed NPL, Delisted NPL, NPL Liens, or CONSENT lists are within one mile of the Property.

One site on the NPL list is identified as being located within one mile of the Property, the Agriculture Street Landfill. This site is located approximately one mile to the east of the Florida Avenue Bridge. It is over one mile from the IHNC lock. It was a municipal landfill between 1910 and 1958, and was briefly reopened in 1965 to accept debris generated by Hurricane Betsy. Between 1970 and 1987, residential development took place within the perimeter of the original landfill. In 1986, high levels of lead, zinc, arsenic, cadmium, mercury, and PAHs were found in the soils. It was placed on the NPL list in 1994, and the undeveloped portions were fenced off to prevent illegal dumping. In several areas, contaminated soil was removed, capped, and re-sodded. As of 2008, the USEPA and the State of Louisiana had agreed that no further remediation was necessary for this site. However, the vegetative cover on the backfilled sites must be maintained and institutional controls were put in place including closeout letters and instructions for handling soils below the geotextile barrier installed beneath the fill (USEPA, 2008). Due to the distance from the Property, the remediation, the types of contaminants, the presence of the IHNC between the landfill site and the Property, and the no further action decision, the potential impact of the Agriculture Street Landfill is judged to be low.

No Orphan sites on these lists were identified by the radius report.

CERCLIS Sites

The Property is not on the CERCLIS list. One site on the CERCLIS list that is identified as being located within one mile of the Property is the Agriculture Street Landfill, located approximately one mile to the east of Stations 18+00 and 28+85 and over one mile from the IHNC lock. The potential for impact to the Stations 18+00 and 28+85 was judged to be low, due to the distance from the Property, the remedial actions taken (see above), and the hydrological separation from Stations 18+00 and 28+85.

A second site was identified on the CERCLIS list, New Orleans Naval Air Station. This site is currently part of the University of New Orleans Campus, several miles to the north of the Property. Also, two CERCLIS sites are identified as being Orphan sites: Southern Mineralite at 2933 Burgundy Street and the Riverwalk Mall Radiation Response at the end of Poydras Street. Based upon the partial address information in the database search report for those Orphan sites, neither is nearby and topographically or hydraulically upgradient from the Property. The potential impact of the Orphan CERCLIS sites upon the Property is judged to be low because of distance to the Properties.

CERC-NFRAP Sites

The database search report contains information on three sites located within one mile of the Property and five Orphan sites that were originally on the CERCLIS list, but have been removed from it and transferred to the CERC-NFRAP list because of a decision of No Further Remedial Action Planned by the USEPA at those sites. Of the three properties within one mile, only one, the USCG Integrated Support Command at 4640 Urquhart Street, is within one-fourth of a mile of the IHNC lock. The USCG Command is adjacent to the IHNC lock and Gate W-1, and is not hydrologically separated from it. The possibility of impact from this site is judged to be moderate, due to the proximity of the site and the history of use.

Based upon the partial address information and maps in the database search report for the five Orphan sites, one may be nearby and topographically or hydraulically upgradient from the Property, the Florida Avenue Wharf. The potential impact of the identified CERC-NFRAP site upon the Property is judged to be low. The Florida Avenue Wharf is approximately one mile north of the IHNC lock (Gate W-1) and hydrologically separated from Stations 18+00 and 28+85.

RCRA Corrective Action Sites

The Property is not identified as being a CORRACTS site. The database search report does not contain information about any CORRACTS site that is located within one mile of the Property, or is an Orphan site and might be located within one mile of it.

RCRIS Hazardous Waste Generator Sites

The Property is not identified as having filed a RCRA notification as a hazardous waste generator.

One site located within one-fourth mile of Stations 18+00 and 28+85 is identified as having filed a RCRA notification as a Large Quantity Generator (LQG) of hazardous waste. This site is over a mile from the IHNC lock. Simmons Plating and Metal Finishing at 4216 Florida Avenue is located about one-fourth of a mile to the west of Stations 18+00 and 28+85. It is hydraulically separated from it by the IHNC. Another site, the USCG Integrated Support Command, is located within one-fourth of a mile of Gate W-1. No Orphan sites filed notifications as LQGs. One site located within one-eighth mile of the IHNC lock (USCG Integrated Support Command), and one site within one-eighth mile of Stations 18+00 and 28+85 (DICKSON GMP INTL INC NO E YD) - now Transcoastal Marine Services - at 3044 Harbor Road) filed RCRA notifications as SQGs.

Nine Orphan sites filed notifications as SQGs. Based upon the partial address information and maps in the database search report, one Orphan site may be located within one-eighth mile of the Property and topographically or hydraulically upgradient from it, St Cecelia Health Clinic at 1030 Lesseps Street. The potential impact of the identified nearby hazardous waste generators upon the Property is considered to be low because of distance to the Property, lack of violations, type of business, and separation by the IHNC.

Additionally, three sites within one-fourth mile of either Property have registered as conditionally exempt SQGs (CESQGs; Southern Scrap, USACE Inner Harbor, and High Technology Car Care). Twenty-six Orphans sites registered as CESQGs. Four sites were identified as non-generating SCQs (nongen-SQGs) and six Orphans were listed as nongen-SQGs. The potential impact of the orphan CESQGs and the nongen-SQGs upon the Property is judged to be low due to the small volumes of substances produced.

RCRIS Hazardous Waste TSD Facility Sites

No site located within one mile of the Property or an Orphan site is identified as being a RCRA Treatment, Storage, or Disposal (TSD) facility.

Leaking UST Sites

Three sites that have reported a leak involving a UST system (LUST sites) are identified as being located within one-half mile of the Property. The nearest sites that are, or might be, upgradient are: Azeem Discount Store at 5201 North Claiborne Avenue, Shell #137488 at 5000 North Claiborne Avenue, and the former Holy Cross High School at 4950 Dauphine Street. No sites that have reported a LUST are on the list of Orphan sites. The potential for the nearby LUST sites that are known or suspected to be upgradient from the Property to have adversely impacted soil or ground water on the Property is considered to be low because they are across the IHNC from the lock, and they are more than one mile from Station 18 and 28+85.

Three sites that have reported a historical LUST system (HIST LUST sites) are identified as being located within one-half mile of the Property. The nearest sites that are, or might be, upgradient are: EZ Serve #7431 at 5201 North Claiborne Avenue, Majik Market at 5130 St. Claude Avenue, and MTMC Gulf Outport at 4400 Dauphine Street. No sites that have reported a historic LUST are on the list of Orphan sites. The potential for the nearby LUST sites that are known or suspected to be upgradient from the Property to have adversely impacted soil or ground water on the Property is considered to be low because

they are across the IHNC from the lock and they are more than one mile from Station 18 and 28+85. Additionally, the LUSTs have been removed from Majik Market, and the MTMC Gulf tank has been remediated with a letter of closure from the LDEQ.

Registered UST Sites

Registered USTs are identified as being, or having been, located at nine sites within one mile of the Properties. USTs have been permanently closed or removed at seven of those locations. The nearest sites with USTs currently in service that are, or might be, upgradient are: Azeem Discount Store at 5201 North Claiborne Avenue and Shell #137488 at 5000 North Claiborne Avenue, both located about one-half mile to the east of the IHNC lock, and across the IHNC from Station 18 and 28+85, approximately one mile south of the Florida Avenue Bridge. One additional site that registered one or more USTs is on the list of Orphan sites. A review of the information in the database search report suggests that it is located within one-half mile of Station W-1, across the IHNC. In the event of a release, the potential for the nearby sites with registered USTs to have a significant adverse impact on soil or ground water on the Property is considered to be low because of separation from the stations by the IHNC and distance to the Property.

Other Lists of Sites of Concern

The Property is not on any of the other lists searched.

Other lists researched by EDR reported three Brownfields sites within one mile of the IHNC Lock. The Agriculture Street Landfill is on the ENG CONTROLS list and the ROD list. Southern Recycling and the New Orleans Naval Air Station are on the PADS list, handling PCBs. Southern Scrap/Recycling is immediately adjacent to Station 18 and 28+85. During Hurricane Katrina, Southern Recycling was completely flooded and materials stored on site could have been released into the general area, including the levee and floodwall stations in question. Thirteen sites are on the FINDS list, indicating records with an agency for some type of hazardous substance. The former USCG station at 4640 Urquhart Street is on the SHWS list, the potential and confirmed sites. The Azeem Discount Store with the LUSTs is on the AUL list, indicating restriction of property use. Three sites are on the SPILLS list, with all three incidents closed. Seventeen sites are on the State Brownfields list. Southern Scrap has a National Pollutant Discharge Elimination System (NPDES) permit, and two sites are known to contain ACM.

Although the database search report identifies several located and Orphan sites of potential concern that were not discussed above, only three of them were judged to be nearby and possibly upgradient, and thus represent realistic potential concerns with respect to the environmental condition of the Property. The potential for soil or ground water on the Property to have been adversely impacted by these sites is considered to be low because of distance from the Properties and the types of records found.

5.1.2 Station Grouping 2

Northern IHNC Stations (268-256-258, 200, Gate E-14, 20-30-32, and 73)

NPL, Proposed NPL, Delisted NPL, NPL Liens, and Consent Sites

The Property is not identified as being an NPL, Proposed NPL, Delisted NPL, NPL Liens, or CONSENT site. No sites on the Proposed NPL, Delisted NPL, NPL Liens, or CONSENT lists are within one mile of the Property. One site on the NPL is identified as being located within one mile of the Property, or an Orphan site. This is the Agriculture Street landfill; a discussion on the landfill is provided in Section 5.1.1. This site is approximately one mile to the southwest of Station 200. Due to the distance from the Property and the types of possible contaminants, the potential impact to Station 200 is judged to be low.

CERCLIS Sites

The Property is not on the CERCLIS list. No site on the CERCLIS list is identified as being located within one-half mile of the Property. Two CERCLIS sites are identified as being Orphan sites: Southern Mineralite at 2933 Burgundy Street and the Riverwalk Mall Radiation Response at the end of Poydras Street. Based upon the partial address information and maps in the database search report for those Orphan sites, neither is nearby and topographically or hydraulically upgradient from the Property. The potential impact of these sites upon the Property is judged to be low due to the distance to the Property.

CERC-NFRAP Sites

The database search report does not indicate that the Property, or any site located within one mile of it, 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.

The database search report contains information on five Orphan sites that were originally on the CERCLIS list, but have been removed from it and transferred to the CERC-NFRAP list because of a decision of No Further Remedial Action Planned by the EPA at those sites. Based upon the partial address information and maps in the database search report for those Orphan sites, none are nearby and topographically or hydraulically upgradient from the Property. The potential impact of the identified CERC-NFRAP sites upon the Property is, therefore, judged to be low.

RCRA Corrective Action Sites

The Property is not identified as being a CORRACTS site. The database search report does not contain information about any CORRACTS site that is located within one mile of the Property, or is an Orphan site and might be located within one mile of it.

RCRIS Hazardous Waste Generator Sites

The Property is not identified as having filed a RCRA notification as a hazardous waste generator.

Three sites located within one mile are identified as having filed RCRA notifications as LQGs of hazardous waste: Associated Hospital Services, US Gypsum, and Trinity Yachts. US Gypsum is located adjacent to Station 20-30-32 and is potentially hydraulically upgradient from it. Trinity Yachts is adjacent to Station 200. Associated Hospital Services is approximately 800 feet to the east of Section 20-30-32. No Orphan sites were listed that filed notifications as LQGs.

Eight sites located within one mile filed RCRA notifications as SQGs; six of these properties are immediately adjacent to one of the Sections in this set: LA Power House, United Parcel Service, Kansas Packing, Seabrook Marine LLC, HBH Inc., New Orleans, and Entergy New Orleans Inc. Six Orphan sites filed notifications as SQGs. Based upon the partial address information and maps in the database search report, one may be located within one-eighth mile of the Property and topographically or hydraulically upgradient from it, SE LA Urban Flood Control located at Dwyer and Jourdan Roads.

Twenty sites located within one mile are identified as having filed RCRA notifications as Conditionally Exempt Small Quantity Generators (CESQGs) of hazardous waste. Harvey Press, Gulf States Engineering, CBS Outdoor, Ring Electric Co., and Halliburton Energy Services are located within 500 feet of the Gate E-14 and Section 20-30-32 sites and are potentially hydraulically upgradient from them.

Million Aire of New Orleans, RFB Flying SVC Caudle Aviation, and Southern Holdings are listed at 5500 Lakeshore Drive. The EDR report places these businesses in the center of the IHNC at the Seabrook Bridge. It is assumed that these businesses are actually located at the Lakefront Airport, which is approximately 200 feet north of Gate E-14. The other sites are listed on Townsend Place or Morrison

Road, over 500 feet from the sites on the eastern bank. The potential impact of the identified nearby hazardous waste generators upon the Property is considered to be moderate because of proximity to the Property.

RCRIS Hazardous Waste TSD Facility Sites

No site located within one mile of the Property or an Orphan site is identified as being a RCRA TSD facility.

Leaking UST Sites

Six sites that have reported a LUST are identified as being located within one mile of the Property. The nearest sites that are, or might be, upgradient are: EZ Serve #7127, Texaco 44-398-0112, and Shell #137503 on Downman Road. In addition, four sites that have reported a LUST are on the list of Orphan sites. A review of the information in the database search report suggests that none of them are located within one-half mile of the Property and potentially upgradient of it. Twelve sites are listed as having historical LUSTs. Of these, United Parcel Service, at 5700 and 5641 Morisson Road, US Gypsum at 5701 Lewis Road, M-I Drilling Fluids Inc. at 6101 France Road, and Port of New Orleans at 6201 France Road are either adjacent or close by. There are seven Orphans listed as historical LUST sites; of these, two were found to be nearby and possibly upgradient from Gate E-14 (Transit Aviation Inc.) and Station 200 (Big Easy Travel Plaza). The potential for the nearby LUST sites that are known or suspected to be upgradient from the Property to have adversely impacted soil or ground water on the Property is considered to be moderate because of proximity to the Property; several parcels with historical LUSTs are adjacent to the Properties.

Registered UST Sites

Registered USTs are identified as being, or having been, located at 30 sites within one mile of the Property. Of these, 21 are either adjacent or close by. All USTs have been permanently closed or removed at 25 of those locations. The nearest facilities with USTs currently in service that are, or might be, upgradient are: United Parcel Service located adjacent to Station 20-30-32 to the east; and Milpark Grinding Plant located adjacent to Station 73 to the south. Twenty-eight additional sites that registered one or more USTs are on the list of Orphan sites. A review of the information in the database search report suggests that none of them are located within one-eighth mile of the Property. In the event of a release, the potential for the nearby sites with registered USTs to have a significant adverse impact on soil or ground water on the Property is considered to be moderate because of proximity to the sites (United Parcel Service and Milpark Grinding Plant).

Other Lists of Sites of Concern

The Property is not on any of the other lists searched. The database search report identifies several located and Orphan sites of potential concern that were not discussed above. The Agriculture Street Landfill is on the US ENG CONTROLS list, the ROD list, the SHWS list, and the AUL list. This site is approximately one mile to the southwest of Station 200, and does not present a potential environmental impact. Five sites along the IHNC in this area are on the ERNS list indicating that there was an emergency response to a spill on these properties. Thirty-nine sites are in the FINDS system, indicating the existence of records regarding permitting of releases to the air, water, or soils and other records including TRIS, TSCA, PADS and RCRA. The Port of New Orleans is on the AUL list (institutional controls) for the property located at 6201 France Road, due to a UST leak that could not be completely remediated due to the proximity of the shoreline of the IHNC. Twenty-eight sites are on the SPILLS list within a radius of one mile. Seven sites on the local BROWNFIELDS list are within one mile of the Properties.

The potential for soil or ground water on the Property to have been adversely impacted by these sites is considered to be low because of distance to the Properties and the type of incident reported.

5.1.3 Station Grouping 3

Michoud Area Stations (79, 247, 268-270-278, 449-454, 406 and 525 to 530)

NPL, Proposed NPL, Delisted NPL, NPL Liens, and Consent Sites

The Property is not identified as being an NPL, Proposed NPL, Delisted NPL, NPL Liens, or CONSENT site. No site on the NPL, Proposed NPL, Delisted NPL, NPL Liens, or CONSENT list is identified as being located within one mile of the Property, or an Orphan site.

CERCLIS Sites

The Property is not on the CERCLIS list. No site on the CERCLIS list is identified as being located within one-half mile of the Property, or an Orphan site.

CERC-NFRAP Sites

The database search report contains information on three sites located within one mile of the Property, BOC Gases, Hydrocarbon Recovery Services (both near or adjacent to station 525+00 to 530+00) and Martin Marietta Aerospace (adjacent to NASA) that were originally on the CERCLIS list, but have been removed from it and transferred to the CERC-NFRAP list because of a decision of No Further Remedial Action Planned by the EPA at those sites. One Orphan site is listed within one mile of the Properties, Boeing Co. The Michoud Assembly Facility. This orphan is assumed to be part of the NASA Michoud Assembly Facility. This property is adjacent to Stations 449-454 and 406. This site has been under remediation since 1986 and is reported to have achieved both human exposure and groundwater migration control (see Section 5.2 and Appendix E). Additionally a phone interview with Mr. Keith Savoy of NASA revealed that none of the contaminated areas were anywhere near the Property (see Section 7.2 and below). The potential impact of the identified CERC-NFRAP sites upon the Property is judged to be low due to distance from the Property and the no further action planned decision.

RCRA Corrective Action Sites

The Property is not identified as being a CORRACTS site. The database search report contains information on one CORRACTS site located within one mile of the Property, US NASA Michoud Assembly Facility, immediately adjacent to the west. No Orphan sites are on the CORRACTS list. The NASA Facility has records of accidental releases of 1,3-dichloro-1,1,2,2,3-pentafluoropropane and trichloroethylene in large quantities in the 1990s (USEPA 2010). The site has been under regulatory guidance and has completed several remedial actions, and others are in progress. NASA is reported as having completed human exposure control and migration of contaminated groundwater control (USEPA 2010). Mr. Keith Savoy at NASA was contacted and reported that no historical or current environmental releases of hazardous materials or wastes from the NASA facility or other nearby facilities to the hurricane system adjacent to the NASA facility were known. Mr. Savoy was familiar with the hurricane protection system and has been in recent contact with representatives of the USACE. The USACE is aware of the NASA groundwater contamination and has seen related reports. Mr. Savoy was certain that NASA activities had not resulted in releases to the hurricane protection system and that construction activities at the Property would not impact (move) any contamination originating on his facility (see Appendix F). The potential impact of NASA upon the Property is judged to be low because the ongoing remediation is in an area that is not adjacent or near to the property.

RCRIS Hazardous Waste Generator Sites

The Property is not identified as having filed a RCRA notification as a hazardous waste generator.

Three sites located within one mile are identified as having filed RCRA notifications as LQGs of hazardous waste: US NASA Michoud Assembly Facility is located adjacent to Station 449-454, and is potentially hydraulically upgradient from it; Smith Techn Corp, at 14101 Gentilly Road, is approximately 0.5 miles to the east across Gentilly Road from Station 449-545; Air Products and Chemicals, Inc., at 14700 Intracoastal Drive, it is immediately adjacent to station 525+00 to 530+00. No Orphan sites were listed that filed notifications as LQGs. Two sites located within one mile filed RCRA notifications as SQGs, Air Prod and Chemicals and Turner Marine Bulk. Air Prod and Chemicals is adjacent to station 525-530, Turner Marine Bulk is not nearby.

Two Orphan sites filed notifications as SQGs. Based upon the partial address information and maps in the database search report, neither is located within one-eighth mile of the Property and topographically or hydraulically upgradient from it. The potential impact of the identified nearby hazardous waste generators upon the Property is considered to be moderate because the NASA facility is immediately adjacent to Station 449-454. The potential impact of Air Products and Chemicals is judged to be moderate, due to proximity to Station 525+00 to 530+00. However, this company produces gases, which would not impact soil or water if a release occurred. Potential impacts are limited to materials used in the manufacturing process such as fuels or other liquids and solids, not final products.

RCRIS Hazardous Waste TSD Facility Sites

One site located within one mile of the Property is identified as being a RCRA TSD facility: US NASA Michoud Assembly Facility, located adjacent to Station 449-454, 406 and staging area E. 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 conversations with Mr. Keith Savoy of NASA revealed that because although there were some groundwater impacts on the NASA property, there were no impacts to the soils on the levee.

Leaking UST Sites

One site that has reported a LUST is identified as being located within one mile of the Property, Bowman Transportation at 12301 Old Gentilly Road. This site is slightly less than one-half mile north of Station 268-270-278. No sites that have reported a LUST are on the list of Orphan sites. Five sites are listed as having historical LUSTs. Four of these sites are across the Michoud Canal from Station 449-454, near or adjacent to station 525+00 to 530+00. All tanks at BOC Gases and D. A. S. properties have been removed and remediated. The one leaking UST at Air Products and Chemicals has been removed and remediated under LDEQ regulatory oversight. Seven Orphan sites are on the historical LUST list. A review of the information in the database search report suggests that none of them are located within one-half mile of the Property. The potential for nearby LUST sites that are known or suspected to be upgradient from the Property to have adversely impacted soil or ground water on the Property is considered to be low because of distance to the Properties, and completed remediation activities.

Registered UST Sites

Registered USTs are identified as being, or having been, located at nine sites within one mile of the Property. All USTs have been permanently closed at six of those locations. The three remaining sites with USTs are located near station 525+00 to 530+00. Five USTs are located immediately adjacent at Air Products and Chemicals, associated with the truck terminal; all other USTs have been removed or closed. Twenty-eight additional sites that registered one or more USTs are on the list of Orphan sites. A review of the information in the database search report suggests that none of them are located within one-eighth mile of the Property. In the event of a release, the potential for the nearby sites with registered USTs to

have a significant adverse impact on soil or ground water on the Property is considered to be moderate because of distance to the Properties (Air Products and Chemicals).

Other Lists of Sites of Concern

The Property is not on any of the other lists searched. The database search report identifies one US Brownfields site at 8200 Chef Menteur Highway, one mile north of Station 79. One site, Air Products and Chemicals Inc., is on the TRIS list for non-production related releases of ammonia, copper compounds, hydrochloric acid, and nickel and zinc compounds to both air and water, in addition to regulated releases of several compounds. Nine sites are on the FINDS list, indicating some regulatory activity. Six sites are on the state Solid Waste Facilities/Landfill sites list, including Lockheed Martin – Space System (NASA), which is adjacent to Station 449-454, 406 and staging area E. Several of these sites are approximately one-half mile from Station 79. One site, BOC Gases, has an institutional control due to a historical LUST; it is located adjacent to station 525+00 to 530+00, it is a conveyance notice only, indicating limits on the type of future development. Seventeen sites within one mile of the Properties are on the SPILLS list, indicating past releases of hazardous substances or petroleum products. Seven sites are on the local Brownfields list.

The potential for soil or ground water on the Property to have been adversely impacted by any of these sites is considered to be low because of distance from the Properties and the types of notifications involved.

5.2 Additional Environmental Record Sources

To enhance and supplement the standard environmental record sources summarized in Section 5.1, above, the following additional records sources were reviewed:

Types of Records:

- State Environmental Quality Database Information
- USEPA Database Information
- Local Environmental Records
- Private Environmental Records

Sources:

- LDEQ Electronic Data Management System (EDMS)
- USEPA Envirofacts System
- USEPA Region VI Records Facility Assessment Section
- LDEQ Freedom of Information Act Request

NOTE: Due to the nature of the Properties being investigated, records reviewed from the LDEQ EDMS and the USEPA Envirofacts System databases were those of adjacent properties noted during the site visits, not the Property itself. Summaries of the information found are below; copies of some reports and permits are in Appendix E.

USCG

A document filed in 2004 just prior to the abandonment of the facility after Hurricane Katrina gives details regarding the production and handling many various wastes (Table 4, next page).

Prior years' inspection reports stated that although some paperwork was occasionally missing, all wastes were handled appropriately on site. An inspection report from 1996 includes a site map which depicts the locations of several fuel tanks and a hazardous materials storage area. At the time of the inspection, there

were three fuel tanks, one behind building #1 near the confined space sign, one at the northern end of the property adjacent to the North Claiborne Avenue Bridge, and one adjacent to the small boat docking area. The document does not indicate if these tanks were under- or above-ground.

Table 4. The hazardous materials filed with the LDEQ in 2004 for the USCG facility, showing numerical designations and definitions. (Hazardous waste definitions provided by USEPA, 2010.)

Designation	Explanation or definition
D001	ignitable waste
D018	benzene
D039	1,2-dichloroethane
D040	trichloroethylene
UNIV	(unknown);
309H	(unknown);
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2, trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
D007	Chromium
D005	Barium
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2- nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures
D002	corrosive waste
D006	Cadmium
D008	Lead
D035	Methyl ethyl ketone
F009	Spent stripping and cleaning bath solutions from electroplating operations in which cyanides are used in the process
U019	benzene (I,T)
U135	Hydrogen sulfide
UN3624	(unknown)
D024	m-Cresol
U128	hexachlorobutadiene
U188	phenol

The hazardous materials storage area was to the west of building #3, where there is currently a series of concrete containment structures. Additionally, building #1 is identified as the machine shop, building #2 is the electrical/carpentry/Heating, Ventilating, and Air Conditioning (HVAC) center, building #3 is the electronic/telephone/welding area, and building #4 is the tool room. Two of the foundations on the southern end of the property are offices and a workshop, the third foundation is not indicated. Additionally, the BOH Brothers Construction Company and the LA-SPCA building are shown on the protected side of the floodwall to the west (LDEQ, 1996). Another document from the LDEQ gives final notice of the non-operational status of the facility after the hurricane. Very little information is in the USEPA database regarding this facility other than it is a SQG (Appendix E). It is currently owned by the USACE. No violations were listed.

Southern Scrap/Southern Recycling

Several hundred documents regarding Southern Scrap are in the LDEQ EDMS database. Some of these are reproduced in Appendix E. Most of these are permit related, as Southern Scrap has permits to release substances to both air and water. There are several complaints and investigation reports for various types of incidents involving fuel leaks from vessels that were in the process of being scrapped, air emissions of a rusty particulate, piles of tires and vehicle gas tanks, radiation releases, and other releases to waters in the area. One document revealed that the landfill operation mentioned in Section 3.4.1, is actually the Southern Scrap fluff landfill, where the soft and plastic parts of cars and other materials are placed. This landfill is permitted and required to maintain a protective levee and runoff holding area. Of most concern was a complaint made by a former employee stating that Southern Scrap had buried transformers with PCBs on site for disposal. This complaint was reported to have been forwarded to the Region 6 USEPA PCB Division. Attempts to contact the regional PCB office regarding this complaint were not successful. Additional records concerning the facility post-Katrina were not available on the website, the reason listed was 'contains private, confidential, and/or security sensitive information'. A request was sent to the LDEQ for any possible public sections of these documents, a response had not been received by 27 July, 2010. Information regarding permits held by Southern Scrap with respect to releases to air and water and waste handling were available in the USEPA database. No violations were listed.

Olefins LLC – LDH Energy

This company owns the pipeline that runs parallel to the Paris Road Bridge. There was no information on the pipeline in the databases, but LDH Energy was fined in 2007 for illegal dumping of wastewater and unpermitted gas releases. It is unlikely that these releases occurred in the vicinity of the pipeline adjacent to Station 247 as there is no facility there.

IHNC Lock

No information regarding spills, permitting problems, or other hazardous materials was found in the databases.

NASA

There were almost 5000 entries regarding the NASA Michoud Facility in the LDEQ database. In 2009, a work plan was submitted for the plugging and abandonment of 11 monitoring wells on site. The site has a waste water treatment center on site (building 176) that uses off-site storage for the waste. In October 2008, an AST released phenolphthalein into a canal from a leak, which was fixed, and the incident was closed. There were a few air pollution releases that resulted in fines (2007) and the incidents closed according to inspection reports. At least three AST's were noted during the inspection, but no problems were identified with these tanks in the inspection reports.

Trinity Yachts

Four AST's were noted in the LDEQ database, three contain diesel and one contains gasoline there were no reported problems with them.

Heniff

There was no information on the LDEQ and USEPA databases on this company.

SeaBrook Marine

This company produces oil and paint wastes which are stored on site in barrels and then shipped out every four to five months. During Hurricane Katrina, oil was spilled in the building but not outside of it. The facility has had some violations in the past, but these were considered minor and related to improper or lack of permits. The last inspection listed was in June 2007, with no problems reported.

Copart Salvage Auto Auctions

The LDEQ database contains letters identifying the site as a debris staging area after Hurricane Katrina; however, this site was never used. The property was closed as a debris site in 2007.

Sewerage & Water Board of New Orleans

During the last inspection of February 2009 it was noted that the S&WB vacuum trucks dumped unknown contents in an area 50 yards from a storm drain. A berm was to be constructed to prevent runoff into the storm drain. Diesel oil was noted as being spilled near railroad tracks in September 2008, but the actual location of the tracks was not given.

Port of New Orleans

At 5601 France Road there is an abandoned warehouse. There are several reports of fuel oil from tankers spilling into the canal. In June 2003, USTs containing benzopyrene and arsenic leaked into the soil (near City aquifers) at 6301 France Road (sometimes listed as 6201 France Road). This soil cannot be removed due to its location near the shoreline. The report states there are no immediate dangers and that the LUSTs were removed and partially remediated. The USTs were unregistered, but were discovered when workers were trenching for a data cable. There is currently a conveyance notice on this property due to the inability to fully remediate the hazardous substances. Soil contamination was also discovered in 1999, and in 2000 a work plan was drawn up, with maps to test soils on site.

Halliburton

Between 2008 and 2009 there were three incidents noted with air pollutants being released. In 1999, an inspection noted an AST (75-gallon) which was used to store oil until it was removed by another transport company and that there were pallets of unlabeled and leaking drums of chemicals and oil. The company was ordered to clean up and remove these drums. Later inspection reports show no other violations.

UPS

In 1991, two 10,000-gallon diesel tanks and one 12,000-gallon gasoline tank were removed from the property. These tanks were located on the eastern side of the facility, across a parking lot and on the other side of the buildings from Station 20-30-32. Soils and groundwater testing was completed in 1994, with minor levels of soil impact from these tanks and other activities on site. In 1992, in the center of the UPS property at 5641 Morrison Road, there was significant excavation of soils with elevated TPH levels in the vicinity of a former oil/water separator. In 1993, more soil borings were done to characterize the area for further remediation, which consisted of removing the contaminated material and backfilling. In 1994, some of this excavated soil was bio-remediated on site. A letter of no further action for the USTs removed in 1991 was filed in 1994. In 1996, another 10,000-gallon gasoline-filled UST was found to be leaking and was removed. Two 15,000-gallon diesel USTs were registered by UPS in 2007. These tanks were inspected, also in 2007, with no problems noted. Another UST inspection was completed in 2010, with the same outcome.

United States Gypsum Co.

This company emissions exceedences in the 1980s and was flooded during Katrina; other than that nothing outstanding was noticed from any modern reports. Katrina clean up reports state there were several 55-gallon drums in the area and one large 1,000-gallon AST. LDEQ records indicate that no hazardous substances are currently used or stored on site.

New Orleans RV Campground

No information was found regarding this company in the LDEQ database.

Prime Source Building Products

No information was found on this company in the LDEQ database.

Dupuy Storage & Forwarding LLC

This company fixes forklifts and provides warehouse space, according to a 2007 permit. All waste oil and batteries are removed by a contractor. According to a March 1990 inspection report, a large 3,000-gallon diesel AST and a 1,000-gallon gasoline UST were on site. These tanks were still listed in 2000, which is the latest report available in the database. This company is also reported to own nine USTs, but they are at a different location.

Entergy Michoud Plant

There are over 2000 records on this facility in the LDEQ database. Most of these are related to air quality permitting. A semiannual groundwater monitoring report from 2009 reports on the history of the facility. It has been in operation since 1957. There are six groundwater monitoring wells adjacent to the permitted surface impoundments. According to this report, the groundwater flow is away from the GIWW/MRGO. Site maps show that there is a blowdown pond approximately 20 feet from the levee, and that there is an equalization pond 10 feet from the levee. Blowdown is water that is removed from the cooling tower or other generating equipment in order to maintain acceptable levels of dissolved solids, salts and other impurities. The monitoring results determined that these ponds are not affecting the groundwater in the vicinity. The facility is a LQG, producing D001, D002, D003, D005, D006, D007, D008, D009, D018, D019, D021, D027, D035, D039, D040, F001, F002, F003, F005, and F037 wastes.

Another report from 2008 lists 13 monitoring wells associated with the impoundments. During Hurricane Katrina, due to the surge in the IHNC/MRGO, three chemicals were spilled on the flood side of the levee, sodium hypochlorite (1,700 gallons), lubricating oil (500 gallons), and surfactant (200 gallons). This release was considered minimal due to the high dilution factor of the surge associated with the hurricane. An additional accidental spill report gave details regarding 165 gallons of oil spilled from a lubrication oil tank. This oil reportedly flowed into the facility's underground drainage system, which is equipped with an oil/water separator. It did not impact any soil or water, including drainage ditches on site, due to the internal drainage system.

Air Products and Chemicals, Inc.

This facility manufactures liquid hydrogen, carbon dioxide, oxygen and nitrogen using natural gas and water.

A report dated June 2010 summarizes the installation of two shallow monitoring wells and the plugging and abandonment of two deep monitoring wells associated with the cooling water treatment pond located on the eastern side of the facility. This work was done as part of a solid waste permit process initiated by the LDEQ. The work was done by Shaw Environmental and completed in March of 2010 (Shaw, 2010). Monitoring reports from these wells and the plugged and abandoned wells are also available on the LDEQ website.

The solid waste permit application released for public comment in March of 2010 describes the cooling water treatment system in detail. The system became operational in 1965 and receives water from the boiler, cooling tower, de-mineralizer, reverse osmosis units, steam condensate, potable water, and rain runoff. Other potentially hazardous materials used on site are not discharged to the system. The treated pond water is eventually released to the Intracoastal Water Way, at a LPDES permitted outfall. This permit application is a 700 page document which details the history of both the solid waste and LPDES permitting performed by the facility. Over the past 15 years, several permit modifications have been submitted to the LDEQ and approved, mostly regarding the outfall, a sump pump and the waste water

treatment pond (Shaw, 2010a). Several figures from this report are included in Appendix E to illustrate the plant layout. The drainage pattern map shows that runoff typically flows away from the floodwall towards drainage collections areas approximately 250 feet from the floodwall.

Several records of accidental spills related to gas production were found, some of these are found in Appendix E. All spills records were found to have been immediately cleaned up and potential contaminants removed according to regulation.

A letter from Air Products to the LDEQ from April 2010 indicates that a large remediation project is underway in the oil containment and collection facilities, including a ditch and oil containment basin. This work is being overseen by the LDEQ and is currently in the design phase. Construction should be complete by the end of 2010. This letter refers to the results of an inspection done in January of 2010. During this inspection, it was noted that oil compressors had been leaking oil for over 40 years. This oil was collected along with storm water and is directed through a ditch to an oil/water separator. During heavy rains, the ditch overflows and the oil has contaminated the soils near the ditch. This is the enforcement action which lead to the redesign of the oil containment facility and the remediation of the contaminated soils (see Appendix E).

BOC Gases

The LDEQ database had a phase II remedial activity quality assurance plan regarding this site. It is currently abandoned and the work is being funded by a USEPA Brownfields assessment grant. A phase I ESA determined that issues on the site included former USTs and their locations, a drum storage area, oil staining near floor drains, underground sumps, a former rail road spur and debris and rubble piles throughout the site. The plans include six soil and groundwater samples and five surface samples. This facility is on the other side of Intracoastal Drive from the floodwall, a site map from the report is provided in Appendix E.

The database also includes the Conveyance Notice issued by the state in 2004. The area of concern is 0.3 acres of the total 11 acre property. There was a compressor oil release in this area which was discovered during the removal of a 500 gallon used oil UST. This discovery resulted in product recovery, a site assessment and a RECAP evaluation. The contaminants identified included total petroleum hydrocarbons, Chromium and Selenium. An interim recovery system was installed to collect light non-aqueous phase liquid; approximately 195 gallons were removed. The notice states that if the land use were to change from industrial to non-industrial, the LDEQ must be notified and another assessment must be completed prior to future development. This report is available in Appendix E and contains a site map indicating the previous locations of storage tanks and facilities on site.

5.3 Physical Setting Sources

The database search report in Appendix D-1 contains an excerpt from a topographic map that depicts the Property and its vicinity. Due to the property type and large area the report does not contain information about geological conditions in the vicinity of the Property.

5.4 Historical Use Information

5.4.1 Station Grouping 1: Gate W-1 and Stations 18-28+85 (IHNC lock and Florida Avenue Bridge area)

5.4.1.1 Aerial Photographs

Aerial photographs (in Appendix D-2) were reviewed for the years 1952, 1971, 1978, 1982, 1983, 1989, 1992, 1998, 2005, and 2006. The composite historical timeline in Table 5 contains a summary of the observations made from those aerial photographs.

5.4.1.2 Historical Fire Insurance Maps

Historical fire insurance maps (in Appendix D-3) were reviewed from the years 1937, 1950, 1983, and 1994. The composite historical timeline in Table 5 contains summaries of the observations made from those fire insurance maps.

5.4.1.3 Historical Topographic Maps

Historical USGS topographic maps (in Appendix D-4) were reviewed from the years 1891, 1932, 1939, 1949, 1951, 1954, 1966, 1979, 1989, 1992, and 1998. The composite historical timeline in Table 5 contains a summary of the observations made from those topographic maps.

5.4.1.4 Historical City Directories

No historical city directories were reviewed.

5.4.1.5 Additional Historical Sources

No additional historical source records were obtained.

5.4.1.6 Composite Historical Timeline

Table 5. Historical timeline for Site Grouping 1.

Year	Source	Discussion
1891	Topographic Map 1:62500	The area north of the Mississippi River has a dense road grid in place. The area south of the River has a road grid in Algiers, Macdonoughville, and Gretna. Most of the area south of the river is depicted as marsh or swamp. Southern Pacific Railroad follows a path on the south side of the River and New Orleans, Ft. Jackson, and Grand Isle Railroad are present coming in from the south into Gretna.
1932	Topographic Map 1:31680	The IHNC and the lock are present; three slips are present north of Florida Avenue on the western side of the canal, having a southwest/northeast orientation. On the canal north of Florida Avenue are the Outfall Canal and a pumping station to the east. New Orleans Great Northern Railroad continues north. The St. Claude Bridge is present. Southern Louisiana Railroad is present and running along St. Claude. The Galvez Street Wharf, Border Patrol at St. Claude, and the US Engineers Depot #1 are all present on the west side of the IHNC between the mouth of the Mississippi and Florida Avenue. The Naval Base is in Algiers; Jackson Barracks is depicted on the Orleans/St. Bernard Parish line just north of the river. South of the river (directly across from Jackson Barracks) the US Quarantine Station is visible. Poland St. Wharf and Pauline Street Wharf are visible west of the mouth of IHNC; Andry Street Wharf and Holy Cross College are present to the east. There is a levee system in place, but it is not detailed and elevation contours are not shown. Agriculture Street Landfill appears on the northwest corner of the map but is not defined. Louisa Street crosses Florida Avenue and some residences are visible.
1937	Sanborn Maps	There are two maps that depict the IHNC from southern extent at St. Claude Avenue north to Florida Avenue. From the south, the IHNC extends north to the Department of Commerce Lighthouse Service on the western bank of the Industrial Canal. Beyond that to the west is a dairy.

Year	Source	Discussion
		<p>Multiple sets of railroad tracks appear to converge into the Galvez Street Wharf; however the two Sanborn maps do not line up and the railroad tracks cannot be seen on the northern portion/section. There are multiple single-story dwellings and stables to the west of the IHNC. Many roads are unpaved but water mains are visible. On the northern section of map, between North Galvez and North Miro Streets are several businesses: Neptune Supply Co, New Orleans Stevedoring Co, Lucxenbach Steam Ship Lines, and W.HO & Repair Shop mixed with single-story dwellings and a traveling crane. To the north is the Lone Star Cement Corp. Earthen dikes completely surround a large oil tank, small oil tank, and oil pump on the northwest portion of this property. Another tank is located on the northeast corner of the property. The cement plant property also includes several fire-proof construction buildings, a concrete slurry pit, kiln building, etc. Farther north (from Florida Avenue to the drainage canal) an eight-foot earthen levee wraps around the northern and western sides (to the east is the canal and the south is the turning basin) of Lester F. Alexander Co. Inc., manufacturer of steel barges and tugs. This company property includes an erecting shop with earthen floor, electric welding machine area, dressing room, print room, and office.</p>
1939	Topographic Map 1:31680	<p>The area appears as in the 1932 topographic map north of the Mississippi River and west of the IHNC. There is more development in the northwest corner (on Elysian Fields and Franklin; north of Florida Avenue). The New Orleans Great Northern Railroad is now Gulf Mobile and Northern. There is more development on the east side of IHNC; Jourdan Avenue is present, running parallel with IHNC. The US Naval Base has developed the land; multiple buildings are visible. On the inner bend (south side of the river) there is more development which is residential and commercial. The US Quarantine Station is not depicted. The levee system is not detailed, but elevation contours are depicted. The Agriculture Street Landfill appears on the east side of Southern Pacific Railroad north of Florida Avenue. It is an irregular circle with undefined markings and is not identified as a landfill.</p>
1949	Topographic Map 1:25000	<p>The area appears as in the 1939 topographic map. The scale is larger so features south of the river are not visible. The area described above (Elysian Fields and Franklin Avenues) have become heavily residential, including the area west and northwest of the Agriculture Street Landfill.</p>
1950	Sanborn Maps	<p>There are two maps depicting the IHNC from the southern extent at St. Claude Avenue north to Florida Avenue. The area appears similar to the previous map with some changes in businesses and names. To the west, where the dairy was, are two auto and truck repair shops, an auto wrecker yard, a marine supply and tin shop with warehouse, a wood working shop, and a cotton batting plant. Some roads are now paved. On the northern section of map, between North Galvez and North Miro are several businesses: Dreyfus Machinery Marine Supply Co. and The Flintkote Company, with a mix of single-story dwellings and a traveling crane. The Lone Star Cement Corp. still appears as before with an additional tank (no dike) in the northeast corner of the property. Adjacent and to the north is the Chase Burlap Bag Manufacturing Company. Lester F. Alexander Co. Inc., appears as previously</p>
1951	Topographic Map 1:24000	<p>The area appears as in the 1949 topographic map with several additional features. The Mississippi River Gulf Outlet (MRGO) canal has been added, although it is still relatively narrow. The southern-most slip and</p>

Year	Source	Discussion
		the middle slip on the western bank of the IHNC have been extensively developed with industrial buildings. There is development on the east side of the IHNC directly across from the northern-most slip. The area north of Florida Avenue between Almonaster Avenue and France Road shows some residential development. Almonaster Avenue and Louisa Street have significant residential growth. The Florida Avenue Wharf is visible. The US Engineering Depot at the mouth of the IHNC now has three buildings (compared to one previously).
1952	Aerial Photographs 1:1000	<u>The North Photograph</u> : The MRGO is visible, but narrow. There are multiple slips and numerous large buildings on the west side of the IHNC. Along the east side of IHNC and north of the Outfall Canal there appears to be a road or possibly a fill area. The Florida Avenue Wharf and the Galvez Street Wharf are present. <u>The South Photograph</u> (mouth of IHNC to Florida Avenue): The IHNC is present and residential areas appear well developed on several blocks west of the canal. Multiple industrial-sized buildings are west of IHNC, but very little industrial development appears on the east. On the Mississippi River, the Poland Street Wharf and Pauline Street Wharf are visible on the west and the Andry Street Wharf is visible on the east.
1954	Topographic Map Scale 1:62,500	The area appears as in the 1951 topographic map, but details are indiscernible at this scale. All areas north of the river are heavily developed. The MRGO is still narrow, but visible. The outfall canal and the IHNC are visible. Areas south of the river appear developed; Walkertown, Amesville, Marrero, and Gretna in Jefferson Parish are visible.
1966	Topographic Map 1:24000	The area appears as in the 1951 topographic map with additional features. A turning basin has been created between the IHNC and MRGO; the basin exceeds the reach of the southern-most slip. There are no longer any buildings indicated around the slips on the west bank of the IHNC. A small slip has been added north of the middle slip on the east side of the IHNC and the MRGO has been widened considerably. The Agriculture Street Landfill has increased in size. A high school has been built northeast of the landfill. A levee is identified at the eastern mouth of IHNC. There is a Coast Guard Station on the west side of the IHNC, north of the lock. The New Orleans Army Base is sited at what was previously referred to as US Engineers Depot #1.
1971	Aerial Photographs 1:1000	<u>The North Photograph</u> : The MRGO has been considerably widened. The southern-most slip on the IHNC has been filled in. The area south of Florida Avenue is fully developed. The area that is currently occupied by Southern Scrap is developed. Northwest of the turning basin, the Desire Street Housing development has been completed. <u>The South Photograph</u> : As in the 1952 photo, the IHNC is present and residential areas appear well developed east and west of the canal. Multiple industrial-sized buildings are located west of the IHNC; industrial development is now visible on the eastern side of IHNC. The wharfs remain. A bridge has been constructed across the IHNC at North Claiborne Avenue. There appears to be a railroad bridge crossing at Harbor Road.
1978	Aerial Photographs 1:1000	<u>The North Photograph</u> : Appears as in the 1971 photograph. <u>The South Photograph</u> : Appears as in the 1971 photograph. Details are not visible due to the color of the photograph.
1979	Topographic Map	The area appears as in the 1966 topographic map with additional features.

Year	Source	Discussion
	1:24000	The IHNC opens to the turning basin and veers to the north and east. The IHNC goes to the northwest and the MRGO goes to the northeast. The turning basin is being expanded; the basin exceeds the former southern-most slip which appears to have been filled in. The MRGO has been widened again. The Agriculture Street Landfill is being developed on the northeastern section with roads. The Mississippi River is referred to as the Inner Coastal Waterway (ICW). The area along the western side of the IHNC is industrial and there is industrial growth on the east side of IHNC above North Claiborne to Florida Avenue. There is a levee under construction between the main outfall canal at Bayou Bienvenue and the MRGO.
1982	Aerial Photograph	As in the 1971 northern photograph, the MRGO is present. Both of the southern slips appear to be filled in; it is not completely clear on the photograph. The area north of Harbor Road (currently Southern Recycling) appears to be developed. The area north of the turning basin appears to have some development.
1983	Aerial Photograph 1:1000	As in the 1971 southern photograph, the IHNC is present and residential areas are well developed east and west of the canal. There are multiple industrial-sized buildings west of the IHNC; more industrial development is now visible on the eastern side of the IHNC. The wharfs along the river remain. There are bridges across IHNC at North Claiborne Avenue and at Florida Avenue.
1983	Sanborn Map	There are two maps depicting the IHNC stretching from the southern extent at St. Claude Avenue north to Florida Avenue. From the south, the IHNC looks north to the USCG Base on the western bank of the canal, which holds (on the eastern side of north-south running railroad tracks) boat storage yards, maintenance buildings, communication building, and various other buildings for military duties. Beyond the railroad tracks to the west are various buildings associated with the USCG Base including officer and enlisted personnel housing, storage, and offices. In the southwest stands a U.S. Post Office; northeast of the post office is the Union School; north are the offices for the Society for the Prevention of Cruelty to Animals, storage warehouses for military contractors vehicle repair services, and Steve Dore's Machine Shop. In the northwest corner is a filling station; north of that is the National Blow Pipe Manufacturing Co., with a sheet metal shop, warehouse, storage yards, and scrap metal yard. On the northern section of map, between North Galvez and North Miro are several military contractor repair shops, a metal propeller production shop, and storage yards for marine and land vehicles. To the north is the Citadel Cement Corporation, which appears as the previously existing Lone Start Cement Corp. Adjacent and to the north is the Chase Burlap Bag Manufacturing Company and Warehouse, with Ro-Ro Facility Wharf located immediately east. Farther north (just south of Florida Avenue) is a large Kirschman's Furniture Warehouse with an associated plastic storage and production shop immediately west. A truck parking lot is located to the east at the north end of the turning basin.
1989	Topographic Map 1:24000	The area appears similar to the 1979 topographic map. The turning basin expansion is complete; the basin exceeds the former middle slip which is now filled in. There is new development on the north side of the MRGO just east of the middle of the turning basin. There is more development near the single remaining slip on the west side of the IHNC. There is more development on the former Agriculture Street Landfill. The New

Year	Source	Discussion
		Orleans Army Base is now referred to as the US Naval Base and appears to encompass several blocks north of and including the Poland Street Wharf.
1989	Aerial Photographs 1:750	<p><u>The North Photograph</u>: Appears as in the 1982 photograph, but the top of the image does not extend to the northern extent of the turning basin, so features of MRGO are not visible on this photograph. The property that is currently Southern Scrap is developed. The floodwalls and levees are visible.</p> <p><u>The South Photograph</u>: Appears as in the 1983 photograph. The IHNC is present; residential areas appear well developed east and west of the canal. Multiple industrial-sized buildings are on the west and east banks of the IHNC. The river wharfs remain. The floodwalls and levees are visible. The floodwall on the east bank of the IHNC goes from Florida Avenue to St. Claude; the levee wraps the area south of St. Claude at the IHNC and follows the river.</p>
1992	Topographic Map 1:24000	The area appears as in the 1989 topographic map. There is a new floodwall and pumping station north of the turning basin. The levee between the Outfall Canal and MRGO is present. There is a floodwall between the railroad tracks and Alvar Street north of Florida Avenue. Two large buildings are present on the east side of the developed area of the Agriculture Street Landfill. There is more development at the river and at the Pauline Street Wharf and on Montegut Street.
1992	Aerial Photographs 1:1000	<p><u>The North Photograph</u>: Appears as in the 1989 photograph. The area north of the turning basin is being developed. The floodwalls and levees are visible.</p> <p><u>The South Photograph</u>: Appears as in the 1989 photograph. The floodwalls and levees are visible.</p>
1994	Sanborn Map	There are two maps depicting the IHNC from the southern extent at St. Claude Avenue north to Florida Avenue. The area appears as in the 1983 map. On the northern section of the map, between North Galvez and North Miro, there are several more military contractor repair shops, a metal propeller production shop, and storage yards for marine and land vehicles. North of North Miro Street are two large traveling cranes on tracks; north of these is the Citadel Cement Corporation. The plant still has an earthen dike completely surrounding a large oil tank, small oil tank, and oil pump on the northwest portion of this property, with another tank (no dike) on the northeast corner and the same buildings are noted. The northern adjacent building is Lafarge Inc.; Ro-Ro Facility Wharf is immediately east. Kirschman's Furniture Warehouse and a truck parking lot are still at the north end of the turning basin; the lot now has an American Marine Oil tank (AST) at the east end.
1998	Topographic Map 1:24000	The area appears similar to the 1992 topographic map. A large building on the southern side of the remaining slip on the IHNC is gone. The area is completely developed as an urban area. On the west, Kohn Middle School is gone and on the east, Lawless School is gone. The development at the river, Pauline Street Wharf and Montegut Street, does not appear on the map.
1998	Aerial Photographs 1:750	<u>The North Photograph</u> : The area appears as in the 1992 photograph, but the top of the image does not extend to the northern extent of the turning basin, so features of the MRGO are not visible on this photo. The area north of Harbor Road appears to be being cleared. Floodwalls and levees are visible.

Year	Source	Discussion
		<u>The South Photograph</u> : The area appears as in the 1992 photograph. The IHNC is present; residential areas appear well developed east and west of the canal. A possible school on the western side of the IHNC is gone. The floodwalls and levees are visible.
2005	Aerial Photographs 1:604	<u>The North Photograph</u> : The photograph is assumed to be post-Katrina. The Florida Avenue Bridge is visible. All of the buildings/businesses on the east side of the IHNC south of Florida Avenue are gone. The Galvez Street Wharf located south of the cut-in adjacent to the train yard is gone. The floodwalls and levees are visible. <u>The South Photograph</u> : Assumed to be post-Katrina. All of the buildings/businesses on the east side of the IHNC south of Florida Avenue are gone. The large dock located south of the cut-in adjacent to the train yard is gone. The floodwalls and levees are visible.
2006	Aerial Photographs 1:604	<u>The North Photograph</u> : Appears as in the 2005 photograph. <u>The South Photograph</u> : Appears as in the 2005 photograph. There is a linear structure (associated with floodwall repair?) on the eastern side of the IHNC starting at the locks and following the land northward and running parallel with the floodwall.

Historical Summary: There is significant evidence of current and historical industrial or commercial use of the properties in the area. Many structures remain and many that previously existed have been demolished or destroyed. The IHNC and the associated lock were completed in 1923, resulting in rapid and intense industrial development on both shores. The area has remained industrial in nature until the present, but many sites have been abandoned. The abandonment began in the late 20th century with the advent of containerized shipping (USACE, 2010).

5.4.1.7 Historical Use Information on Adjacent Parcels

Historical uses of adjacent parcels are discussed in the Composite Historical Timeline, in Table 5 above.

5.4.2 Station Grouping 2: Northern IHNC Stations (268-256-258, 200, Gate E-14, 20-30-32 and 73)

5.4.2.1 Aerial Photographs

Aerial photographs (in Appendix D-2) were reviewed for the years 1952, 1971, 1978, 1982, 1989, 1992, 1998, 2004, 2005, and 2006. The composite historical timeline in Table 6 contains a summary of the observations made from those aerial photographs.

5.4.2.2 Historical Fire Insurance Maps

Historical fire insurance maps (in Appendix D-3) were reviewed from the years 1937, 1950, 1983, and 1994. The composite historical timeline in Table 6 contains summaries of the observations made from those fire insurance maps.

5.4.2.3 Historical Topographic Maps

Historical USGS topographic maps (in Appendix D-4) were reviewed from the years 1938, 1950, 1965, 1972, 1979, 1992, and 1999. The composite historical timeline in Table 6 contains a summary of the observations made from those topographic maps.

5.4.2.4 Historical City Directories

No historical city directories were reviewed.

5.4.2.5 Additional Historical Sources

No additional historical source records were obtained.

5.4.2.6 Composite Historical Timeline

Table 6. Historical timeline for Station Grouping 2.

Year	Source	Discussion
1891	Topographic Map 1:62500	A road grid is shown covering the entire area. There is a lighthouse in the area currently occupied by the Lakefront Airport. The towns of Gentilly and Milneburg are in the southeast and north, respectively. The Louisville and Nashville Railroad is shown to the southeast.
1938	Topographic Map 1:31680	There is very little development surrounding the shoreline of the IHNC. Shushan Airport is identified along Lake Pontchartrain in the location to be known in the future as the New Orleans Lakefront Airport. Southern Railroad is present along State Road LA-74, located where the IHNC and Lake Pontchartrain merge. Gentilly Road, Louisville and Nashville Railroad, as well as Highway 90 are visible with bridges crossing over the IHNC to the south. There appears to be a road along the IHNC on both the east and west shorelines.
1951	Topographic Map 1:24000	There is significant industrial development on the west bank of the IHNC just north of the Chef Menteur Bridge. Railroad tracks have been completed to serve this area. On the east bank, there is residential development to the east of Downman Road. There is some residential development to the west of France Road. The U.S Naval Reserve Headquarters, Camp Leroy Johnson, and the New Orleans Airport are identified along the shorelines of Lake Pontchartrain at the northern boundary of the map.
1952	Aerial Photograph 1:1000	The IHNC and Lake Pontchartrain are visible. State Road LA-47 and the Seabrook Bridge are present. The northern IHNC area has industrial and recreational development. The New Orleans Lakefront Airport is present, extending into Lake Pontchartrain. The southeast shore of Lake Pontchartrain to the east of the IHNC appears to be recreational development with a natural landscape. Most of the development is along the west shore of the IHNC. There are numerous smaller parcels along the northwest section of the IHNC. Large cleared areas are visible to the southwest. There are many acres of undisturbed landscape just west of the shore line. The parcels where the Pontchartrain Park and Gentilly Woods residential area are currently have been developed. There is very little development along the eastern side of the IHNC; most of the land appears to be heavily vegetated. There are two developed parcels on the northeast shore line, just south of the Seabrook Bridge. Centrally located along the IHNC, on the eastern shore, is a large disturbed area. There appears to be a dirt road access to the properties along the eastern shore.
1965	Topographic Map 1:24000	The area surrounding the IHNC is more developed with additional recreational, residential, and industrial parcels. France Road runs along the west bank, north-south, and to the west of the parcels on the western shoreline of the IHNC. Significant industrial development has taken

Year	Source	Discussion
		place on both banks of the IHNC. A dense road grid is identified on the western shore of the IHNC to the west of France Road. Pontchartrain Park is depicted within the developed residential area, located to the west of the IHNC. The parcels along the east and west shoreline of the IHNC are industrialized. The area just east of the eastern shoreline parcels is depicted as natural landscape. Two large slips are present along the north west shoreline of the IHNC, south of the Seabrook Bridge. One large turning basin has been constructed along the northeast shoreline, just south of the Seabrook Bridge. The railroad tracks have been extended to run the entire length of the IHNC on the west bank.
1971	Aerial Photograph 1:1000	The area surrounding the IHNC is largely developed for industrial use on both shores. Numerous slips have been constructed along the west shore of the IHNC. Two larger slips are located just south of the Seabrook Bridge along the IHNC western shore. The photograph shows road access to the properties along both sides of the IHNC, France Road on the west shore and Jourdan Road on the east. The Pontchartrain Park and Gentilly Woods residential community has been developed. The development around Lake Pontchartrain appears the same as in the 1952 photograph.
1972	Topographic Map 1:24000	The area appears similar to the 1965 map.
1978	Aerial Photograph 1:1000	The area appears similar to the 1971 photograph. The area to the east of the floodwall on the eastern bank of the IHNC has been completely developed with large industrial buildings. The US Gypsum silos have been constructed.
1979	Topographic Map 1:24000	The area appears similar to the 1965 map with some additional industrial development to the east of the parcels along the eastern bank of the IHNC, at the northern end.
1982	Aerial Photograph 1:1000	The east and west shorelines of the IHNC are completely industrialized. The photograph appears similar to previous photographs. State Road 90, Chef Menteur Highway Bridge is present to the south.
1983	Aerial Photograph	The east and west shorelines of the IHNC are industrialized. The photograph appears similar to previous historic photographs.
1983	Sanborn Maps	Ten maps depict the IHNC from the southern extent at Harbor Drive (Florida Avenue) north to the southern shore of Lake Pontchartrain. North of Florida Avenue and east of France Road there are various container storage tanks for Land and Sea Storage; the contents of the tanks are not identified. A large tract of storage for the Louisiana Materials Company Inc. and a gravel and shell yard are located adjacent to the Interstate 10 connection. Immediately north of the Interstate overpass is a Schwegmann Brothers Supermarket. North of Chef Menteur Highway is the Equitable Shipyards Inc., with cutting tables, traveling crane, plating mill, ship launch, warehouse, and storage yards. North of the shipyards is the Louisiana Industrial Cement Terminal, Ideal Cement Co. with railroad loading spur, an area with many storage tanks, and a craneway located between the cement plant to the south and the metal plant to the north (owner unknown). Immediately north of the craneway is the Orleans Materials and Equipment Co., with metal storage yard and traveling crane; two barge slips; Halter Marine Inc.; and Industrial Canal Division with storage and metal shops. North of these are large tracts of empty land east of the levee, while west of the levee are residential houses of Gentilly. East of Prentiss Avenue on the eastern side

Year	Source	Discussion
		of the levee is Contr's, Materials and Machinery Storage Yard and Shop, and Williams and McWilliams Inc. with several single-story metal office buildings and a slip. North of the slip are Boh Brothers Construction offices and storage yard; a railroad track (New Orleans Public Belt) and spur; Magcobar Manufacturing Oil Field Products; and shops for Bean Ship Repairs, Inc. North of the last slip are the storage yards and offices of Radcliffe Materials Inc. (sand, gravels, shells, and the terminus of the New Orleans Public Belt railroad).
1989	Aerial Photograph 1:750	The east and west shorelines of the IHNC are industrialized. The photograph appears similar to previous historic photographs.
1992	Topographic Map 1:24000	This map is similar to previous maps, with a few added details. Numerous flood control structures are identified surrounding the project area. Floodgates and floodwalls line the IHNC as well as the entrance into Lake Pontchartrain. The floodwalls and levees are depicted running north and south along the IHNC. Industrial parcels are located between the floodwalls and IHNC shoreline. The Seabrook boat ramp is identified.
1992	Aerial Photograph 1:1000	The area appears similar to previous aerial photographs. The east and west shorelines of the IHNC are industrialized.
1994	Sanborn Map	Eight maps depict the IHNC from the southern extent at Harbor Drive (Florida Avenue) north to the southern shores of Lake Pontchartrain. Land and Sea Storage and its tanks are still present. There are vacant tracts between Land and Sea Storage and Interstate 10. West of Schwegmann Brothers Supermarket is a truck sales and service center. North of Gentilly Road are a furniture store and the Royal Inn Motel. North of Chef Menteur Highway, but west of the levee, are the F&P Construction Offices, a Holiday Inn Motel, a bowling alley (vacant), a public pool, an undertaker, the New Orleans Inn, and the beginnings of residential housing. North of Chef Menteur Highway, but east of the levee, is the Equitable Shipyards Inc., with cutting tables, traveling crane, plating mill, assembly lines, ship launch, warehouse and storage yards. North of the shipyard is the Louisiana Industrial Cement Terminal and the Holnam Cement Factory with railroad loading spur to an area of storage tanks and craneway. North is Orleans Material and Equipment - Steel Manufacturing, with metal storage yard, a traveling crane, and two barge slips; Halter Marine Inc.; and Industrial Canal Division with storage and metal shops. North of these are tracts of vacant land east of the levee; west of the levee are the residential houses of Gentilly. East of Prentiss Avenue on the eastern side of the levee is Contr's, Materials and Machinery Storage Yard and Shop, M&I Drilling Fluids Company, and several single-story metal office buildings south of a slip. Further north is Choctaw International Ship Builders. North of the last slip are the storage yards and offices of Radcliffe Materials Inc. (sand, gravel, shells, and the terminus of the New Orleans Public Belt railroad).
1999	Topographic Map 1:24000	The area appears similar to the 1992 map.
1998	Aerial Photograph 1:750	The area appears similar to the 1992 photograph.
2004	Aerial Photograph 1:750	The area appears similar to the 1992 photograph.
2005	Aerial Photograph 1:604	The area appears similar to the 1992 photograph. Assumed to be pre-Hurricane Katrina.
2006	Aerial Photograph	Some of the structures on the banks of the IHNC have been demolished or

Year	Source	Discussion
	1:604	destroyed by the hurricane.

Historical Summary: There is significant evidence of current and historical industrial or commercial use of the properties in the area. Many structures remain and many that previously existed have been demolished or destroyed. The IHNC and the associated lock were completed in 1923, resulting in rapid and intense industrial development on both shores. The area has remained industrial in nature until the present, but many sites have been abandoned (USACE, 2010). Development in the northern IHNC area began somewhat later than in the southern portions. Fewer of these sites were abandoned however, as large containers can access this area more easily through the GIWW. Abandonment of sites in this area most likely happened after Hurricane Katrina, as the entire area between the floodwalls was flooded and badly damaged.

5.4.2.7 Historical Use Information on Adjacent Parcels

Historical uses of adjacent parcels are discussed in the Composite Historical Timeline, in Table 6 above.

5.4.3 Station Grouping 3: Michoud Area Stations (79, 247, 268-270-278, and 449-454)

5.4.3.1 Aerial Photographs

The following information was compiled from three sets of aerial photographs with the “center” set dated 1971, 1978, 1983, 1989, 1994, 1998, 2005, and 2006. The second set of aerial photographs depict the area of the “eastern” set with the photographs dated 1952, 1965, 1971, 1983, 1994, 1998, 2005, and 2006. The third set of aeriels reviewed correspond to Station 79, from the years 1951, 1971, 1978, 1983, 1989, 1994, 2005, and 2006. The composite historical timeline in Table 7 contains a summary of the observations made from those aerial photographs.

5.4.3.2 Historical Fire Insurance Maps

The EDR[®] database did not contain any historical fire insurance map coverage for this portion of the Property. Due to the large size of the report, certified confirmation was not received, as historical fire insurance maps were received for the other sections. The composite historical timeline in Table 7 contains summaries of the observations made from those fire insurance maps.

5.4.3.3 Historical Topographic Maps

There are three USGS topographic maps for the “center and eastern” areas defined as Little Woods (Appendix D-4) for each of the years 1938, 1951, 1967, 1972, 1979, 1994, and 1998. USGS topographic maps for the “western” area are defined as Chalmette, Spanish Fort, Chef Menteur, and New Orleans East (Appendix D-4) for the years 1892, 1939, 1955, 1967, 1972, 1979, 1989, 1994, and 1998. Three maps are needed to encompass the identified area of investigation. The composite historical timeline in Table 7 contains a summary of the observations made from those topographic maps.

5.4.3.4 Historical City Directories

No historical city directories were reviewed.

5.4.3.5 Additional Historical Sources

No additional historical source records were obtained.

5.4.3.6 Composite Historical Timeline

Table 7. Historical timeline for Station Grouping 3.

Year	Source	Discussion
1891	Topographic Map 1:62500	New Orleans: Lot boundaries are shown; the New Orleans and Northeastern (N.O. & N.E.) Railroad is shown extending north and northeast along southern bank of Lake Pontchartrain. Louisville & Nashville Railroad (L&N) is shown along its present course. Gentilly is shown as a town south of L&N Railroad; an unnamed road passes north of town.
1892	Topographic Map 1:62500	Chef Menteur: Bayou Sauvage and Lake Pontchartrain are shown as are the L & N Railroad with the N.O. & N.E. Railroad to the north. Small hamlets named Lee and Micheoud [sic] lie on the south side of the L & N Railroad. Otherwise the entire area is natural and undeveloped. St. Bernard: Bayou Bienvenue, Bayou Maxent and the Mississippi River are shown. Most of the area is undeveloped marsh. The town of Saxonholm is shown adjacent to the New Orleans and Gulf Railroad which runs on the east bank of the Mississippi River. A battery is shown in the center of the marsh area where the two bayous meet.
1932	Topographic Map 1:31680	New Orleans East: The area north of the outfall canal is undeveloped while the area south of the canal is undeveloped. There is some residential development to the south of Florida Avenue. There is a pumping station at the intersection of Florida Avenue and the outfall canal. The MRGO and GIWW have not been built.
1938	Topographic Maps 1:31680	East: The area is mostly undeveloped marsh. The Michoud Canal runs from Bayou Bienvenue to Micheaud [sic] on the railroad line. The GIWW and MRGO have not been built. West: Highway 90 is present; Paris Road is present. L&N Railroad is present. The area is sparsely populated; Old Gentilly Road is located along the northwest portion of the map. Most of the property appears to be undisturbed although some parcel boundaries are depicted. Drainage canals have been built in New Orleans East.
1939	Topographic Map 1:31680	Chalmette: The area is undeveloped and natural. The L&N Railroad and the pumping station are present. Paris Road and the Jackson Protection Levee are shown. This map is of the southern portion of the area, including Bayou Bienvenue. The GIWW and MRGO have not been built.
1949	Topographic Map 1:25000	New Orleans East: The area appears as in the 1939 map, undeveloped and natural. The IHNC is shown in this map, but the GIWW and MRGO have not been built.
1951	Topographic Maps 1:24000	East: The Michoud Canal is present, as are Highway 90 and Old Gentilly Road. There is a large industrial development in the current NASA location. Center: Highway 90 is present; Paris Road and the L&N Railroad are present. Paris Road (Highway 47) is seen running north-south; a small airport is shown east of Paris Road and south of Old Gentilly Road at the edge of the map. This parcel has a pumping station at the southeastern end of the property. There is

Year	Source	Discussion
		<p>some residential development along Old Gentilly Road. The GIWW has been built.</p> <p>West: Gentilly is shown on the western side of the map. The area south of Old Gentilly Road is undeveloped marsh and the GIWW is shown to the south.</p>
1952	Aerial Photographs 1:1000	<p>East: The Michoud Canal is present. Highway 90 and Old Gentilly Road are also present. The only development is north and northwest of the canal. It appears to be all industrial (NASA). Two large facilities appear to encompass the area. The rest of the surrounding area is heavily vegetated. There appears to be a drainage basin north of Highway 90.</p> <p>West: There is significant development along Almonaster Boulevard. The area between Old Gentilly Road and the GIWW is undisturbed.</p>
1954	Topographic Map 1:62500	<p>New Orleans: The area appears as in the previous map; the area is undeveloped and natural; earthen levees are shown north of the GIWW.</p>
1965	Aerial Photograph 1:750	<p>East: The Michoud Canal is shown. There appears to be some widening of the canal along the northern-most point. There is new industrial development along the east and southwest shoreline. There appears to be a levee surrounding the canal. A drainage canal seems to follow along the western shore of the canal leading from the IHNC north; the drainage canal stops just as the canal bends east. There is one loading dock centrally located at the bend of the levee along the eastern shoreline. Many access roads into the industrial properties are visible.</p>
1966	Topographic Map 1:24000	<p>New Orleans East: The area shows some development along the eastern side of the IHNC; the immediate north side of the GIWW is relatively undeveloped and natural. The L&N Railroad is also present in the vicinity of Station 79.</p>
1967	Topographic Maps 1:24000	<p>Chalmette: The area appears as undisturbed land and marshes to the edges of Chalmette. South of Bayou Bienvenue, a sewage disposal plant and a protective levee are shown at the northern edge of the City, on the edge of Orleans Parish.</p> <p>East: The map shows Michoud Canal, Highway 90, Old Gentilly Road, and the L&N Railroad. West of Michoud Canal and south of Old Gentilly Road is the NASA facility with at least four large buildings, two pumping stations on the southwest and southeast corners, a substation at the northern end of property, and Saturn Boulevard running through the center of the area. There are additions to the town center of Michoud, including the housing addition of “Village de’ L’Est” which is labeled as being under construction. There is industrial development on the eastern shore of the Michoud Canal.</p> <p>Center: Highway 90 is present; Paris Road and L&N Railroad are present. There is a residential development clustered around Highway 90 and Old Gentilly Road. South of Old Gentilly Road is the Resthaven Memorial Park. Two roads are identified as proposed, which will become Almonaster Road to the south and Interstate 10 to the north. There is a pump station and water tower at the current location of the Entergy Plant. NASA has expanded and the Village de L’Est is being developed.</p>

Year	Source	Discussion
		<p>West: The map shows significant residential development to the north of Chef Menteur Highway. There is industrial development in the current location of Station 79, including railroad tracks and six large tanks. There is residential development along Old Gentilly Road. There is a levee shown along the GIWW.</p>
1971	Aerial Photographs 1:1000	<p>East: The area is similar to the 1965 photographs, with additional coverage surrounding the canal. There appears to be an overgrown area in the middle of the past industrial development, located along the northwest shoreline. There are additional loading docks constructed along Michoud Canal, specifically two on the south and one along the bend centrally located within the canal. The GIWW is visible along the southern portion of the photograph. There continues to be evidence of industrial growth along the east and west sides of the canal. There is some residential development along the drainage basin north of Highway 90, mostly constructed to the west of the basin. There is evidence of a constructed levee northwest of the drainage basin.</p> <p>Center: Highway 90 is present; Paris Road is present. The Paris Road Bridge is present. The area is sparsely populated, primarily north of Old Gentilly Road along the northeast portion of the photograph. Most of the area appears to be undisturbed, with some parcel boundaries depicted. There is evidence of a large turning basin located to the east of the photograph, along the northern boundary of the GIWW. There is industrial development along the entrance of the small turning basin and the GIWW. The facility appears to have a long boating slip leading into the parcel from the GIWW. There are two or three small storage tanks located at the industrial facility. The area south of the GIWW appears to be undisturbed.</p> <p>West: There is additional industrial development evident on Elaine Street. The barge loading facilities on the GIWW have been constructed.</p>
1972	Topographic Maps 1:24000	<p>Chalmette: The area appears to be undisturbed land and marshes to the edges of Chalmette. The levee along the GIWW is under construction on the southern shore. South of Bayou Bienvenue there is a sewage disposal plant and a protective levee before entering the northern edge of the Chalmette.</p> <p>East: The area appears as in the 1967 map, showing Highway 90, Old Gentilly Road, and the L&N Railroad. West of Michoud Canal and south of Old Gentilly Road is the NASA facility with at least four large buildings, two pumping stations, a substation at the northern end of the property, and Saturn Boulevard running through the center of the area. There are few new additions to the town center of Michoud, with the Village de L'Est completed. There is a new substation and radio tower east of Paris Road and south of Old Gentilly Road. To the southeast of the canal, on the northern shore of the GIWW, there are levees listed as being under construction.</p> <p>Center: Highway 90 is present; Paris Road and bridge are present. Almonaster Road and Interstate 10 are under construction. The residential development in the area is nearly at</p>

Year	Source	Discussion
		<p>its current level. There have been five large tanks constructed on the property currently occupied by Entergy, to the east of the Paris Road Bridge.</p> <p>West: The area appears as in the previous topographic map, with industrial development along the GIWW. Almonaster Road is under construction. There has been residential development in New Orleans East, north of Interstate 10.</p>
1978	Aerial Photograph 1:1000	<p>Center: The area appears similar to that of the 1971 photographs. There appear to be four large industrial sized storage tanks present within the industrial facility (currently Entergy) located along the GIWW. There appears to be a drainage canal running along the eastern shore of the small turning basin.</p>
1979	Topographic Maps 1:24000	<p>Chalmette: There is undisturbed land and marsh to the edges of Chalmette. A landfill adjacent to the sewage facility is under construction. The map shows dredging of the bayou north of the City limits and south of the protective levees.</p> <p>East: The area appears as in the 1967 map, showing Highway 90, Old Gentilly Road, and the L&N Railroad. There is additional industrial development to the north of Old Gentilly Road, across the road from NASA. There is a substation and radio tower east of Paris Road and south of Old Gentilly Road and to the south of the Michoud Canal there are levees listed as being under construction.</p> <p>Center: Almonaster Road and Interstate 10 have been completed. The residential area is expanding closer to the current level in terms of the town's borders north of Old Gentilly Road. Two additional large tanks have been added to the facility at the current Entergy property. There is more industrial development along Old Gentilly Road and Almonaster Avenue.</p> <p>West: The area appears as in the previous map, with additional development in New Orleans East south of Interstate 10, both residential and institutional. Another industrial facility is under construction along Elaine Street.</p>
1983	Aerial Photographs 1:1000	<p>East: There is an increase in industrial growth east and west of the canal. The overgrown area along the northwest shoreline appears to be undisturbed. The eastern shoreline has been developed in comparison with other historical photographs. The entire eastern shoreline appears to be industrialized, with a small portion undisturbed at the entrance of the canal into the IHNC. The northern end of the canal appears to have been widened again. The residential communities north of Highway 90, along the drainage basin, have continued to develop. Some additional construction is visible between Highway 90 and the drainage basin.</p> <p>Center: The area appears to be similar to the 1978 photograph, with a few areas of development. There is some additional industrial development in the northeast portion of the photograph; one small area has been developed south of Old Gentilly Road. West of Paris Road, three large industrial properties have been developed.</p> <p>West: The area appears as in the previous aerial, with minor new development along Elaine Street.</p>

Year	Source	Discussion
1989	Aerial Photographs 1:750	<p>Center: There is evidence of the beginning of road construction, to be known in the future as Almonaster Boulevard and the Highway 510 corridor. The industrial facility adjacent to the Paris Road Bridge also appears to have some additional buildings constructed, mostly along the GIWW shoreline. In the northeast, development continues to be evident. There are four large storage tanks on the current Entergy property.</p> <p>West: The area appears similar to the previous aerial. The CSX (current) facility is visible, as are some roads to the west of Elaine Street, adjacent to the levee. A large drainage canal has been constructed between Almonaster Road and the GIWW.</p>
1994	Topographic Maps 1:24000	<p>Chalmette: The area appears as in the previous map.</p> <p>East: The area appears similar to the previous map. There is additional industrial development at the intersection of Old Gentilly Road and Chef Menteur Highway. There are few new additions to the town center of Michoud, which is expanding to the north, south, and east. To the south of the Michoud Canal there are levees listed as being under construction while the levees to the north of the canal are listed as completed. There are several large tanks shown on the eastern shore of the Michoud Canal.</p> <p>Center: Highway 90 is present; Paris Road and bridge are present. Almonaster Road is located to the south and Interstate 10 to the north. The Almonaster/Paris Road interchange is under construction. The development in the area is expanding north of Dwyer Canal to Lake Pontchartrain and south of Dwyer Canal to Old Gentilly Road. Additional industrial development has occurred along Old Gentilly Road near the bridge.</p> <p>West: The area appears similar to the previous maps. A large amount of industrial development is occurring along the southern side of Chef Menteur Highway. The large tanks in the current location of Station 79 are still present.</p>
1994	Aerial Photographs 1:750	<p>East: The area appears similar to the 1989 photograph.</p> <p>Center: A larger industrial area has been developed between the small turning basin and Old Gentilly Road.</p> <p>West: The area appears as in the previous aerial.</p>
1998	Topographic Maps 1:24000	<p>Chalmette: There appears to be undisturbed land and marsh to the edges of Bayou Bienvenue. From the northern levee of the town to Bayou Bienvenue there is evidence of intense dredging of the marshlands. The levee along the GIWW has been completed.</p> <p>East: The area appears as in the previous map, with development mostly complete. The edge of the Bayou Sauvage National Wildlife Refuge is shown on the eastern side of the map.</p> <p>Center: Highway 90 is present; Paris Road and bridge are present. Almonaster Road is located to the south and Interstate 10 to the north. The residential area is expanding north of Dwyer Canal to Lake Pontchartrain and south of Dwyer Canal to Old Gentilly Road. There is a large man-made water body to the west of the Paris Road Bridge.</p> <p>West: The area appears similar to the previous map. The industrial developments along Elaine Street are depicted as</p>

Year	Source	Discussion
		complete. The large tanks adjacent to the GIWW are still present.
1998	Aerial Photographs 1:750	East: The area appears similar to the 1994 photograph. The parcel along the west shore continues to be developed. The property currently occupied by Copart Salvage is partially developed. Center: The area appears similar to the 1994 photograph. There is a new industrial development to the north of the turning basin.
2005	Aerial Photographs 1:604	East: The area appears similar to the 1998 photograph with continued industrial development east and west of the canal. The Copart Salvage parking lot has been constructed. Center: The area appears similar to the 1998 photograph. West: The area appears similar to the previous aerial. There is a large cleared area to the west of Elaine Street, south of Almonaster Boulevard.
2006	Aerial Photographs 1:604	East: The area appears to be fully developed, with a few small areas of natural landscape. Many loading docks are present along the eastern canal shorelines. Center: The area appears similar to the 2005 photograph. West: The area appears similar to the previous aerial. The area immediately to the west of Elaine Street has many vehicles parked on it, presumably cars abandoned after Hurricane Katrina.

Historical Summary: There is significant evidence of current and historical industrial or commercial use of the properties in the area. Many structures remain and many that previously existed have been demolished or destroyed. The IHNC and the associated lock were completed in 1923, resulting in rapid and intense industrial development on both shores. The area has remained industrial in nature until the present, but many sites have been abandoned (USACE, 2010).

5.5 Historical Use Information on Adjacent Parcels

Historical uses of adjacent parcels are discussed in the Composite Historical Timeline, in Table 7 above.

6.0 PROPERTY RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Ms. Zoe Knesl and Ms. Laura Sanchez of AECOM conducted a visual reconnaissance of the Property on June 1 through 4, 2010. A site visit to the former USCG facility was conducted on June 7, 2010 by Ms. Zoe Knesl and Dr. J. Christopher Brown of the USACE. Additional site visits were performed by Ms. Knesl on 7 July 2010 and by Ms. Knesl and Dr. Brown on 8 July 2010. The exterior portion involved walking the Properties, including the boundaries, except for some portions which were not accessible because of access constraints due to fencing. The interior of buildings on adjacent properties was observed sufficiently to identify actual or potential RECs, except for areas which were abandoned and judged to be too dangerous to enter. Pertinent environmentally-related observations and findings are described in the following sections.

6.2 General Property Setting

The elevation of the Property, as determined from the topographic map in the database search report in Appendix D-1, varies between zero and 15 feet above Mean Sea Level. The local topography can be characterized as flat, with higher elevations on the tops of the levees.

All properties have an adjacent body of water, either the IHNC, the GIWW, or the Michoud Canal. The land surface slopes downward to the water about 10 to 20 feet away. Based upon the topography and the general soil characteristics in the area, the hydraulic gradient in surficial soil on and near the Property is likely to be low. Soils characteristics information was not provided in the EDR report, possibly due to the large area investigated.

No information was provided in the EDR report regarding the approximate depth to shallow ground water on the Property; however, based on the elevation and data for the surrounding area, it is likely very shallow.

The inferred direction of shallow ground water flow in the area, based upon the Property inspection and an examination of the topographic map, is towards the adjacent water body, although buildings and other conditions on the Property and nearby parcels, 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 ground water would be expected to move at a slow rate.

6.3 Exterior Observations

There are no buildings on the Properties, although there are a few drainage-related pipes and other structures. Please see Section 3.4 for a detailed site description.

6.4 Interior Observations

General housekeeping was good. The ROW is mowed on a regular basis and all levees were clear of brush and other large vegetation. Descriptions of housekeeping on the adjacent properties are included in Section 3.4; conditions were observed to be highly variable.

7.0 INTERVIEWS

Records of interviews and phone/email communications that contain information beyond that summarized in this chapter are in Appendix F.

7.1 Interview with Owner and User

Dr. J. Christopher Brown, with USACE, described current and historical uses of the Property. The Orleans Levee board owns the ROW where the levee and floodwall stations are located. Dr. Brown provided documentation regarding previous environmental studies and other relevant information regarding the current and historical conditions of the Property. This information is summarized in Section 4.3.

Mr. Kugleman of the Orleans Levee District, Operations & Maintenance Department, was contacted regarding any possible impacts to the property. Mr. Kuglemann conducted research within the organization speaking with the Executive Director and two supervisors who work daily on the levees with a total of 20+ years experience in total. None of these individuals had any knowledge of spills or incidents that would be of concern in the project areas.

7.2 Interviews with Others (Adjacent Property Occupiers)

Mr. Clayton Miller with the Port of New Orleans Business Development Division was not aware of any significant environmental concern on or near the Property.

Mr. Randy Zerang with Olefins LLC, which owns the pipeline running through Station 247, explained that the name of the company occupying this property is LDH Energy Refinery Service. He described the

current and historical uses of the Property. The property was previously owned by Gulf Liquids. Both the current and previous owners operate(d) pipelines carrying liquid natural gas. He was not aware of any significant environmental concern on or near the subject Property. There was a check valve leak in 2006 with an insignificant release.

Mr. Gary Luther with DUPUY Storage & Forwarding described current and historical uses of the property located immediately east of the subject Property. The property has been owned and operated by DUPUY for approximately 25 years. Previously the property was owned by Owens Innovations, a glass company that is now out of business. DUPUY maintains three ASTs on the property, two containing diesel fuel and one containing gasoline. All ASTs are located within a containment unit and there have been no spills or releases. The property line is located 300 to 400 feet from the levee. Mr. Luther was not aware of any significant environmental concern on or near the subject Property.

Mr. Keith Savoy with NASA, described current and historical uses of the NASA Property. He reported that no historical and current environmental releases of hazardous materials or wastes from the NASA facility or other nearby facilities to the hurricane system adjacent to the NASA facility were known. Mr. Savoy was familiar with the hurricane protection system and has been in recent contact with representatives of the USACE. The USACE is aware of the NASA groundwater contamination and has seen related reports. Mr. Savoy was certain that NASA activities had not resulted in releases to the hurricane protection system and that construction activities at the Property would not impact (move) any contamination originating on his facility.

Ms. Dionne Magness from the LDEQ responded to a request for general information regarding the properties adjacent to the hurricane protection system. The email stated that she required an address to be able to provide any information. This email is included in appendix F.

Mr. Gus Von Bodungen, and Sandra Bradford, Senior Lead Environmental Analysts for the Entergy Corporation, provided information on the Entergy Michoud Plant during the escorted site visit. The facility produces power using natural gas. It can operate on heating oil during emergencies. There are four extremely large storage tanks on the northeast corner of the property. Two of these have been cleaned out, one is empty, and the remaining tank contains heating oil for emergency use. There is an oil offloading area along the GIWW which is still functional and can be used to bring in heating oil if necessary. The previous storage tanks for oil were located adjacent to this facility, but they were removed after Hurricane Katrina. There is a cooling water intake facility which runs over the levee and has an associated anti-bio-fouling system which uses bleach and sodium hypochlorite. There is also a permitted discharge which receives both storm water and cooling tower water at two separate outfalls. Two blowdown ponds are on site where water used to clean the boilers is treated and stored. This water is tested for pH and particulates prior to release through the discharge system. Overall, housekeeping and maintenance were very well organized at the facility and all permits were reported to be up to date. Additionally, the investigators inquired about the plant on the IHNC and were informed that the culverts had been sealed and that the plant was non-operational.

Mr. Wayne De Sal at the LDEQ responded to general questions about the levees and floodwalls in the study area. Reach 2 Station 79+00 was once a coal terminal, the dilapidated conveyors currently on the flood side of the wall were used to offload barges. The area adjacent to Station 247+00 is a closed landfill. He was not informed of any complaints or resolutions regarding the burial of PCB-containing transformers at Southern Recycling. Also, as he is in the solid waste department, he had no information regarding possible issues in the waters of the IHNC and GIWW.

Interview attempts were unsuccessful with:

- U.S. Environmental Protection Agency Region VI Records Facility Assessment Section
- U.S. Coast Guard Water Management

- New Orleans Sewerage & Water Board
- New Orleans Fire Department Fire Prevention Division
- New Orleans Fire Department Public Affairs Division
- City of New Orleans Environmental Affairs
- City of New Orleans Safety & Permits Division
- Southern Scrap
- UPS
- New Orleans RV Campground
- Trinity Yachts
- Heniff
- COPART Salvage – a storage and auction yard
- Catholic Charities

8.0 FINDINGS

The following findings are based upon the information obtained during this ESA, and discussed in the previous chapters of this report:

Known or Suspect Recognized Environmental Conditions

Station Gate W-1

Former USCG Facility at 4640 Urquhart Street, New Orleans, LA 70117

Coordinates: 29°58'1.65"N, 90° 1'38.77"W

This site has been abandoned since Hurricane Katrina. The buildings are in disrepair. There are many unidentified containers of possible hazardous substances or petroleum products on site, some of which are in poor condition. There is one area which has a sign designating a space below ground as a confined space. Another area has an access portal to another unidentified underground area. A 1997 HTRW report regarding the lock replacement project listed nine sites on the NPL list. The USCG facility was listed as a high priority site. It is currently on the CERC-NFRAP list, although no records of clean up or remediation were found during this Phase I ESA investigation (USACE 1997a). Additionally, a Phase II sampling investigation revealed volatiles, semi-volatiles, metals, and pesticides in nine locations on this property. These substances were not found to be above Federal regulatory levels, but the report states that State regulations may require remediation if construction were to commence on the new lock (USACE 1997b). Additional historical information reveals that this site has the potential for impacted soils due to long term use as an industrial area (R. Christopher Goodwin and Associates, 1992).

Station 18-28+85

Southern Scrap/Southern Recycling

Coordinates: 29°58'54.16"N, 90° 1'11.60"W

Southern Scrap is a materials recycling company, which handles cars, trucks, barges, large vessels and various household appliances. It is unknown if these materials are free of hazardous substances or petroleum products when they are brought to the facility. The method of disposal of these materials if they are present is also unknown. This facility was heavily damaged during Hurricane Katrina; any spills associated with the flooding are undocumented. Additional historical information reveals that the area south of this site has the potential for impacted soils due to long term use as an industrial area (R. Christopher Goodwin and Associates, 1992).

Historical Recognized Environmental Conditions

No such condition was identified on the Property. Adjacent properties which have had historical leaks or spills include: the Port of New Orleans, 6201 France Road; UPS, 5700 Morrison Road; Southern Recycling, 4801 Florida Avenue; Baroid Drilling Fluids (currently Halliburton), 8000 Jourdan Road; NASA, 03800 Old Gentilly Road; and Seabrook Marine, 5801 France Road.

Known or Suspect De Minimis Environmental Conditions

Station 79

Adjacent to the Elaine Street Pump Station

This area is generally in poor condition with many piles of debris, abandoned structures and unknown soil conditions. The shoreline near the floodgate at this station appears to be stained and there is a petroleum odor in this area. The industrial uses in this area (especially the asphalt company) appear to be both on the Property and adjacent, although it was not possible to ascertain which operations were current and which were abandoned.

Other Environmental Concerns

Stations along the northern end of the IHNC

The flood side of all of these stations is a heavy industrial area and has been for in excess of 50 years. The potential for hazardous substances or petroleum products is present. There is a hazardous materials storage area on the Trinity Yachts property, adjacent to the Property at station 200, which appears to be well maintained and in good condition. Several adjacent properties on both shores of the IHNC have records of historical LUSTs. The Port of New Orleans is on the AUL list (institutional controls) for the property located at 6201 France Road, due to a UST leak that could not be completely remediated due to the proximity of the IHNC.

Station 247

The vegetation in the vicinity of the liquid gas pipeline (owned by LDH Energy) that runs through the levee adjacent to the Paris Road Bridge appeared to be in distress. Vegetation on other portions of this Station appeared normal.

Staging areas

Most of the staging areas are in industrial areas, which have been in use as such for many years. The potential exists for soils at some of these staging areas to contain hazardous substances or petroleum products. These sites will be used for material and equipment storage temporarily while levee restoration/reinforcement work is being done. The investigators would caution using these staging areas for bulk soil storage as scraping of the existing soils while removing materials for use could import contaminants to the construction sites.

9.0 OPINIONS

Based upon all of the information obtained, the environmental professional(s) who conducted this ESA believe that the known or suspect environmental conditions identified in Chapter 8.0 above have resulted in the impacts to the Property listed below, for the reasons given.

Station Gate W-1

Former USCG Facility at 4640 Urquhart Street, New Orleans, LA 70117

Based on the current condition of this property, the unknown contents of many containers on site, and the potential for unidentified underground structures and/or storage tanks, this site could have impacted the soils adjacent to station Gate W-1. Although the USCG operated this site for many years in compliance with LDEQ regulations (other than paperwork issues), it is now abandoned. It is the investigator's opinion that soils in the area could have elevated levels of hazardous substances or petroleum products that would require remediation under State regulations. However, as the area is to remain industrial, remediation may not be necessary. If soils are to be removed from the site, and placed elsewhere, remediation and proper disposal may be necessary.

Station 18-28+85

Southern Scrap/Southern Recycling

This company has operated on this site for many years. Although it is reportedly in general compliance with LDEQ regulations, poor housekeeping was apparent during the site visit. Fuel and other hazardous substances are reported to be removed from all vehicles prior to receipt on site. However, records from the LDEQ indicate that at least one vessel has released fuel into the waters of the IHNC while being scrapped. Additionally, any hazardous substances or petroleum products that were stored on site during Hurricane Katrina could have been spilled from their containers anywhere on the property. If soils are to be removed from the site, they may need to be tested to establish whether either remediation and/or sanitary disposal would be required, according to LDEQ regulations.

Station 79

Barge loading area adjacent to the Elaine Street pump station

This area has been a heavy industrial site for many years and appears to have been abandoned with minimal clean up after Hurricane Katrina. Debris piles and unknown containers of hazardous substances or petroleum products may be on site near the property. If soils are to be removed from the station, they may need to be tested to establish whether either remediation or sanitary disposal would be required according to LDEQ regulations.

Stations along the northern end of the IHNC

This area has been industrial for over 50 years. The potential for impacts to soils on the flood side of the property exists. Several spills and regulatory compliance issues have been logged with companies in this area. Other sites appear to have been abandoned post-Katrina with minimal clean up. The residential area on the western side of the western IHNC floodwall is unlikely to have any issues that would be cause for environmental concern. On the eastern side, however, there are also industrial properties on the protected side of the floodwall. If soils are to be removed from this area, more detailed investigations may be necessary including possible soil sampling, depending on the depth of any proposed excavations. The UPS property has had several leaking USTs removed and has undergone extensive excavation and remediation on site.

10.0 CONCLUSIONS

At the request of USACE, AECOM. has performed a Phase I 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 IHNC and GIWW levees and floodwalls located along the IHNC and GIWW in New Orleans, Louisiana (the “Property”). Any exceptions to, or deletions from, the ASTM Practice are described in Chapter 2.0 of this report. This assessment has revealed no evidence of RECs (as that term is defined in ASTM Standard Practice E1527-05) in connection with the Property, except for the following:

Station Gate W-1

Former USCG Facility at 4640 Urquhart Street, New Orleans, LA 70117

Soils potentially impacted by hazardous substances or petroleum products by adjacent facility.

Station 18-28+85

Southern Scrap/Southern Recycling, 4801 Florida Avenue, New Orleans, LA 70117

Soils potentially impacted by hazardous substances or petroleum products by adjacent facility.

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.

In this Chapter, any term in *italics* has the meaning defined in ASTM Standard Practice E1527-05.

11.1 Historical Data Gaps/Data Failure

In accordance with the requirements in ASTM E1527-05, 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 1940, whichever was earlier.

In accordance with the requirements in ASTM E1527-05, when conducting the historical review, intervals of not greater than five years were researched, unless the use of the Property was unchanged over a period of longer than five years.

At some stations, certain portions of the historical review were not possible. For example, historical fire insurance maps were not available for the stations near the NASA facility. Additionally, as there were never any occupants of the properties, and they were either in undeveloped or industrial areas, city directories were not reviewed. These minor data gaps were not considered data failure by the investigators as they would not result in the failure to discover a REC.

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, no attempt was made to evaluate the following historical sources:

- Recorded Land Title Records – The land has been owned by the government for several decades; title records would not have provided any additional information.
- Property Tax Files - The land is technically owned by the government; therefore, there is no tax assessment information associated with it.

- Building Department Records – There are no buildings on the properties, only levees, floodwalls, and occasional pipelines. Records of the construction of these structures would be in the possession of the USACE or the New Orleans Levee Board, not the Building Department. Attempts were not made to obtain these records.
- Zoning/Land Use Records – The Property is considered public property, used exclusively for flood protection. It would not have been rezoned since the protection structures were built. Other historical sources, including newspaper archives, community organizations, local libraries, or historical societies.

11.2 Other Deviations/Data Gaps

- Information regarding the possible impacts to soils in the area after the flooding associated with Hurricane Katrina, especially along the northern IHNC, adjacent to Southern Scrap, and adjacent to the former USCG facility, was not readily available during this assessment. This information is available only through sampling and/or extensive research. These areas experienced heavy and/or violent flooding during Hurricane Katrina. Any materials stored on site could have been spilled into the floodwaters and could have impacted soils on or near the properties.
- Due to the nature of the Property, the planned use for which this assessment was conducted, and time and budgetary constraints, this ESA concentrated on properties immediately adjacent to the floodwall and levee stations in question. Site visits were conducted at all accessible portions of the floodwall and levee stations. The site visits were followed up with emails and/or phone calls to the adjacent property owners and operators of interest. If calls were not answered on the second attempt, a message was left if possible. If the phone or email message was not returned, a reasonable attempt was considered to have been made. Most of the privately owned companies did not respond or did not wish to participate in the inquiry. This is not considered a data failure, as information regarding these companies was readily available publically.
- Desktop and database research was considered sufficient for properties not immediately adjacent to the Property.

12.0 ADDITIONAL SERVICES

No additional services were requested to be included in this Phase I ESA. The client did not request an investigation of the potential for *chemicals of concern* (as defined in ASTM Standard Practice E2600-08) to migrate into structures on the Property.

13.0 REFERENCES

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Additional references used during the regulatory records review are provided in Appendix E.

14.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of *environmental professional* as defined in §312.10 of 40 CFR Part 312.

We have the specific qualifications based on education, training, and experience to assess a *Property* of the nature, history, and setting of the subject *Property*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by:

Zoe Knesl
Environmental Scientist

Reviewed by:

Robert A. Dover
Senior Geologist

15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Resumes of the environmental professionals named in Chapter 14.0 above are in Appendix H.

16.0 APPENDICES

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

APPENDIX A
SCOPE OF SERVICES

APPENDIX B

PROPERTY MAPS AND FIGURES

APPENDIX C
PHOTOGRAPHS

APPENDIX D-1
COMPUTER DATABASE SEARCH

APPENDIX D-2
HISTORICAL AERIAL PHOTOGRAPHS

APPENDIX D-3

HISTORICAL FIRE INSURANCE MAPS

APPENDIX D-4
HISTORICAL TOPOGRAPHIC MAPS

APPENDIX D-5

HISTORICAL CITY DIRECTORY SUMMARY

City Directories were not requested as part of the database report. There are no buildings or occupants on the Property, therefore, they would not be listed in any directories.

APPENDIX E
REGULATORY RECORDS

APPENDIX F
INTERVIEW DOCUMENTATION

APPENDIX G

**QUALIFICATIONS OF
ENVIRONMENTAL PROFESSIONALS**