PHASE I ENVIRONMENTAL SITE ASSESSMENT
BELLE CHASSE NAVAL FACILITY BORROW AREA
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
CONTRACT NUMBER: W912P8-07-D-0057
TASK ORDER NUMBER: 0007

PREPARED FOR:

US Army Corps of Engineers

United States Army Corps of Engineers,
Mississippi Valley Division,
New Orleans District (USACE-MVN)
7400 Leake Avenue
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PREPARED BY:

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APPENDICES

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
BLS	Below Land Surface
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
LDNR	Louisiana Department of Natural Resources
LSLO	Louisiana State Lands Office
LUST	Leaking Underground Storage Tank
NASJRB	Naval Air Station Joint Reserve Base
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

1.0 EXECUTIVE SUMMARY

1.1 Site Name

Belle Chasse Naval Facility Borrow Area
Belle Chasse, Plaquemines Parish, Louisiana
Tax Bill Numbers: Not Applicable

1.2 Inspection Date(s)

May 23, 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 an approximate 34-acre parcel of land previously occupied by a golf course, developed with a dilapidated, concrete block structure located in the southeastern portion of the NASJRB facility. A small pile of dirt was observed in the northwestern corner of the site. No information was available concerning the origin of the dirt. Access to the site is available via a gravel road along the northern and southern subject site boundaries. The site is bordered by apartments to the north; commercial businesses to the east; wooded property to the south; and the western portion of the golf course to the west.

Based on the review of aerial photographs, historical topographic maps and interviews, the site appears to have been undeveloped, wooded land from at least 1951 to at least 1972 and developed with the present-day golf course since at least 1979.

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 Naval Facility Borrow Area, 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:

- Historical concerns were noted on the subject site and the western adjoining property from use of herbicides and pesticides on the golf course.

- On-site concerns were noted from the former drilling operations in the southeastern and western portions of the subject site: drilling techniques require extensive use of gas or oil powered drilling equipment which can cause environmental impacts through accidental releases or leaks. Additionally, a small pile of dirt was observed in the northwestern corner of the subject site (longitude: -90.0152554, latitude: 29.8213667734).

- Off-site concerns were also noted from the numerous gas and oil wells located east and southeast of the subject site in the Stella Oil and Gas Field.

1.7 Recommendations

Based on the information obtained for this report, AEROSTAR recommends conducting soil and groundwater sampling in the areas of the former oil and gas wells to evaluate potential impacts from drilling operations. Additionally, AEROSTAR recommends conducting soil and groundwater in the area of the inactive golf course to assess potential impacts from golf course maintenance activities. Soil sampling in the area of the inactive golf course should be focused primarily on the approximate features of the former tees and greens.

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 1967. City directories for Suburban New Orleans did not list the site. 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 a 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 property 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 Naval Air Facility Building 49, Belle Chasse, Plaquemines Parish, Louisiana, and is shown in Appendix A, Figure 1 (Street Site Location Map). The site is located within Sections 17 and 18, 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 consisted of an approximate 34-acre parcel of land previously occupied by a golf course, developed with a dilapidated, concrete block structure located in the southeastern portion of the NASJRB facility. A small pile of dirt was observed in the northwestern corner of the site. No information was available concerning the origin of the dirt. The immediate vicinity surrounding the site is primarily characterized by government, residential, commercial, 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 occupied by an inactive golf course and a dilapidated, concrete block structure. During the site inspection, there was no evidence of the use, storage, disposal, or generation of hazardous substances or petroleum products at the site. 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 as an inactive golf course with a dilapidated, concrete block structure.

3.4.2 Existing Roads

Princeton Circle and Tarawa Circle are located north of the subject site. Protti Drive and Concord Road South are located east of the subject site.

3.4.3 Heating/Cooling System

The structure is not heated or cooled.

3.4.4 Utilities (including Sewage Disposal)

Utilities are currently provided to the subject site by Entergy, Inc.

3.4.5 Potable Water

Potable water is provided to the subject 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	Princeton Circle (Multiple Numbers) Tarawa Circle (Multiple Numbers)	Naval Air Facility Multi-family Housing Naval Air Facility Multi-family Housing
East	311 South Concord Road 318 South Concord Road Protti Drive (Multiple Numbers)	Residential Residential Residential
South	No Address	Wooded
West	Naval Facility Building 49	Golf Course

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:

- Historical concerns were noted on the western adjoining property from use of herbicides and pesticides on the golf course.

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 the purchase price reflected the fair market value of the site.

4.6 Owner, Property Manager, and Occupant Information

The property is owned, managed, and occupied by the U.S. Department of Defense and the U.S. Navy.

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	1
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

According to the database report, two RCRA-SQG, one LUST, one UST, and one AUL facilities were listed to be within the minimum ASTM search distances; however, upon further review, these facilities are located outside their respective ASTM search distances of on or adjoining to the subject site or within 0.5 miles of the subject site.

One Department of Defense site was listed in the database report. One Solid Waste Facility/Landfill/UST was identified in the orphan summary in the database report and was determined to be within the ASTM search distance of one mile from the subject site These facilities are discussed below:

New Orleans Naval Air Station, 400 Russell Avenue, AI# (Numerous): The subject site is located at this Department of Defense site, portions of which are registered RCRA and/or LUST facilities. The subject site is located in the southeastern portion of the naval facility; the main portion of the base is located at least 0.5 miles west and northwest 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 northwestern portions of the naval facility, greater than 0.5 miles away from the subject site. 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.

Chevron Oronite Co. LLC – Oak Point Plant, 10258 Highway 23 South, AI#1708: This Solid Waste Facility/Landfill/UST facility is located approximately 0.35 miles southeast of the subject site. According to the database report, two 2,000-gallon gasoline USTs were installed in January 1961 and closed in February 1988. No other information was available. According to an Incident Report: Incident ID: 59733, dated March 20, 2003, a vent line running through a separator burst, releasing 0.5 barrels of oil; however, the spill occurred within containment and was not reportable. According to a Management Option 3 Workplan for Area of Concern 3: Volume 1, dated December 15, 2003, groundwater was reported to be towards the west-southwest. According to an Incident Report: Incident ID: 76420, dated January 25, 2005, a flow line was damaged and released salt water and approximately 0.5 barrels of crude oil. The fluids were clean up with a vacuum truck and impacted soils were removed. Groundwater impacts were not reported. The incident was reported to be closed. According to a Post-Closure Care Plan: Landfill A&B and Landfill C, dated February 25, 2005, the Chevron Oronite facility produces gasoline additives, oil-based lubricants, and other chemicals. The wastes produced during these processes include waste oil and sludges, sludges obtained from stormwater treatment water systems, filter cake, and hazardous wastes. According to the report, three closed landfills are located at the southern end of the facility. The landfills were closed in 1996 and 1997 and were awarded final closure acceptance in 1998. AEROSTAR attempted to interview Mr. Bathle, Environmental Director for the facility, regarding any damage or flooding associated with Hurricanes Katrina and Rita; however, he did not return our phone calls by the completion of this report. An employee of the plant stated that the facility did sustain damage, but was unable to elaborate since he had recently moved to the area. 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.

5.2 Additional Environmental Record Sources

According to research information reviewed, a common procedure in vertical and directional oil drilling involves combining oil, water, or synthetic oil with other chemicals to form a drilling mixture that is circulated through the well hole. These mixtures frequently contain materials such as oil and grease, suspended solids, phenol, arsenic, chromium, cadmium, lead, mercury, naturally occurring radioactive materials, and barium. The composition of drilling muds varies widely depending on the location and depth of the well and the type of drilling fluid used. Directional drilling sites frequently require up to two acres of land to stage the drilling rig, well, and support infrastructure, which causes significant soil erosion, soil loss, and sediment contamination of surface waters during the preparation and development of the drilling site. Drilling techniques require extensive use of gas or oil powered drilling equipment which can cause environmental impacts through accidental releases or leaks. Based on the information reviewed as part of this investigation, on-site concerns were noted from the former drilling operations in

the southeastern and western portions of the subject site. Off-site concerns were also noted from the numerous gas and oil wells located east and southeast of the subject site in the Stella Oil and Gas Field.

AEROSTAR performed a review of gas and oil production wells on the LDNR website for the subject site and vicinity. The wells are located in the Stella Oil and Gas Field and are owned by several different operators. Two wells are located on the subject site, one well is located to the north, and one directional well is located to the west, which are discussed below. Numerous wells of various statuses are located to the east in the privately owned area of the Stella Gas and Oil Field; those wells within approximately 500 feet of the subject site are discussed below.

According to information found on the website, effective September 18, 2003, the first on-site well, serial number 193214, was located in the southeastern corner of the subject site at coordinates longitude -90.0141672015117 and latitude 29.8174150521129. It was permitted on July 16, 1984. Drilling was completed at a depth of 13,000 feet BLS as of March 1, 1985. According to a scout information report, dated April 7, 1989, the well was re-completed to a depth of 12,500 feet BLS on March 21, 1989 as a gas well; however, according to information on the website, the well was producing gas and oil until 2000. The well was then categorized as an "orphan" (wells which are abandoned and require cleanup or are non-compliant wells) from 2000 to 2003. It was re-listed in 2003 as "plugged and abandoned". The well was plugged and abandoned as of September 18, 2003 with cement in several intervals: 0 to 120 feet BLS; 863 to 1,100 feet BLS; 6,715 to 7,345 feet BLS; 7,370 to 7,870 feet BLS; and 7,880 to 7,946 feet BLS. The casing was cut to five feet BLS.

According to information from the website, effective as of August 31, 2004, the second on-site well, serial number 128784, is located along the southwestern boundary of the subject site at coordinates longitude -90.0169863595479 and latitude 29.819349106356. The well was permitted on May 14, 1969 and drilling was completed as of September 1, 1976 at a depth of 12,829 feet BLS. The well produced oil and gas from at least 1977 to at least 1999. The well was classified as "shut-in productive-future utility" from 2000 to 2004 and was plugged and abandoned on August 31, 2004. Cement plugs were set at intervals between five to 55 feet BLS; 2,160 to 2,360 feet BLS; and 9,450 to 9,550 feet BLS. The casing was cut to five feet BLS. The well was then assigned the status of plugged and abandoned on August 31, 2004.

According to information reviewed on the website, effective June 1, 1988, the well identified by the serial number 64741 is located approximately 0.06 miles north on the northern adjoining property. The well was permitted on January 17, 1957 as a gas well. The well was measured to a depth of 13,424 feet BLS on November 1, 1976 and was measured again on May 1, 1980 to a depth of 11,701 feet BLS. Recorded information shows that the well produced oil and gas from at least 1977 to at least 1982; records prior to 1977 were not available for review. The well was categorized as "actively producing" from at least 1973 to at least 1987. As of June 1, 1988, the well was listed as "plugged and abandoned". The abandonment activated occurred on June 8, 1988. The cement plugs were set at the intervals 0 to 35 feet BLS; 904 to 1,915 feet BLS; and 1,915 to 2,113 feet BLS.

According to information reviewed, effective March 1, 2005, a directional well, identified by the serial number 229595, is located approximately 0.25 miles west of the subject site. The well was permitted on May 11, 2004 as a gas well and is listed as "actively producing". The well was drilled in a westerly direction and measures 11,660 feet BLS with a true vertical depth listed as 11,500 feet BLS as of May 11, 2004. The well depth was measured again on July 2, 2004 and is listed as 10,928 feet BLS; the vertical depth was not determined on this date. The well has been producing oil and gas since at least July 2004.

Three wells located in a cluster to the south-southeast are located within 500 feet of the subject site in the Stella Oil and Gas Field. According to information effective as of January 28, 2003, the first well,

identified by the serial number 61430, was permitted on May 10, 1956 as an oil well. As of May 1, 1971, the measured depth of the well was 7,090 feet BLS. The well produced oil and gas from at least 1977 to at least February 1986 (records prior to 1977 were not available for review), during which the well was classified as "actively producing". It was reassigned a classification in March 1986 to "shut-in productive-future utility." The well has been designated as temporarily inactive and awaiting omission from the production report since February 1992.

According to information gathered on the LDNR website, effective December 27, 2000, the second well in the cluster is identified by the serial number 224506 and is listed as "permit expired". The well had been permitted on June 30, 2000 with no product specified. As of the permit date, the well was measured to a depth of 7,550 feet BLS. No other information was available for review.

The third well in the cluster, according to information effective as of July 6, 2004, is identified by the serial number 226851 and is listed as "actively producing". As of January 1, 2005, the well depth was measured at 7,000 feet BLS. The well has been producing oil and gas since June 2002.

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 17 and 18, 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. The Mississippi River is located approximately 0.43 miles east of the subject site. An unnamed pond is located approximately 0.45 miles south of the subject site. Augusta Canal is located approximately 1.15 miles south-southwest of the subject site. Several unnamed canals are located within the subject site's vicinity. Based upon a review of the topographic map, regional shallow groundwater flow in the immediate vicinity of the site appears to be towards the east. 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. 4 was reviewed to identify native soil characteristics in the vicinity of the site. According to the survey, the soils are primarily classified as Rita mucky clay and Sharkey clay.

Rita mucky clay is a level and poorly drained mineral soil. It is in former freshwater marshes that are drained, and it is protected from most flooding. Slope is less than 1 percent. Typically, the surface layer is very dark gray mucky clay about 5 inches thick. The subsoil is about 27 inches thick. It is dark gray and very dark gray, firm clay. The subsoil is permanently cracked in the upper part. The substratum to a depth of about 60 inches is gray, slightly fluid silty clay loam in the upper part and olive gray silt loam in the lower part. This Rita soil is protected from most flooding by levees and drained with pumps. Under normal conditions the water table is maintained at a depth of 2 to 3 feet below the surface. After high intensity rains of long duration, however, the water table is within 1 foot of the surface for short periods. Flooding is rare and occurs only during hurricanes or other severe storms. Permeability is very slow in the soil material and rapid in the network of permanent cracks in the subsoil. Adequate water is available to plants in most years. This soil is high in fertility. The content of organic matter is very high. The total subsidence potential is medium. The upper part of the soil typically becomes increasingly acid as the organic matter decomposes. In places where the soil has subsided, the water table is near the surface most of the time. The shrink-swell potential is high; however, any part of the substratum that remains continuously saturated will have a low shrink-swell potential.

Sharkey clay is a poorly drained, firm, mineral soil in low positions on the natural levees of the Mississippi River and its distributaries. It is protected from river overflows by large earthen levees. Areas range from about 10 to 1,000 acres. Slope is less than 1 percent. Typically, this soil has a dark gray clay surface layer about 5 inches thick. The subsoil to a depth of about 37 inches is dark gray clay in the upper part and gray clay in the lower part. The substratum to a depth of about 60 inches is gray clay. This soil has high fertility. Water and air move through it at a very slow rate. Water runs off the surface slowly and stands in low places for short periods after heavy rains. Flooding is rare, but it can occur after prolonged rains. Flooding occurs less than often than once in 10 years but can occur at anytime of the year. A seasonal high water table fluctuates between the soil surface and a depth of about 2 feet during the winter and spring. Adequate water is available to plants in most years. The surface layer is very sticky when wet and very hard when dry. This soil has a very high shrink-swell potential.

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 interdistributary 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, wooded land from at least 1951 to at least 1972 and developed with the present-day golf course (now inactive) since at least 1979.

5.5 Historical Use of Adjoining Properties

Based on the review of aerial photographs, historical topographic maps and interviews, the northern adjoining property has been residential property since at least 1951. The eastern adjoining property appeared to be undeveloped in 1951 and appears to have been residentially developed since at least 1966. The southern adjoining property appears to have been wooded property since at least 1951. The western adjoining property appeared to be undeveloped from at least 1951 to at least 1967 and appears to have been developed as a golf course since at least 1979.

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 1967, 1979, 1994, 1998, and 2005 obtained from NRCS office and the LDEQ GIS website. Color copies of the 1967, 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	1967	Not Available	Site: Wooded North: On-base residences, wooded East: Residential, wooded South: Wooded West: Wooded
NRCS	1979	Not Available	Site: Golf course North: No change East: No change South: No change West: Golf course
NRCS	1994	Not Available	Site: No change North: No change East: No change South: No change West: No change

TABLE 3 Summary of Aerial Photograph Observations			
Source	**Photograph Date**	**Photograph Scale**	**Remarks**
LDEQ GIS	1998	Not Available	Site: No change North: No change East: No change South: No change West: No change
LDEQ GIS	2005	Not Available	Site: No change North: Multi-family housing East: No change South: No change West: No change

5.6.2 Property Ownership Records

According to the PPTAO, the current property owner is the U.S. Department of Defense and the U.S. Navy. 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 was not listed in the city directories reviewed. The northern adjoining properties were listed as residential since at least 2006. The eastern adjoining properties have been listed as residential from at least 1982 to at least 2002 and have been listed as residential and commercial since at least 2006. The southern western adjoining properties were not listed in the city directories.

TABLE 4 Summary of City Directories			
Direction	Address	Date(s)	Listing(s)
Site	No Address	1940-2006	Not Listed
North	Princeton Circle	2006	Residential
		1940-2002	Not Listed
	Tarawa Circle	2006	Residential
		1940-2002	Not Listed
East	228 Concord Road South	2006	Commercial
		1940-2002	Not Listed
	311, 318 Concord Road South	2006, 2002, 1996, 1991, 1986	Residential
		1940-1982	Not Listed
	Protti Drive	2006, 2002, 1996, 1991, 1986, 1982	Residential
		1940-1976	Not Listed
South	No Address	1940-2006	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: Residential East: Undeveloped South: Undeveloped West: Undeveloped, unnamed canal
EDR	1966	1:24,000	Site: Undeveloped, canal no longer visible, U.S. Naval Air Station visible North: Road, residences East: Residences, Stella Oil and Gas Field South: No change West: No change
EDR	1972	1:24,000	Site: No change North: No change East: No change South: No change West: No change
EDR	1979	1:24,000	Site: Golf course North: No change East: Additional residences South: No change West: Golf course
EDR	1989	1:24,000	Site: No change North: No change East: Additional residences South: No change West: No change

TABLE 5 Summary of Historical Topographic Map Observations			
Source	**Map Date**	**Map Scale**	**Remarks**
EDR	1992	1:24,000	Site: No change North: No change East: No change South: No change West: No change
EDR	1995	1:24,000	Site: No change North: No change East: No change South: No change West: No change

According to a Property Line Survey, conducted by Messers, Bedell, and Nelson Engineers for the proposed Joint Air Reserved Training Center, dated December 15, 1953, the subject site consisted of a portion of one large parcel owned by Hero Lands Co. and several small, residentially developed parcels owned by Hero Lands Co. and several different individuals. In addition, a second plat map, prepared by Messers, Bedell, and Nelson Engineers, however, undated, showed the subject site was a part of Tract II, totaling 3,234.49 acres, which was acquired piecemeal by the U.S. Navy from December 30, 1954 through April 10, 1957. Gas well facilities were shown to be within the subject site vicinity.

According to the Naval Air Station Joint Reserve Base – New Orleans website, the southern portion of the present-day naval facility was a 2,724-acre area of heavily vegetated land and consisted of swampy areas with thick muck. According to the website, the area was excavated to three feet and backfilled with river sand prior to construction. Construction commenced in August 1954 and was completed by December 1957. An area located approximately one mile north of the subject site was first cleared in the 1920s and used as a landing field and the New Orleans commercial airfield until 1940, when the property was acquired by the U.S. Navy.

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 owned by Villary and Fazand and Nicholas Reggio in 1831; owned by Lavergne Hugues and Nicholas Reggio from at least 1854 to at least 1956; and owned by at least Lavergne Hugues 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 as an inactive golf course with a dilapidated, concrete block structure located in the southeastern portion of the NASJRB facility. A small pile of dirt was observed in the northwestern corner of the site. No information was available concerning the origin of the dirt.

6.2.2 Past Use(s) of the Site

The site appeared to have once been an active golf course. No other 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 apartments to the north; commercial businesses and residences to the east; wooded property to the south; and the western portion of the golf course to the west.

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 governmental, residential, or commercial 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 a varying slope associated with the golf course's features, such as sand traps. No geologic, hydrogeologic or hydrologic conditions were observed during the site reconnaissance.

6.2.7 General Description of Structures

The subject site is developed with a dilapidated, concrete block structure. According to Mr. Tom Grantham and Mr. Marion Fannaly, NASJRB, the structure is believed to have once been a bathroom.

6.2.8 Roads

A gravel road runs along the site's northern and eastern boundaries. Concrete golf cart trails were observed throughout the subject site and western adjoining property. Princeton Circle and Tarawa Circle are located north of the subject site. South Concord Road and Protti Drive are located to the east of the subject site.

6.2.9 Potable Water Supplies

Potable water is provided to the subject site by Plaquemines Parish.

6.2.10 Sewage Disposal System

Utilities are currently provided to the subject site by Entergy, Inc.

6.3 Exterior Observations

6.3.1 Hazardous Substances and Petroleum Products

No evidence of use, storage, or disposal of hazardous substances was observed during the site inspection.

6.3.2 Storage Tanks

No evidence of the presence of USTs or ASTs was observed during the site inspection.

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

No drums were observed during the site inspection.

6.3.6 Unidentified Substance Containers

No unidentified substance containers were observed during the site inspection.

6.3.7 PCBs

No evidence of PCB-containing equipment was observed during the site inspection.

6.3.8 Pits, Ponds or Lagoons

No pits, ponds or lagoons were observed during the site inspection.

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

No evidence of use, storage, or disposal of hazardous substances was observed during the site inspection.

6.4.2 Storage Tanks

No evidence of the presence of USTs or ASTs was observed 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 liquids were observed during the site inspection.

6.4.5 Drums

No drums were observed during the site inspection.

6.4.6 Unidentified Substance Containers

No unidentified substance containers were observed during the site inspection.

6.4.7 PCBs

No evidence of PCB-containing equipment was observed during the site inspection.

6.4.8 Heating and Cooling

The structure is not heated or cooled.

6.4.9 Stains or Corrosion

No evidence of stains or corrosion was observed during the site inspection.

6.4.10 Drains and Sumps

No drains or sumps were observed during the site inspection.

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. Tom Grantham, subject site representative, NASJRB, regarding the history of the site. According to Mr. Grantham, he has been associated with the site for approximately seven years. He explained that the Navy acquired the property for the Naval Facility in the mid- to late-1950s. Mr. Grantham stated that the property was previously owned by Hero Lands Co., who had begun to develop a portion of their property into subdivisions. He stated that Hero Lands Co. may have had some agriculture on their property, but could not say where in relation to the subject site those areas were located. According to Mr. Grantham, no USTs or ASTs, utilities, septic systems, or potable water wells are present on the property; however, there may still be utilities along the boundaries. He stated that an irrigation system may be present on-site and that the water would be provided by Plaquemines Parish. Mr. Grantham stated that herbicides and pesticides may have been used on the golf course, but could not say for certain. According to Mr. Grantham, no dumping has occurred on the subject site. Mr. Grantham indicated that, to the best of his knowledge, there are no environmental concerns associated with the site. He had no information regarding the dirt mound located in the northwestern portion of the subject site. He stated that no environmental liens have been placed on the property. According to Mr. Grantham, no AULs are present for the site. Mr. Grantham stated that no previous Phase I ESAs had been performed on the property. Mr. Grantham was not aware of any real estate identification number for the property.

AEROSTAR interviewed Mr. Marion Fannaly, Environmental Director, NASJRB-New Orleans, regarding the history of the subject site. Mr. Fannaly stated that he has been associated with the subject site for approximately 12 years. According to Mr. Fannaly, the subject site and subject site vicinity was previously owned by Hero Land Co., who used portions of the land for agriculture. Prior to the Hero Lands Co. ownership, the land was owned by several individuals who farmed sugar cane and small amounts of row crops for at least 200 years in the area. Mr. Fannaly did not know whether or not these crops were grown on the subject site. Mr. Fannaly stated that the naval base was constructed in the mid- to late-1950s and the base opened for operations in 1959 or 1960. The subject site was developed as a golf course in the 1960s or 1970s. According to Mr. Fannaly, an irrigation system is set up on the subject site and the western adjoining property and is still connected to parish water; however, the irrigation system has not been used for some time. He also stated that some lights may still be present on-site and the electricity would be provided by Entergy, Inc. Mr. Fannaly stated that he believes the structure was once a bathroom. According to Mr. Fannaly, herbicides and pesticides were used on the golf course, though he was unsure as to the specific chemicals involved. Mr. Fannaly explained that he was aware of one gas and oil well on-site, which was drilled sometime in the 1960s. He stated that the well was plugged and abandoned in either 2004 or 2005. He stated that the only active well on the base was located west of the subject site. According to Mr. Fannaly, the well was drilled in 2003 and produces gas. According to Mr. Fannaly, no dumping has occurred on the subject site. Mr. Fannaly indicated that, to the best of his knowledge, there are no environmental concerns associated with the site. He had no information regarding the dirt mound. He stated that no environmental liens have been placed on the property. According to Mr. Fannaly, no AULs are present for the site. Mr. Fannaly stated that no previous Phase I ESAs had been performed on the property. Mr. Fannaly was not aware of any real estate identification number for the property.

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. Navy, 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 regarding the Chevron-Oronite facility. She stated that she would provide appropriate documentation regarding the three on-site landfills for review. Please refer to Section 5.1 for a discussion on this facility.

7.5 Interviews with Others

AEROSTAR interviewed Mr. Mike Brown, Environmental Manager, U.S. Army Corps of Engineers, concerning the subject site using the User Questionnaire found in Appendix X3 of ASTM E 1527-05. Mr. Brown stated that there are no environmental liens or AULs on the subject site. Mr. Brown indicated that the purchase price reflects the fair market price. 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. Brown stated, to the best of his knowledge, no environmental concerns are associated with the subject site. Mr. Brown indicated that the Phase I ESA is being conducted as a requirement for the use of borrow material on the levees.

8.0 FINDINGS AND OPINIONS

8.1 Known or Suspect Recognized Environmental Conditions

On-site concerns were noted from the dirt mound observed in the northwest corner of the subject site.

On-site concerns were noted from the former drilling operations in the southeastern and western portions of the subject site. Off-site concerns were also noted from the numerous gas and oil wells located east and southeast of the subject site in the Stella Oil and Gas Field.

8.2 Historical Recognized Environmental Conditions

Historical concerns were noted on the subject site and the western adjoining property from use of herbicides and pesticides on the golf course.

8.3 *De Minimis* Conditions

No *de minimis* conditions were noted at the site.

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 Naval Facility Borrow Area, located at Naval Air Facility Building 49, 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:

- Historical concerns were noted on the subject site and the western adjoining property from use of herbicides and pesticides on the golf course.

- On-site concerns were noted from the former drilling operations in the southeastern and western portions of the subject site: drilling techniques require extensive use of gas or oil powered drilling equipment which can cause environmental impacts through accidental releases or leaks. Additionally, a small pile of dirt was observed in the northwestern corner of the subject site (longitude: -90.0152554, latitude: 29.8213667734).

- Off-site concerns were also noted from the numerous gas and oil wells located east and southeast of the subject site in the Stella Oil and Gas Field.

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 Naval Facility Borrow Area, located at Naval Air Facility Building 49, 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.

APPENDICES

APPENDIX A

FIGURES

APPENDIX B

PROPERTY RECORD INFORMATION

AEROSTAR was not provided property record information by the client or user at the time of this report's completion due to unavailable and incomplete property record information. The Plaquemines Parish Tax Assessor's Office was unable to provide tax record or assessment information concerning the subject site since the government-owned subject site is exempt from taxes. An environmental lien search was to have been requested through EDR as part of this investigation; however, it could not be completed without additional property record information. A chain-of-title was not requested by the client. An addendum letter will be issued updating this information upon receipt of additional property record information should a property identification number be obtained.

APPENDIX C

SITE PHOTOGRAPHS

APPENDIX D

REGULATORY DATABASE REPORT

APPENDIX E

HISTORICAL REFERENCE DOCUMENTATION

APPENDIX F

INTERVIEW DOCUMENTATION

LIST OF CONTACTS INTERVIEWED
PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name	Title	Affiliation	Topics Discussed
Mr. Tom Grantham	Subject Site Representative	NASJRB-New Orleans	Historical use of the site
Mr. Marion Fannaly	Environmental Director	NASJRB-New Orleans	Historical use of the site
Ms. Melinda Molieri		LDEQ	Chevron-Oronite facility
Mr. Robert Gravolet	Tax Assessor	PPTAO	PRC and Tax Bill Numbers
Chevron-Oronite Employee		Chevron-Oronite	Hurricane Damage at the Chevron-Oronite facility
Mr. Mike Brown	Environmental Manager	U.S. Army Corps of Engineers	Site in reference to Appendix X3 of ASTM Standard E 1527-05

APPENDIX G

REFERENCES

REFERENCES

Interviews: Mr. Mike Brown, Environmental Manager, USACE
Mr. Marion Fannaly, Environmental Director, NASJRB-New Orleans
Mr. Tom Grantham, NASJRB-New Orleans
Mr. Robert Gravolet, PPTAO
Ms. Melinda Molieri, LDEQ
Chevron-Oronite Employee, Chevron-Oronite

EDR Historical Topographic Map Report, EDR, May 15, 2007.

The EDR Radius Map Report with GeoCheck, EDR, May 15, 2007.

New Orleans Suburban, Louisiana Polk City Directory, select editions.

Sanborn Map Report, EDR, May 15, 2007.

Southeastern District, Louisiana, West of Mississippi River historical plat maps, select years

USGS Topographic Map of "Bertrandville, Louisiana," dated 1995.

US Department of Agriculture Soil Conservation Service, *Soil Survey of Plaquemines Parish*, dated 1989.

Websites:

EDMS	https://edms.deq.louisiana.gov/app
LDEQ GIS	http://map.deq.state.la.us/index2.htm
LDNR	http://dnr.louisiana.gov/
LSLO: InfoLouisiana	http://1webfn.doa.la.gov/slodocs/SLO/hist_records.htm
NAS-JRB	http://www.nasjrbnola.navy.mil/history.htm

APPENDIX H

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS