

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
BELLE CHASSE PUMP STATION 1
206 PUMP STATION ROAD
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
CONTRACT NUMBER: W912P8-07-D-0057
TASK ORDER NUMBER: 0015**

PREPARED FOR:



**US Army Corps
of Engineers**

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Mississippi Valley Division,
New Orleans District (USACE-MVN)
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June 19, 2007

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LIST OF ABBREVIATIONS

AEROSTAR	Aerostar Environmental Services, Inc.
AI#	Agency Interest Number
AST	Aboveground Storage Tanks
ASTM	American Society for Testing and Materials
AULs	Activity and Use Limitations
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CORRACTS	RCRA Corrective Action
EDMS	Electronic Document Management System
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
HTRW	Hazardous, Toxic, and Radioactive Waste
IC/EC	Institutional Controls/Engineering Controls
LDEQ	Louisiana Department of Environmental Quality
LSLO	Louisiana State Lands Office
LUST	Leaking Underground Storage Tank
NFRAP	No Further Remedial Action Planned
NGVD	National Geodetic Vertical Datum
NPL	National Priority List
NRCS	National Resource Conservation Service
PCB	Polychlorinated Biphenyls
PMT	Pole-Mounted Transformer
PPTAO	Plaquemines Parish Tax Assessor's Office
PRC	Property Record Card
RCRA	Resource Conservation and Recovery Act
RCRA-LQG	RCRA Large Quantity Generators
RCRA-SQG	RCRA Small Quantity Generators
RCRA TSD	RCRA Treatment, Storage and Disposal
RE	Real Estate Number
SWF/LF	Solid Waste Facilities/Landfills
SHWS	Hazardous Waste Sites
TSD	Treatment, Storage and Disposal
USGS	United States Geological Survey
UST	Underground Storage Tanks
VCP	Voluntary Cleanup Program

1.0 EXECUTIVE SUMMARY

1.1 Site Name

Belle Chasse Pump Station 1
206 Pump Station Road
Belle Chasse, Plaquemines Parish, Louisiana
Tax Bill Numbers: Not Applicable

1.2 Inspection Date(s)

May 24, 2007

1.3 Name of Inspector(s)

Elizabeth Black

1.4 Client and User

Client: United States Army Corps of Engineers, Mississippi Valley Division, New Orleans District (USACE-MVN)

User: United States Army Corps of Engineers, Mississippi Valley Division, New Orleans District (USACE-MVN)

1.5 Site Descriptions and General Observations

At the time of our investigation, the site consisted of a parcel developed with two connecting pump houses, a storage garage, a combined office warehouse, and the western end of the suction basin, which is an extension of Bayou Barriere. Access to the site is available via Pump Station Road to the east. The site is bordered by Kostmayer Construction Co. to the north; Pump Station Road and Bayou Barriere to the east and south; the eastern portion of the suction basin and equipment staging to the south; and the Algiers Canal – Gulf Intracoastal Waterway, followed by the Whitney-Barataria Pump Station, to the west.

Based on the review of aerial photographs, historical topographic maps and interviews, the site appears to have been undeveloped land in 1951 and has been developed with the present-day pump station since at least the mid-1950s.

1.6 Findings and Conclusions

AEROSTAR has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard E 1527-05 of the Belle Chasse Pump Station 1, located at 206 Pump Station Road, Belle Chasse, Plaquemines Parish, Louisiana, hereafter referred to as the site. Any exceptions to, or deletions from, this practice are described in Section 2 of this report. The Executive Summary serves as a summary of this report and presents the significant findings, conclusions and recommendations. The Executive Summary should not be considered a stand-alone document and must be evaluated in conjunction with the discussions, supporting documentation, and limitations within this ESA report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the site, except for the following:

- On-site concerns were noted from the large amount of oil and staining observed on the engines and concrete floors in the two pump houses.
- On-site concerns were noted from the lack of regulatory information pertaining to the removal of the two 10,000-gallon USTs from the area now occupied by the cooling system adjacent to the northern pump house.
- Off-site concerns were noted on the southern adjoining property, which is used by the Plaquemines Parish Drainage Department as a staging area for equipment and spare parts. In addition, an approximate 2,500-gallon waste oil AST is located on this property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor, a towable sprayer, and two approximate 10,000-gallon former USTs were observed on this property.

1.7 Recommendations

Based on the information obtained for this report, AEROSTAR recommends conducting soil and groundwater sampling along the southern property boundary to determine if operations on the southern adjoining property have negatively impacted the site. AEROSTAR also recommends soil and groundwater sampling around the pump houses and in the area of the cooling system, which is reportedly the area of the former tank farm.

The remainder of this report is organized as follows: Section 2 describes the scope of work and limitations for this report; Section 3 presents a site description; Section 4 presents user provided information; Section 5 presents a records review; Section 6 presents a summary of the site reconnaissance; Section 7 presents a summary of interviews; Section 8 presents a summary of AEROSTAR's findings and opinions; Section 9 presents a summary of AEROSTAR's conclusions; Section 10 presents any deviations from the ASTM standard; Section 11 provides additional services conducted as part of this Phase I ESA; Section 12 presents the references; Section 13 presents the signatures of environmental professionals preparing and reviewing the report; and Section 14 presents the qualifications of the environmental professionals participating in this Phase I ESA. Figures are included in Appendix A. The property record information is included in Appendix B. Site photographs are included in Appendix C. A computerized regulatory agency database search is included in Appendix D. Historical research documentation is included in Appendix E. Interview documentation is included in Appendix F. A list of references is included in Appendix G. The qualifications and resumes of the environmental professionals performing this investigation are included in Appendix H.

2.0 INTRODUCTION

2.1 Purpose

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to ASTM Standard E 1527-05, recognized environmental conditions in connection with the site. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not 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. Conditions determined to be *de minimis* are not recognized environmental conditions.

Although performance of this investigation in a manner that is generally consistent with the ASTM Standard E 1527-05 Standard is of benefit, it should be recognized that the Standard of “All Appropriate Inquiry” or “good commercial or customary practice” can only be made on a case-by-case basis and is subject to judicial interpretation.

2.2 Scope of Work

This Phase I ESA was conducted in general accordance with ASTM Standard E 1527-05, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.” The assessment consisted of four components: records review, site reconnaissance, interviews, and report preparation.

The scope of work does not include an evaluation of asbestos containing building materials, lead based paint, lead in drinking water, regulatory compliance, soil or groundwater sampling and analysis, cultural and historical resources, industrial hygiene, health and safety, ecological resources, indoor air quality, radon, site geotechnics (soils, foundations, site retention, etc.), wetlands, endangered species, or construction materials testing. AEROSTAR can provide these additional services, if requested.

2.2.1 Records Review

Historical Research: Sources such as historical aerial photographs, city directories, and fire insurance maps were reviewed, if reasonably ascertainable, to evaluate the historical usage of the site and surrounding properties. Additionally, a chain-of-title and an environmental lien search were reviewed if provided by the User.

Physical Setting Sources: Various maps, reports, and technical publications were reviewed and observations of site conditions were made to evaluate the hydrogeological/geological conditions associated with the site and surrounding properties. This data can provide pertinent information about the site, including soil classification, surface water flow directions, and possibly, an indication of the local directions of surficial aquifer groundwater flow.

Environmental Public Records Review: Reasonably ascertainable local, state, tribal and federal environmental records and the regulatory database search were reviewed to help assess the likelihood of problems from migrating hazardous substance or petroleum products. Public records identifying these facilities can provide indications of the potential for recognized environmental conditions to be present at the site.

AEROSTAR obtained, reviewed and evaluated reasonably ascertainable information from the Client, User, site owner; local, state, tribal, or federal entities; and the environmental regulatory database search. The conclusions and recommendations of this report are based, in part, on this information. The data reviewed during this investigation appeared to be accurate; however, the provided services do not include the verification of the accuracy or authenticity of information provided by others.

2.2.2 Site Reconnaissance

On-site Reconnaissance: Visual and physical inspections conducted as part of this investigation included walking the interior of the site in a grid-like manner and walking the site perimeter, where accessible. Additionally, observations of access to and egress from the site were noted, as well as the presence and condition of any on-site buildings, utilities, or other improvements. During the site inspection, an emphasis was placed on observing the operations or conditions exhibiting the potential for recognized environmental conditions. All phases of the site reconnaissance were documented and photographs were taken.

Offsite Reconnaissance: Offsite reconnaissance conducted as part of this investigation included visual and physical inspections of the adjoining properties from the site boundary and from publicly accessible areas. Additionally, a vehicular reconnaissance of the surrounding properties was conducted. During these inspections, an emphasis was placed on observing the operations or conditions exhibiting the potential for recognized environmental conditions. If any sources were identified, the inspector would document the name and location of the facility.

2.2.3 Interviews

AEROSTAR conducted interviews with available individuals familiar with the site, as well as local, state, tribal or federal agency representatives, regarding issues which could have an adverse effect on the environmental status of the subject site.

AEROSTAR depends on the Client, tenant, and other site personnel to provide data pertinent to determining the environmental status of the site, which may or may not exist within public records. The conclusions and recommendations of this report are based, in part, on this information. The data obtained during this investigation appeared to be accurate; however, the provided services do not include the verification of the accuracy or authenticity of information provided by others.

2.2.4 Report Preparation

This report was prepared based upon the information provided by the Client and the User, the observations made during the site reconnaissance, and the information obtained from a review of readily available records. Given the inherent limitations of environmental assessment work, AEROSTAR will not guarantee that any site is free of hazardous or potentially hazardous materials or that latent or undiscovered conditions will not become evident in the future. This report was prepared within the professional conduct of the industry and in accordance with the proposal and the standard terms and conditions presented in the contract. No other warranties, representations or certifications are made.

2.3 Limitations

AEROSTAR has prepared this assessment for the Client and User. AEROSTAR's assessment represents a review of certain information relating to the site that was obtained by methods described above and does not include sampling or other monitoring activities at the property. While AEROSTAR has used reasonable care to avoid reliance upon data and information that is inaccurate, AEROSTAR is not able to

verify the accuracy or completeness of all data and information available during the investigation. Some of the conclusions in this report would be different if the information upon which they are based is determined to be false, inaccurate or incomplete.

AEROSTAR makes no legal representations whatsoever concerning any matter including, but not limited to, ownership of any property or the interpretation of any law. AEROSTAR further disclaims any obligations to update the report for events taking place after the time during which the assessment was conducted.

This report is not a comprehensive site characterization and should not be construed as such. The opinions presented in this report are based upon the findings derived from a site reconnaissance, a limited review of specified regulatory records and historical sources, and comments made by the interviewees.

Phase I ESAs, by their very nature, are limited. AEROSTAR has endeavored to meet what it believes is the applicable standard of care, and, in doing so, is obliged to advise the Client and User of Phase I ESA limitations. AEROSTAR believes that providing information about limitations is essential to help the Client and User identify and thereby manage its risks. Through additional research, these risks can be mitigated - but they cannot be eliminated. AEROSTAR will, upon request, advise the Client and User of the additional research opportunities available, their impact, and their cost.

As noted above, the Phase I ESA was conducted at the referenced site, and this report was prepared for the sole use of the Client and User. This report shall not be relied upon by or transferred to any other party without the express written authorization of AEROSTAR.

Along with all of the limitations set forth in various sections of the ASTM Standard E 1527-05 protocol, the accuracy and completeness of this report is necessarily limited by the following:

- At the request of the client, a chain-of-title search was not conducted.
- A property identification number could not be provided by the client or subject site owner.

2.3.1 Data Gaps

Data gaps are the lack or inability to obtain information required by ASTM Standard E 1527-05 despite good faith efforts to gather such information, such as, but not limited to, the inability to conduct a site visit, inability to conduct interviews, and the inability to establish historical uses of the site or surrounding properties. Not all data gaps are significant, and a data gap will only be discussed in this section if: 1) a data gap occurs during investigation, and 2) the data gap impairs AEROSTAR's ability to meet the objectives of ASTM Standard E 1527-05.

Historical Data Source Failures: Aerial photographs were not available for review prior to 1979. City directories for Suburban New Orleans did not list the site prior to at least 2002. Topographic maps were not available for review prior to 1951. The historical records researched did not allow the property's history to be traced back to 1940 or to the property's first developed use, whichever came first, which constitutes historical data failure per ASTM Standard E 1527-05 § 8.3.2.3.

A significant data gap was noted due to the lack of property record information provided to AEROSTAR by the site contact. Tax Collector and Tax Assessor information was unavailable for review and an environmental lien search was unable to be performed.

2.4 Special Terms and Conditions

This report, and the information contained herein, shall be the sole property of AEROSTAR until payment of any unpaid balance is made in full. The Client and User agree that until payment is made in full, the Client and User shall not have a proprietary interest in this report or the information contained herein. AEROSTAR shall have the absolute right to request the return of any and all copies of this report submitted to other parties, public or private, on behalf of the Client and User in the event of nonpayment of outstanding fees by the Client pursuant to AEROSTAR's proposal.

2.5 User Reliance

This report is intended for the sole use of Client and User. Its contents may not be relied upon by other parties without the explicit written consent of AEROSTAR. This is not a statement of suitability of the report for any use or purpose. The user shall be held to the same limitations as detailed in Section 2.3.

3.0 SITE DESCRIPTION

3.1 Location

The site is located at 206 Pump Station Road, Belle Chasse, Plaquemines Parish, Louisiana, and is shown in Appendix A, Figure 1 (Street Site Location Map). The site is located within Sections 14 and 89, Township 14 South, Range 24 East as referenced in the "Bertrandville, Louisiana" USGS topographic quadrangle map, dated 1995, presented in Appendix A, Figure 2 (Topographic Site Location Map). Please also refer to the Site Plan presented in Appendix A, Figure 3, and to PPTAO information of the site in Appendix B.

3.2 Site and Vicinity General Characteristics

At the time of our investigation, the site consisted of a parcel developed with two connecting pump houses, a storage garage, a combined office warehouse, and the western portion of the suction basin. The immediate vicinity surrounding the site is primarily characterized by commercial, government-owned, and undeveloped properties. Please refer to the Street Site Location Map in Figure 1, the Topographic Site Location Map in Figure 2, and the Site Plan in Figure 3 for additional details.

3.3 Current Use(s) of the Site

The site is developed with two connecting pump houses, a storage garage, and a combined office warehouse. During the site inspection, there was evidence of the use, storage, disposal, or generation of hazardous substances or petroleum products at the site. Six drums were observed north of the storage warehouse; some of the drums were empty, the remaining drums contained oil. Approximately 40 55-gallon drums, 30 3-gallon buckets, 10 120-pound drums, and 10 5-gallon buckets were observed in the two pump houses. The drums and buckets contained oil, gear grease, degreaser, coolant, or waste oil. Approximately 20 55-gallon drums, ten 120-pound drums, and six five-gallon buckets were observed in the storage warehouse. Those drums that were full contained oil, gear grease, degreaser, and coolant. The office warehouse contained various quantities of oil, lubricant, antifreeze, and degreaser; however these amounts appeared to total less than 50 gallons. Batteries were observed throughout the buildings. An approximate 20,000-gallon AST containing diesel fuel was observed southeast of the office warehouse within a ring levee. Observations made during the site reconnaissance are further discussed in Section 6 of this report.

3.4 Structures, Roads, and Other Improvements on the Site

3.4.1 Existing Structures

The site is developed with two connecting pump houses, a storage garage, and a combined office warehouse.

3.4.2 Existing Roads

Pump Station Road is located north of the subject site.

3.4.3 Heating/Cooling System

The pump houses are cooled with window-mounted fans and are heated with portable electric heaters. The storage garage is not heated or cooled. The office warehouse is cooled with window-mounted units and heated with portable heaters.

3.4.4 Utilities (including Sewage Disposal)

Electricity is supplied to the site by Entergy and on-site generators when power fails. Sewage disposal is provided to the site by Plaquemines Parish.

3.4.5 Potable Water

Potable water is provided to the site by Plaquemines Parish.

3.5 Current Uses of the Adjoining Properties

The current uses of the adjoining properties are as follows:

Table 1 Description of Adjoining Parcels		
Direction From Site	Address	Description of Current Use
North	1808 Barriere Road	Kostmayer Construction Co.
East	No Address	Pump Station Road, Bayou Barriere suction basin
South	206 Pump Station Road	Bayou Barriere suction basin, equipment staging associated with Pump Station 1
West	Engineers Road	Algiers Canal – Gulf Intracoastal Waterway, Whitney-Barataria Pump Station

Based on the information reviewed as part of this assessment, the current uses of adjoining properties are not suspected of having the potential to negatively impact the site, except for the following:

- The southern adjoining property is used by the Plaquemines Parish Drainage Department as a staging area for equipment and spare parts. In addition, an approximate 2,500-gallon waste oil AST is located on this property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor and a towable sprayer were observed on this property.

4.0 USER PROVIDED INFORMATION

4.1 Title Records

A chain-of-title report for the site was not provided to AEROSTAR by the User or Client.

4.2 Environmental Liens or Activity and Use Limitations

An environmental lien search was not ordered through EDR due to unavailable and incomplete property record information. The user and site owner representative both stated that they were unaware of any environmental liens or AULs associated with the site.

4.3 Specialized Knowledge

No information was provided to AEROSTAR by the User with respect to any specialized knowledge or experience that may pertain to recognized environmental conditions in connection with the site.

4.4 Commonly Known or Reasonably Ascertainable Information

The User was not aware of any commonly known or reasonably ascertainable information about the site that would indicate the presence of recognized environmental conditions associated with the property.

4.5 Valuation Reduction for Environmental Issues

The User indicated that the property was not being purchased; however, the User was unaware of any valuation reduction for environmental issues.

4.6 Owner, Property Manager, and Occupant Information

The property is owned and managed by Plaquemines Parish Drainage Department and is not occupied.

4.7 Reason for Performing Phase I ESA

This Phase I ESA is being performed to comply with industry standards for reasonable due diligence level of environmental investigation.

4.8 Other

No other information was obtained from the User.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

As a part of this assessment, AEROSTAR reviewed information sources to obtain existing information pertaining to a release of hazardous substances or petroleum products on or near the site. AEROSTAR obtained an ASTM regulatory database search through EDR. A copy of the database report is included in Appendix D. AEROSTAR also reviewed other available standard environmental record sources at the LDEQ EDMS, as needed. Table 2 presents the summary of the regulatory database report.

TABLE 2 Regulatory Database Summary				
Source	Applicable Search Distance	Site	Adjoining Property	Within ASTM search distances
Federal NPL Site	1.0 mile	0	0	0
Federal Delisted NPL	0.5 mile	0	0	0
Federal CERCLIS List	0.5 mile	0	0	0
Federal CERCLIS NFRAP Site List	0.5 mile	0	0	0
Federal RCRA CORRACTS and TSD Facilities	1.0 mile	0	0	0
Federal RCRA Non-CORRACTS TSD Facilities	0.5 mile	0	0	0
Federal RCRA Generators Lists	Site and adjoining properties	0	0	0
Federal IC/EC Registries	Site Only	0	NA	0
Federal ERNS	Site Only	0	NA	0
State- and Tribal-equivalent NPL Sites	1.0 mile	0	0	0
State- and Tribal-equivalent CERCLIS Sites	0.5 mile	0	0	0
State and Tribal Landfill and/or Solid Waste Disposal Site Lists	0.5 mile	0	0	0
State and Tribal LUST Lists	0.5 mile	0	0	0
State and Tribal Registered UST Lists	Site and adjoining properties	0	0	0
State and Tribal IC/EC	Site Only	0	NA	0
State and Tribal voluntary cleanup sites	0.5 mile	0	0	0
State and Tribal Brownfield sites	0.5 mile	0	0	0

No NPL, delisted NPL, CERCLIS, CERCLIS NFRAP, SWF/LF, VCP, Brownfield sites, CORRACTS TSD, non-CORRACTS TSD, Federal institutional/engineering control registries, ERNS, state- or tribal-equivalent NPL, state- or tribal-equivalent CERCLIS facilities, LUST, UST, or AST facilities were identified within the ASTM-specified search distances for the subject site. One Department of Defense site was listed in the database report.

New Orleans Naval Air Station, 400 Russell Avenue, AI# (Numerous): This Department of Defense site is located south-southeast of the subject site. The site's boundaries are shown to encompass the subject

site; however, the main portion of the base is located at least 1.5 miles south of the subject site. Numerous AI#s are associated with the naval base and refer to the varied areas on the base, such as the tank farm, gasoline station, hangar areas, and the maintenance facility. These facilities are located in the western and southwestern portions of the naval facility. Groundwater flow has been reported to be towards the west to southwest and away from the subject site. Based on the information gathered for this investigation, this facility is not suspected of negatively impacting the site.

In addition to reviewing the database report, AEROSTAR performed reconnaissance of the site vicinity to identify any sites not mapped by EDR due to inadequate or inaccurate address information and to look for unregistered facilities. No additional petroleum fueling facilities were observed within a half mile of the site during field reconnaissance performed by AEROSTAR; however, the subject site is a former UST facility and the southern adjoining property is an active AST facility.

Plaquemines Parish Drainage Department, 206 Pump Station Road, AI# 127904: During the site inspection, one approximate 2,500-gallon waste oil AST is located on the southern adjoining property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. No containment was observed. Two empty, 10,000-gallon, former USTs, which are staged on bare soil, and one empty, 500-gallon AST were observed on the southern adjoining property. AEROSTAR interviewed Ms. Melinda Molieri, LDEQ, regarding any information concerning the ASTs observed at the subject site and the southern adjoining property. Ms. Molieri stated that LDEQ does not have any regulatory information pertaining to Belle Chasse Pump Station #1. AEROSTAR interviewed Mr. Mike Ragis, Belle Chasse Pump Station Operator, regarding tanks associated with the facility. One empty, approximate 500-gallon AST was observed along the tree line; however, Mr. Ragis did not know the origin of the empty 500-gallon AST. According to Mr. Ragis, the approximate 2,500-gallon AST is used to store waste oil collected from Belle Chasse Pump Stations 1 and 2. The drums observed adjacent to the AST also contains waste oil and dirty rags. He stated that the AST is pumped out as needed. Two approximate 10,000-gallon storage tanks were observed. Mr. Ragis explained that the tanks once held diesel fuel for the pump houses, but had been removed from the ground to make room for the new cooling system. He stated that the tanks were removed in 2002 or 2003.

5.2 Additional Environmental Record Sources

No additional environmental record sources were reviewed as part of this assessment.

5.3 Physical Setting Sources

The "Bertrandville, Louisiana" USGS topographic quadrangle map, dated 1995; and regulatory files available regarding properties of environmental concern in the site vicinity were reviewed as sources for obtaining information regarding the physical setting of the site and surrounding vicinity.

5.3.1 Regional Geology

Plaquemines Parish lies entirely within the Mississippi River Delta. Plaquemines Parish consists of at least two thick, partially overlapping delta complexes, the St. Bernard and the Plaquemines-Modern complexes. They are underlain by Pleistocene strata at a depth of 100 to 700 feet. Depth to Pleistocene surfaces increases toward the modern delta. Delta lobes of the St. Bernard Delta complex were initially deposited in shallow water about 4,500 years ago. Several lobes were deposited, and periods of progradation and abandonment recurred until about 650 years ago. Deposition of the Plaquemines lobe, which was the early distribution system of the Plaquemines-Modern Delta complex, began about 950 years ago. The Balize Delta lobe, which was the second and present distributary system of the Plaquemines-Modern Delta complex, consists of several sub-deltas that have a much better defined

chronology than the earlier complexes. The Balize Delta lobe is the only deepwater delta lobe of the Mississippi River, and thus has an unusual bird's-foot morphology.

5.3.2 Topography

The area of the investigation is located within Sections 14 and 89, Township 14 South, Range 24 East as referenced in the 7.5-minute USGS Topographical Quadrangle Map of "Bertrandville, Louisiana," dated 1995. Based on a review of the topographic map, the site appears to slope to the east. According to the topographic map, the site is situated at an elevation of approximately 0 feet above the NGVD of 1929.

Surface water bodies were identified on the topographic map in the vicinity of the site. Bayou Barriere is located adjoining the eastern and southern boundaries of the subject site and flows northwest through the suction basin and through the pump station towards Algiers Canal – Gulf Intracoastal Waterway, which is located on the site's western boundary. Based upon a review of the topographic map, regional shallow groundwater flow in the immediate vicinity of the site appears to be towards the west. Actual groundwater flow in the vicinity of the property may be locally influenced by seasonal rainfall, proximity to surface bodies of water (lakes, rivers, canals), surface topography, underground structures, soil and bedrock geology, production wells and other factors beyond the scope of this study.

5.3.3 Soils/Geology

The United States Department of Agriculture Soil Conservation Service, *Soil Survey of Plaquemines Parish, Louisiana*, Map No. 2 was reviewed to identify native soil characteristics in the vicinity of the site. According to the survey, the soils are primarily classified as Westwego clay.

Westwego clay is a mineral soil that is level and poorly drained. It is in former swamps that have been drained, and it is protected from most flooding. Slope is less than 1 percent. Typically, the surface layer is very dark gray, firm clay about 4 inches thick. The subsoil is about 27 inches thick. It is dark gray, firm clay. The subsoil has shrunk and cracked, and it remains cracked when re-wetted. The next layer is about 18 inches thick. It is very dark grayish brown, very fluid muck. Below this, to a depth of about 62 inches, is dark gray, very fluid clay. In places, many logs and stumps are buried in the lower layers. In many of the areas developed for urban uses, the surface layer has been covered with loamy and sandy fill material. This Westwego soil has been drained by pumps and is protected from flooding by levees. Under normal conditions, the water table is maintained at a depth of about 2 to 3 feet below the surface. After heavy rains, the water table may be within 1 foot of the surface for short periods. In places where the soil has subsided, the water table is near the surface most of the time. Flooding is rare, but it can occur during hurricanes and when water pumps or protection levees fail. Permeability is very slow in the soil material, but water flows rapidly through the network of cracks. Even if the cracks in the surface layer are covered by fill material, the cracks in the subsoil remain open. Water and air move freely through these cracks. The total subsistence potential is medium to high. The shrink-swell potential is high.

5.3.4 Hydrogeology

Most groundwater in Plaquemines Parish is moderately saline to highly saline. Potable drinking water is only available in local areas. Near surface silt and very fine sand form lenses of clayey and natural levee deposits that yield potable water. The surface water system is a complex hydrologic regime that involves the movement of freshwater and salt water masses through the region as a result of the interaction between the Mississippi River discharge, regional precipitation, winds, and tides. This current hydrologic regime is influenced by both natural and manmade factors. The basic natural hydrologic system is governed by the pattern of major abandoned distributary channels of the ancient Mississippi River delta

complex and intertributary basin channels, which serve to drain swamps and marshes into the estuarine lakes, bays, and sounds.

5.4 Historical Use Information on the Site

Based on the review of aerial photographs, historical topographic maps and interviews, the site appears to have been undeveloped land in 1951 and was developed with the present-day pump station since at least the mid-1950s.

5.5 Historical Use of Adjoining Properties

Based on the review of aerial photographs, historical topographic maps and interviews, the northern adjoining property was undeveloped from at least 1951 to at least 1972 and has been commercially developed since at least 1979. The eastern adjoining property was undeveloped in 1951 and appeared to have been developed with the adjoining suction basin and Bayou Barriere since at least 1966. The southern adjoining property appeared to be undeveloped property from at least 1951 to at least 1998 and appeared to have been used for equipment staging in 2005. The western adjoining property was undeveloped land in 1951 and has been developed with the Algiers Canal-Gulf Intracoastal Waterway since at least 1966.

5.6 Standard Historical Sources Reviewed

5.6.1 Aerial Photograph Review

To evaluate the previous land uses of the property and surrounding area, a series of aerial photographs was reviewed. The aerial photographs provide a progressive overview of parcels pertaining to this assessment.

AEROSTAR personnel reviewed aerial photographs from 1979, 1994, 1998, and 2005 obtained from NRCS office and the LDEQ GIS website. Color copies of the 1979, 1994, 1998, and 2005 aerial photographs are provided in Appendix E. Descriptions of AEROSTAR’s observations are outlined in Table 3.

TABLE 3			
Summary of Aerial Photograph Observations			
Source	Photograph Date	Photograph Scale	Remarks
NRCS	1979	Not Available	Site: Two pump stations, office warehouse, AST, western portion of suction basin North: Grassy, dirt roads East: Bayou Barriere suction basin South: Bayou Barriere suction basin, partially cleared, wooded West: Algiers Canal-Gulf Intracoastal Waterway

TABLE 3			
Summary of Aerial Photograph Observations			
Source	Photograph Date	Photograph Scale	Remarks
NRCS	1994	Not Available	Site: No change North: Commercial structure East: No change South: No change West: No change
LDEQ GIS	1998	Not Available	Site: No change North: Commercial/industrial development East: No change South: No change West: No change
LDEQ GIS	2005	Not Available	Site: Storage garage North: No change East: No change South: Equipment staging West: No change

5.6.2 Property Ownership Records

According to the PPTAO, the current property owner is Plaquemines Parish Drainage Department. A chain-of-title was not provided to AEROSTAR by the Client or User.

5.6.3 City Directory Review

A search of historical city directories for Suburban New Orleans dating back to 1940 was performed as part of this investigation. The subject site has been listed as government property since at least 2002. The eastern and western adjoining properties were not listed in the city directories reviewed. The northern adjoining property was listed as commercial or vacant since at least 1982. The southern adjoining property has been listed as government property since at least 2002.

TABLE 4			
Summary of City Directories			
Direction	Address	Date(s)	Listing(s)
Site	206 Pump Station Road	2006, 2002	Government
		1940-1996	Not Listed
North	1808 Barriere Road	2006, 2002, 1996, 1991, 1982	Commercial
		1986	Vacant
East	No Address	1940-1976	Not Listed
		1940-2006	Not Listed
South	206 Pump Station Road	2006, 2002	Government
		1940-1996	Not Listed
West	No Address	1940-2006	Not Listed

5.6.4 Fire Insurance Map Review

Sanborn Fire Insurance Maps did not provide coverage for the site.

5.6.5 Other Historical Sources

Topographic Maps

Historical topographic maps from 1951, 1966, 1972, 1979, 1989, 1992, and 1995 of the site area were provided by EDR. Historical topographic maps are included in Appendix E. Descriptions of AEROSTAR's observations are outlined in Table 5.

TABLE 5			
Summary of Historical Topographic Map Observations			
Source	Map Date	Map Scale	Remarks
EDR	1951	1:24,000	Site: Undeveloped, unnamed canal North: Undeveloped East: Undeveloped South: Undeveloped West: Undeveloped
EDR	1966	1:24,000	Site: Pump Station North: Road, undeveloped East: Eastern portion of the suction basin, Bayou Barriere South: No change West: Algiers Canal-Gulf Intracoastal Waterway
EDR	1972	1:24,000	Site: Additional structure North: Road, structure East: No change South: No change West: No change
EDR	1979	1:24,000	Site: No change North: No change East: No change South: No change West: No change
EDR	1989	1:24,000	Site: No change North: Additional commercial development East: No change South: No change West: No change
EDR	1992	1:24,000	Site: Additional structure North: Additional structure East: No change South: No change West: No change

TABLE 5			
Summary of Historical Topographic Map Observations			
Source	Map Date	Map Scale	Remarks
EDR	1995	1:24,000	Site: No change North: No change East: No change South: No change West: No change

Historical plat maps of the southeastern district of Louisiana, west of the Mississippi River, obtained from the LSLO: InfoLouisiana website, were reviewed. The maps were dated from at least April 15, 1831 to at least June 17, 1899. The subject site was partially owned by Gabriel Fazand and partially public land in 1831; owned by Gabriel Fazand, Jean Baptiste DeGruy, and Robert Urquhart from at least 1854 to at least 1884; and owned by Gabriel Fazand and Robert Urquhart in 1899. Color copies of the historical plat maps are provided in Appendix E.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Visual and physical inspections conducted as part of this investigation included walking the interior of the site in a grid-like manner and walking the site perimeter, where accessible. Additionally, observations of access to and egress from the site were noted, as well as the presence and condition of any on-site buildings, utilities, or other improvements. This visual and physical inspection of the property focused primarily on its surface features. Property use and significant features are indicated on the Site Plan which is included as Figure 3 in Appendix A. Site photographs are included in Appendix C.

6.2 General Site Setting

6.2.1 Current Use(s) of the Site

The site is developed with two connecting pump houses, a storage garage, a combined office warehouse, and the western portion of the suction basin.

6.2.2 Past Use(s) of the Site

No indication of the site's previous use was observed during the site reconnaissance.

6.2.3 Current Uses of Adjoining Properties

The adjoining properties are Kostmayer Construction Co. to the north; the eastern portion of the suction basin and Bayou Barriere to the east; equipment staging to the south; and the Algiers Canal – Gulf Intracoastal Waterway to the west.

The Kostmayer Construction Co. uses the northern adjoining property as a staging area for heavy machinery and other construction equipment.

The southern adjoining property is used by the Plaquemines Parish Drainage Department as a staging area for equipment and spare parts. In addition, an approximate 2,500-gallon waste oil AST is located on this property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor and a towable sprayer were observed on this property.

6.2.4 Past Uses of Adjoining Properties

No indication of the adjoining properties' past uses was observed during the site reconnaissance.

6.2.5 Current or Past Uses in the Surrounding Area

The surrounding area is currently used for commercial and governmental purposes or is undeveloped. No indication of the surrounding area's past use was observed during the site reconnaissance.

6.2.6 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The site appears to have minimal slope to the southeast. No geologic, hydrogeologic or hydrologic conditions were observed during the site reconnaissance, except the levee observed along the site's western boundary and Bayou Barriere flowing through the pump houses to the Algiers Canal – Gulf

Intracoastal Waterway. The water appeared to be flowing through the pump houses at a slow rate. The rate of water flow in Algiers Canal was not able to be observed.

6.2.7 General Description of Structures

The subject site is developed with two connecting pump houses, a storage garage, and a combined office warehouse. According to Mr. Mike Ragis, Plaquemines Parish Drainage, Pump Station Operator, the pump houses were constructed in the mid-1950s. The northern pump house was approximately 4,800 square feet in area; the southern pump house was approximately 4,200 square feet in area. Both structures were constructed of metal. The storage garage was a metal structure measuring approximately 1,200 square feet. The office warehouse was constructed of wood and metal and measured approximately 3,500 square feet.

6.2.8 Roads

Pump Station Road is located north of the subject site.

6.2.9 Potable Water Supplies

Potable water is provided to the site by Plaquemines Parish.

6.2.10 Sewage Disposal System

Sewage disposal is provided to the site by Plaquemines Parish.

6.3 Exterior Observations

6.3.1 Hazardous Substances and Petroleum Products

Six drums were observed north of the storage warehouse; some of the drums were empty, the remaining drums contained oil. An approximate 20,000-gallon AST containing diesel fuel was observed southeast of the office warehouse within a ring levee.

An approximate 2,500-gallon waste oil AST is located on the southern adjoining property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor and a towable sprayer were observed on this property. Two empty, 10,000-gallon, former USTs, which are staged on bare soil, were observed in the central portion of the southern adjoining property along with the tractor and spare parts. One empty, approximate 500-gallon AST were observed along the tree line in the southern portion of the southern adjoining property. No stained soils or stressed vegetation were observed. Mr. Ragis did not have any other information regarding the 500-gallon AST.

6.3.2 Storage Tanks

No evidence of the presence of ASTs was observed during the site inspection. An approximate 20,000-gallon AST was observed southeast of the office warehouse within a ring levee.

An approximate 2,500-gallon waste oil AST is located on the southern adjoining property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. No containment was observed. Also, a dilapidated tractor and a towable sprayer were observed on this property. Two empty, 10,000-gallon,

former USTs, which are staged on bare soil, and one empty 500-gallon AST were observed on the southern adjoining property.

6.3.3 Odors

No odors were noted during the site inspection.

6.3.4 Pools of Liquids

No pools of liquids were observed during the site inspection.

6.3.5 Drums

Four drums were observed on a pallet and a single drum was observed on the earthen ground northeast of the storage garage.

Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the waste oil AST located on the southern adjoining property.

6.3.6 Unidentified Substance Containers

No unidentified substance containers were observed during the site inspection.

6.3.7 PCBs

A single PMT was observed on the northern adjoining property. The PMT was rusted; however, no staining was observed. According to Mr. James Hal Beard, Entergy, Inc., the transformer has not been tested for PCBs; however, should a release ever occur, Entergy takes full responsibility for the cleanup activities.

6.3.8 Pits, Ponds or Lagoons

No pits, ponds or lagoons were observed during the site inspection; however, the Bayou Barriere is located adjoining the eastern and southern boundaries of the subject site and flows northwest through the suction basin and through the pump station towards Algiers Canal – Gulf Intracoastal Waterway, which is located on the site's western boundary.

6.3.9 Stained Soil or Pavement

No stained soil or pavement was observed during the site inspection.

6.3.10 Stressed Vegetation

No stressed vegetation was observed during the site inspection.

6.3.11 Solid Waste

No solid waste was observed during the site inspection.

6.3.12 Waste Water

No waste water discharges to or from the site was observed during the site inspection.

6.3.13 Wells

No potable, irrigation or industrial wells were observed during the site inspection.

6.3.14 Septic Systems

No septic systems were observed during the site inspection.

6.4 Interior Observations

6.4.1 Hazardous Substances and Petroleum Products

Approximately 40 55-gallon drums, 30 3-gallon buckets, 10 120-pound drums, and 10 5-gallon buckets were observed in the two pump houses. The drums and buckets contained oil, gear grease, degreaser, coolant, or waste oil. Approximately 20 55-gallon drums, 10 120-pound drums, and 6 5-gallon buckets were observed in the storage warehouse. Those drums that were full contained oil, gear grease, degreaser, and coolant. The office warehouse contained various quantities of oil, lubricant, antifreeze, and degreaser; however these amounts appeared to total less than 50 gallons. Batteries were observed throughout the buildings.

6.4.2 Storage Tanks

No storage tanks were observed within the subject site's structures during the site inspection.

6.4.3 Odors

No odors were noted during the site inspection.

6.4.4 Pools of Liquid

No pools of liquid were observed during the site inspection.

6.4.5 Drums

In addition, to the drums containing hazardous substances and petroleum products, approximately six plastic drums of herbicide were observed in the storage garage.

6.4.6 Unidentified Substance Containers

No unidentified substance containers were observed during the site inspection.

6.4.7 PCBs

No evidence of PCBs was observed within the structures during the site inspection.

6.4.8 Heating and Cooling

The pump houses are cooled with window-mounted fans and are heated with portable electric heaters. The storage garage is not heated or cooled. The office warehouse is cooled with window-mounted units and heated with portable heaters.

6.4.9 Stains or Corrosion

No evidence of corrosion was observed during the site inspection; however, stained concrete was observed throughout both pump houses and resulted from leaks in pipes and the older engines. Stained concrete was also observed in the warehouse and were associated with small quart-sized bottles of motor oil.

6.4.10 Drains and Sumps

No drains were observed in the subject site structures; however, sumps were observed in the northern pump house and contained air and fuel lines as well as a dark and sludgy fluid.

7.0 INTERVIEWS

Reasonable attempts were made to interview the available key site manager and occupants. AEROSTAR also conducted interviews with other individuals familiar with the site, as well as local, state, tribal or federal agency representatives, where available, regarding issues which could have an adverse effect on the environmental status of the site. Copies of interview documentation are included as Appendix F.

7.1 Interview with Site Owner

AEROSTAR interviewed Mr. Angelo Alimia, Plaquemines Parish Drainage Department Superintendent, regarding the history of the site. According to Mr. Alimia, he has been associated with the pump station for approximately 28 years. He stated that the land was donated to Plaquemines Parish by Hero Lands Co., who used the property for raising cattle. Mr. Alimia stated that he is not aware of any cattle dipping vats which may have been present in the area. According to Mr. Alimia, no USTs, septic systems, or wells are present on the property; electricity is provided by Entergy, Inc., and water and sewage disposal are provided by Plaquemines Parish. He explained that one approximate 20,000-gallon AST is located in the eastern portion of the subject site. Mr. Alimia stated that the AST usually contains between 17,000 and 18,000 gallons of diesel fuel for use in the pump houses and for the emergency generators. He explained that the engines are turned on at least once a week during routine maintenance and during any heavy rain events when water needs to be pumped from Bayou Barriere. As a result, approximately 2,500 gallons of diesel fuel are added to the AST every few months. Mr. Alimia explained that the oil in the engines is changed at least once a year and produces approximately 110 gallons of waste oil per engine. Mr. Alimia stated that Belle Chasse Pump Station 1 has five engines used to pump water. Several smaller engines are associated with fuel pumps and air compressors, which are used to start the pump engines. According to Mr. Alimia, oil leaked from the engines and waste oil collected during maintenance operations is collected and cleaned up with absorbent pads and rags with kitty litter and degreasers. The waste oil and cleanup materials are stored in 55-gallon drums, labeled, and staged adjacent to or the contents are transferred to an approximate 2,500-gallon waste oil AST located on the southern adjoining property owned by Plaquemines Parish. The waste oil and drums are collected and disposed of as needed by several different companies certified for such tasks. According to Mr. Alimia, two of the five main engines were installed in the 1950s and the three remaining engines were installed in 2004, 2006, and 2007. Mr. Alimia stated that no flooding resulted from Hurricanes Katrina and Rita; however, roof damage did occur. According to Mr. Alimia, no dumping has occurred on the subject site. Mr. Alimia indicated that, to the best of his knowledge, there are no environmental concerns associated with the site. He stated that no environmental liens have been placed on the property. According to Mr. Alimia, no AULs are present for the site. Mr. Alimia stated that no Phase I ESAs have been previously conducted on the subject site.

AEROSTAR interviewed Mr. Mike Ragis, Belle Chasse Pump Station Operator, regarding past and present uses of the subject site. According to Mr. Ragis, the pump houses were constructed in the mid-1950s and that the original engines, some of which are still in use, were salvaged from World War II submarines. He stated that these engines are being phased out due to lack of knowledgeable personnel. The engines observed staged around the property are used for spare parts for those engines that are still in use. According to Mr. Ragis, the engines leak while running; however, the oil is cleaned up using absorbent pads and placed in drums. Mr. Ragis explained that the engines are run once a week for diagnostics checks. The only other time the engines are run is during heavy rain events. After approximately 500 hours of run time, the oil is changed. According to Mr. Ragis, no flooding occurred at the subject site; however, roof damage was sustained. Mr. Ragis explained that the southern adjoining property is used to stage parts used by the Plaquemines Parish Drainage Department. The parts include engine parts (both outside and inside the CONEX boxes observed), culverts, fittings, and pipes. In addition, crushed drums, two tractors, and a towable sprayer were observed on the southern adjoining

property. According to Mr. Ragis, the equipment belonged to the previous site owner, who used the land for cattle pasture. Mr. Ragis said that the equipment has not been used since he started working with the parish approximately 20 years ago. Mr. Ragis stated that the crushed drums are brought on-site from the other pump stations around the parish. Mr. Ragis explained that the RV trailers are left over from the hurricane relief effort and that they were brought on-site from the other pump stations. One empty, approximate 500-gallon AST was observed along the tree line; however, Mr. Ragis did not know the origin of the empty 500-gallon AST. According to Mr. Ragis, the approximate 2,500-gallon AST is used to store waste oil collected from Belle Chasse Pump Stations 1 and 2. The drums observed adjacent to the AST also contain waste oil and dirty rags. He stated that the AST is pumped out as needed. Two approximate 10,000-gallon storage tanks were observed. Mr. Ragis explained that the tanks once held diesel fuel for the pump houses, but had been removed from the ground to make room for the new cooling system. He stated that the tanks were removed in 2002 or 2003. Mr. Ragis explained that the herbicides observed in the storage garage are used to keep vegetation from growing too thickly on the levees, which would hinder proper maintenance and observation activities.

7.2 Interview with Site Manager

Please refer to Section 7.1.

7.3 Interviews with Occupants

The site is unoccupied.

7.4 Interviews with Local Government Officials

AEROSTAR interviewed Mr. Robert Gravolet, PPTAO, regarding tax bill numbers for the subject site. He stated that since the property is owned by the U.S. government, the property is exempt from taxes, thus no tax bill numbers would be assigned to the property.

AEROSTAR interviewed Ms. Melinda Molieri, LDEQ, regarding any information concerning the ASTs observed at the subject site and the southern adjoining. Ms. Molieri stated that LDEQ does not have any regulatory information pertaining to Belle Chasse Pump Station #1.

7.5 Interviews with Others

AEROSTAR interviewed Mr. David Lovett, Project Engineer, U.S. Army Corps of Engineers, concerning the subject site using the User Questionnaire found in Appendix X3 of ASTM E 1527-05. Mr. Lovett stated that there are no environmental liens or AULs on the subject site. Mr. Lovett indicated that the property is not being purchased. He stated that he does not have any specialized knowledge of the subject site or the adjacent properties. He indicated to the best of his knowledge that no chemicals have been used on the property, and no spills or environmental cleanups have occurred on the property. Mr. Lovett stated, to the best of his knowledge, no environmental concerns are associated with the subject site. Mr. Lovett indicated that the Phase I ESA is being performed as part of an in-house policy for potential land transaction or use.

AEROSTAR interviewed Mr. James Hal Beard, Entergy, Inc., regarding possible PCBs in the transformer observed on the northern adjoining property along the site's northern boundary. According to Mr. Beard, the transformer has not been tested for PCBs; however, should a release ever occur, Entergy takes full responsibility for the cleanup activities.

AEROSTAR interviewed Mr. Jerome Wool, Jefferson Parish Drainage Department, regarding operations at the Whitney-Barataria Pump Station, located west across the Algiers Canal-Gulf Intracoastal Waterway from the subject site. According to Mr. Wool, no major spills have occurred at the pump station. Two 11,000-gallon ASTs are present on-site and are kept full of diesel for use in the pump station's three pump engines and two emergency generators. Mr. Wool stated that the engines run approximately 100 hours per year during rain events and maintenance activities. Mr. Wool explained that the engines are inspected daily and coolant and oil samples are collected for laboratory analysis monthly. Oil and fluid changes are performed only when the results of the laboratory analysis shows the fluids and oil to be out of compliance. When an oil or fluid change is performed, an oil recycler picks up the waste for proper disposal and recycling. Mr. Wool stated that the Whitney-Barataria Pump Station was constructed in 2005.

8.0 FINDINGS AND OPINIONS

8.1 Known or Suspect Recognized Environmental Conditions

On-site concerns were noted from the large amount of oil and staining observed on the engines and concrete floors in the two pump houses.

Off-site concerns were noted on the southern adjoining property, which is used by the Plaquemines Parish Drainage Department as a staging area for equipment and spare parts. In addition, an approximate 2,500-gallon waste oil AST is located on this property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor, a towable sprayer, and two approximate 10,000-gallon former USTs were observed on this property.

8.2 Historical Recognized Environmental Conditions

On-site concerns were noted from the lack of regulatory information pertaining to the removal of the two 10,000-gallon USTs from the area now occupied by the cooling system northerly adjacent to the northern pump house.

8.3 De Minimis Conditions

On site *de minimis* conditions were noted from oil staining observed in the office warehouse.

9.0 CONCLUSIONS

AEROSTAR has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard E 1527-05 of the Belle Chasse Pump Station 1, located at 206 Pump Station Road, Belle Chasse, Plaquemines Parish, Louisiana. Any exceptions to, or deletions from, this practice are described in Section 2 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the site, except for the following:

- On-site concerns were noted from the large amount of oil and staining observed on the engines and concrete floors in the two pump houses.
- On-site concerns were noted from the lack of regulatory information pertaining to the removal of the two 10,000-gallon USTs from the area now occupied by the cooling system adjacent to the northern pump house.
- Off-site concerns were noted on the southern adjoining property, which is used by the Plaquemines Parish Drainage Department as a staging area for equipment and spare parts. In addition, an approximate 2,500-gallon waste oil AST is located on this property and receives waste oil from both Belle Chasse Pump Stations 1 and 2. Several 55-gallon drums of waste oil and absorbent pads and rags were observed staged next to the AST. No containment was observed. Also, a dilapidated tractor, a towable sprayer, and two approximate 10,000-gallon former USTs were observed on this property.

10.0 DEVIATIONS

AEROSTAR prepared this Phase I ESA in accordance with ASTM Standard E 1527-05.

11.0 ADDITIONAL SERVICES

Under the terms of the agreement between Client and AEROSTAR, no additional services were provided in association with the Phase I ESA. There may be environmental issues or conditions at a site that the Client may wish to assess in connection with commercial real estate that are outside the scope of this practice (the non-scope considerations). No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all inclusive: asbestos-containing materials; radon; lead-based paint; lead in drinking water; wetlands; regulatory compliance; cultural and historical resources; industrial hygiene; health and safety; ecological resources; endangered species; indoor air quality; and high voltage power lines.

12.0 REFERENCES

References reviewed during the Phase I ESA are documented in Appendix G.

13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

This is to certify the Phase I ESA Report of the Belle Chasse Pump Station 1, located at 206 Pump Station Road, Belle Chasse, Plaquemines Parish, Louisiana, has been examined by the undersigned.

DATE: _____

SIGNATURE: _____

Elizabeth Black
Project Scientist

DATE: _____

SIGNATURE: _____

Neil Hornick, P.G., CHMM
Senior Project Manager

14.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

This assessment was completed by Elizabeth Black, Project Scientist, and reviewed by Neil Hornick, P.G., CHMM, Senior Project Manager both employees of AEROSTAR. We declare that, to the best of our professional knowledge, we meet the definition of environmental professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess the property of a nature, history, and setting of the site. We have developed and performed the all appropriate inquiries in conformance with the standards set forth on 40 CFR Part 312. Qualifications of personnel participating in this assessment are provided in Appendix H.