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MONITORING WELL ABANDONMENT WORK PLAN UNDERGROUND STORAGE TANK 19
BUILDING 3241 NAS PENSACOLA FL
5/1/2006
AEROSTAR ENVIRONMENTAL SERVICES, INC.

MONITORING WELL ABANDONMENT WORK PLAN
UNDERGROUND STORAGE TANK 19
BUILDING 3241
NAVAL AIR STATION PENSACOLA, FLORIDA

CTO NUMBER N62467-03-G-0110/0005



AEROSTAR
ENVIRONMENTAL SERVICES, INC.

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	PROJECT INFORMATION AND DESCRIPTION.....	1
1.1.1	SITE DESCRIPTION AND HISTORY	1
1.2	SCOPE OF WORK.....	2
1.2.1	HEALTH AND SAFETY	2
1.2.2	FACILITY SITE SAFETY AND SECURITY	2
1.2.3	REQUESTS FOR INFORMATION.....	2
1.2.4	ENVIRONMENTAL PROTECTION.....	3
1.2.5	PRE-MOBILIZATION SUBMITTALS.....	3
1.3	RESOURCES.....	3
1.4	PROJECT SCHEDULE.....	3
1.5	MEETINGS.....	3
1.5.1	PRE-CONSTRUCTION MEETING.....	4
1.5.2	DAILY TAILGATE MEETINGS.....	4
2.0	EXECUTION PLAN	5
2.1	SCOPE OF WORK.....	5
2.1.1	MOBILIZATION AND SITE SETUP.....	5
2.1.2	WELL ABANDONMENT	5
2.1.3	DEMOBILIZATION.....	5
2.1.4	REPORTING.....	5
3.0	QUALITY ASSURANCE/QUALITY CONTROL PLAN	6
3.1	PROJECT COMMUNICATION.....	6
3.2	SPECIAL TRAINING, REQUIREMENTS, AND CERTIFICATIONS.....	6
3.3	DOCUMENTATION AND RECORDS	6
3.4	FIELD DOCUMENTATION.....	7
3.5	DATA QUALITY OBJECTIVES FOR MEASUREMENT DATA	7
4.0	APPROVAL	8
4.1	ORIGINAL PLAN	8
4.2	REVISIONS	8

APPENDICES

APPENDIX A:	Work Schedule
APPENDIX B:	Site Plan

1.0 Introduction

Aerostar Environmental Services, Inc. (AEROSTAR) has been contracted by the Southern Division, U.S. Naval Facilities Engineering Command (SOUTHDiv), to perform well abandonment activities at Building 3241, Naval Air Station Pensacola (NAS Pensacola), Florida.

This Work Plan (WP) has been developed for the project site, herein after referred to as Building 3241. The Work Plan addresses issues which are site-specific to the project site. This section presents the project site history, scope of work, project schedule, meeting requirements, and reporting requirements in accordance with the contract agreement.

1.1 Project Information and Description

PROJECT NO: AES Proj. No. 0404-197-24

CLIENT: Department of the Navy, Naval Facilities Engineering Command

PROJECT/SITE NAME: Underground Storage Tank 19
Building 3241
NAS Pensacola, Pensacola, Florida

CTO NUMBER: N62467-03-G-0110/0005

SITE ADDRESS: Building 3241, NAS Pensacola, Florida

AEROSTAR PROJECT MANAGERS: Emilie Wien and Tiffany Whitson

AEROSTAR OFFICE: Mobile, Alabama (MA)

DATE(S) OF SITE WORK: April 2006 through April 2007

1.1.1 Site Description and History

Naval Air Station (NAS) Pensacola is located in Escambia County, approximately five miles west of the Pensacola city limits. The approximately 5,000-acre installation was constructed in the 1800s. Prior to construction, the facility was undeveloped and sparsely vegetated. Land use at NAS Pensacola consists of various military housing, training, and support facilities, as well as large industrial complexes for major repairs and refurbishment of aircraft frames and engines.

Building 3241 is located at the eastern end of Forrest Sherman Field, north of the Naval Aviation Museum and adjacent to the south side of Building 3221, the Aircraft Maintenance and Restoration Facility. The site is the former location of an underground storage tank (UST) which contained fuel oil located on the south side of Building 3241. Most of the area in the vicinity of Building 3241 is paved with asphalt or concrete. An area of bare soil, approximately 20 feet by 50 feet, is located adjacent to the south side of Building 3221 where the UST was located. Surface drainage generally flows to the south and is collected by storm sewer drains.

Building 3241 contains four boilers which are used for heating Building 3221. Prior to its removal in 1994, the UST at the site was used to store fuel oil for the boilers. The boilers have been refitted and are currently fueled with natural gas.

During the removal and closure of the UST, five soil samples were collected from the tank excavation. The samples were analyzed for Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method SW-846 8260 and Semi-Volatile Organic Compounds (SVOCs) by EPA Method SW-846 8270A. Total xylenes and 1,1,2,2-tetrachloroethane were detected at concentrations exceeding the Florida Department of Environmental Protection (FDEP) soil cleanup target levels (SCTLs).

Following the tank removal, a shallow monitoring well (MW-1S) was installed to collect a groundwater sample. The groundwater sample was submitted to a laboratory and analyzed for VOCs by EPA Method SW-846 8260 and for SVOCs by EPA Method SW-846 8270A. Benzene was detected at a concentration of 220 micrograms per liter ($\mu\text{g/L}$), exceeding the FDEP groundwater cleanup target levels (GCTLs) of 1 $\mu\text{g/L}$. The well was resampled and a benzene concentration of 150 $\mu\text{g/L}$ was consistent with the first sample result (TtNUS, 2002).

AEROSTAR was awarded the Natural Attenuation Monitoring contract at UST 19, Building 3241, in April 2004. The work was performed under Basic Ordering Agreement (BOA) Contract No. N62467-03-G-0110/005.

Laboratory analytical results for the August 2004, December 2004, April 2005, June 2005, and December 2005 groundwater sampling events reported all contaminant concentrations sampled for were below the FDEP's GCTLs in groundwater samples collected from MW-1S (MW-1SR), MW-3S, MW-4S and MW-5S.

AEROSTAR conducted the final round of groundwater sampling at the site on December 20, 2005. Since groundwater analytical results have remained below detection limits for five quarters, AEROSTAR recommended that the site be granted No Further Action status.

1.2 Scope of Work

AEROSTAR will furnish all labor, equipment, lower-tier subcontractors, materials, supplies, and all else necessary to completely perform the Scope of Work identified herein. All work shall be completed in compliance with current federal, state, and local regulations, and in accordance with standard industry practice.

1.2.1 Health and Safety

Worker and community safety is of the utmost importance on this project. AEROSTAR and its subcontractors will comply with the health and safety requirements outlined in the Health and Safety Plan (HASP). The HASP was submitted under separate cover for approval by SOUTHdiv. All site workers shall be 40-hour OSHA HAZWOPER trained as specified in 29 CFR 1910.120 and shall be current with the 8-hour OSHA refresher. AEROSTAR will be responsible for providing all required personal protective equipment (PPE) for its workers and

subcontractors in accordance with the HASP, upon approval by SOUTH DIV. AEROSTAR assumes that the work will be performed in Level D PPE.

1.2.2 Facility Site Safety and Security

Workers shall be required to comply with the site safety and security regulations while working on NAS Pensacola. If required, AEROSTAR and its subcontractors will provide proof of U.S. citizenship for each employee to perform work on this project. AEROSTAR will provide facility safety and security protocol for workers' review prior to the commencement of site activities.

1.2.3 Requests for Information

When information/direction is required, AEROSTAR will submit requests for information (RFI) in writing to SOUTHdiv in order to document a specific problem, question or concern, and the answer or direction obtained in response to the RFI. The RFI shall include, as a minimum, a complete description of the problem/question/concern, a reasonable response date, and the signature of AEROSTAR's representative.

1.2.4 Environmental Protection

The work to be performed at Building 3241 may have adverse impacts on the environment. AEROSTAR will perform/install temporary controls to minimize the environmental impacts and to meet the intent of federal, state, and local regulations designed to protect the environment. The temporary controls will include, but are not limited to: site access control; erosion and sediment controls (silt fence, hay bales, etc.), if needed; construction debris and waste control; water pollution control; dust control; and spill control.

1.2.5 Pre-Mobilization Submittals

Prior to mobilization, AEROSTAR will submit to SOUTHdiv for approval a Work Plan which includes an Execution Plan, a Well Abandonment Plan, and Quality Control Plan. A Site-Specific Health and Safety Plan was submitted to SOUTHdiv under separate cover. The requested plans were submitted separately to SOUTHdiv for approval prior to initiating site activities.

AEROSTAR understands SOUTHdiv may require revisions to these plans in order to ensure the project objectives will be achieved in accordance with applicable rules and regulations and at an appropriate level of worker safety. AEROSTAR will revise the documents until acceptable to SOUTHdiv.

1.3 Resources

AEROSTAR will provide the appropriate personnel, equipment, subcontractors, materials, supplies, and all else necessary to completely perform the Scope of Work.

1.4 Project Schedule

The proposed work schedule is included in Appendix A. Certain activities are

dependent on the review and approval of work plans and pre-mobilization submittals, and their scheduled starting dates may be altered if the review periods are extended.

The schedule will be extended, as appropriate, for unforeseen delays such as inclement weather and other factors beyond AEROSTAR's control.

1.5 Meetings

AEROSTAR will schedule physical arrangements for meetings through the progress of site construction work; prepare meeting agenda with regular participant input; distribute written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions; and reproduce and distribute copies of minutes within two days after each meeting with SOUTHdiv. The project meetings shall include, but are not limited to: a pre-construction meeting and daily tailgate meetings.

1.5.1 Pre-Construction Meeting

Prior to any on-site construction work, AEROSTAR will schedule a pre-construction meeting to discuss the following subjects, at a minimum:

- Required schedules
- Sequencing of critical path work items
- Progress payment procedures
- Project changes and clarification procedures (including RFIs)
- Use of site, access, office and storage areas, security, and temporary facilities
- Major product delivery and priorities
- AEROSTAR's Health and Safety Plan and representative (including required employee records)

1.5.2 Daily Tailgate Meetings

A daily tailgate meeting will be held each morning at the site by AEROSTAR to discuss the following subjects, as a minimum:

- The work planned for the day
- Changes in work assignment
- Health and safety issues
- Review problems encountered the previous day
- Sign the safety task assignment form prior to beginning any work onsite

2.0 Execution Plan

This section provides the technical approaches for each of the on-site activities included in the Scope of Work. AEROSTAR will furnish all labor, equipment, materials, lower-tier subcontractors, supplies, and all else necessary to completely perform the Scope of Work identified herein. All work shall be completed in compliance with current federal, state, and local regulations, and in accordance with standard industry practice.

2.1 Scope of Work

The objective of this project is to abandon and plug six groundwater monitor wells located at Building 3241 at NAS Pensacola, Florida. The components of the work to be performed at Building 3241, NAS Pensacola include the following:

- Mobilization and Site Setup
- Well Abandonment
- Demobilization
- Reporting

2.1.1 Mobilization and Site Setup

This task includes mobilizing personnel, equipment, subcontractors, and materials to the site and establishing temporary facilities to conduct the project activities. The contractor will review all regulations, and standard operating procedures (SOPs) regarding vehicle movement and control inside the facility. All location provisions will be observed including notifications and communication requirements. The contractor will minimize disturbance to any operations during project activities. The contractor also will consult with onsite Navy personnel to evaluate area access, placement of equipment, and traffic flow to minimize the effect of this work on facility operations.

Prior to the commencement of work at the site, AEROSTAR will install site controls including construction barricades and security fencing and prepare the decontamination area and equipment laydown area, if necessary.

2.1.2 Well Abandonment

AEROSTAR will abandon six existing permanent wells at Building 3241, within NAS Pensacola, Florida according to a letter issued by the FDEP on April 13, 2006. The wells will be abandoned since the chemicals of concern have remained below laboratory detection limits for five consecutive quarters.

A total of six monitoring wells will be abandoned in accordance with Florida Department of Environmental Protection (FDEP) regulations and local regulations. The proposed abandoning method for each of the monitor wells is removal of the casing and screen. Any section of the monitor well remaining and/or the borehole will then be completely filled with a cement-bentonite slurry

using the pump-down method. If the casing and screen cannot be physically pulled from the borehole, overdrilling will be performed. Well abandonment and construction activities will be conducted in accordance with Section 6.9 of the USEPA Region 4 guidance document, ASTM Standard D5299-92, and FDEP SOP for the Design, Installation, and Placement of Monitoring Wells (effective May 2, 2005).

2.1.3 Demobilization

Before leaving the work area, personnel and equipment will be decontaminated after coming in contact with contaminated material. All debris and/or rinsate generated during the decontamination activities will remain inside the exclusion zone until it can be placed into containers for proper storage and subsequent disposal. Equipment will be thoroughly decontaminated to remove any contamination adhering to the component surfaces.

Decontamination of personnel and PPE will be performed in accordance with 29 Code of Federal Regulation (CFR) 1910.120.

Before traveling from an exclusion zone to a clean area, all decontaminated equipment will be inspected and documented by the contractor.

2.1.4 Reporting

AEROSTAR will prepare and submit a Well Abandonment Report, upon completion of the field activities, to the FDEP, SOUTHDIV, and the Activity.

3.0 Quality Assurance/ Quality Control Plan

3.1 Project Communication

Effective communication among all project personnel shall be established and maintained throughout the course of the project. At the beginning of the project, and/or at the start or end of major milestones, the PM will prepare written project instructions that will be distributed to all team members. These instructions will document project and task objectives and each team member's responsibility in meeting the objectives, as well as a budget and schedule for successfully executing the work.

During the field investigation phase of this project, the field team will meet daily to review the status of the project and to discuss technical and safety issues. When necessary, other meetings will be scheduled or the field team leader (FTL) will meet individually with field personnel, EPA personnel, or State personnel to resolve problems. Following the field effort, the FTL will prepare a trip report detailing project progress.

During the field effort, the FTL will be in regular telephone or face-to-face contact with the project team. When significant problems or decisions requiring additional authority occur, the FTL will immediately contact the PM for assistance. The FTL will coordinate communication with the laboratory through sample collection, sample analysis, and data quality evaluation and consult with the PM.

3.2 Special Training, Requirements, and Certifications

The PM works with the project delivery manager to assemble a project team that has the necessary experience and technical skills. Part of the work planning process is to identify special training requirements or certifications necessary to execute the project successfully. Special training or certifications required beyond the normal routine requirements have not been identified for this project.

3.3 Documentation and Records

This section defines which records are critical to the project and what information needs to be included in reports, as well as the data reporting format and the document control procedures to be used. It is imperative for the defensibility of critical decisions made at the site that proper documents and records be maintained for the field and offsite data gathering activities, so that specific events can be recreated or independently evaluated. The PM will be responsible for organizing, storing, and cataloging all project information. The PM is also responsible for collecting records and support data from all project team members. Individual project team members may maintain separate notebooks for individual tasks. Any files necessary to be retained in the permanent file will be

forwarded to the PM for real-time archiving upon preparation. Permanent files will not be retained in individual team member's possession but will be forwarded to the PM at the close of the project. Copies of permanent records may be retained in their individual files for use during the project and discarded at the close of the project. Personal copies of permanent records will not be forwarded to the PM at the close of the project; it is the individual's responsibility to ensure records in their possession are archived in real-time.

3.4 Field Documentation

Primary fieldwork includes sampling for chemical characterization. Applicable documents and records include the following:

- Field logbook to record data collection activities and observations (including date and time, sample locations, depth, health and safety measures, weather conditions, sampling personnel, analyses requested, and sketches).
- Sample collection field sheets or chain-of-custody (COC) documentation.
- Field instrument calibration and maintenance logs.
- Additionally, field quality control and corrective action documents may be generated as a result of field audits.

3.5 Data Quality Objectives for Measurement Data

All samples will be delivered to a Navy, USACE approved laboratory for a standard 2-week turnaround time. The laboratory also will have an FDEP-approved Comprehensive Quality Assurance Plan. The offsite laboratory analysis data quality objectives for the groundwater investigation are definitive and data packages will be consistent with the criteria stated in Section C of the RFP. The sampling and analytical requirements are listed as an attachment.

All analytical results will be validated or qualified according to general guidance provided in the National Functional Guidelines for Inorganic Review (EPA 540/R-94/013, February 1994). Additionally, the data will be evaluated for adherence to the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories Final Version 2 (June 2002).

The electronic deliverable will be provided by the laboratory as specified in the data management section of the work plan.

4.0 Approval

This Work Plan has been written for use by AEROSTAR only. The plan is written for the specific site conditions, purposes, dates, and personnel specified and must be amended if those conditions change.

4.1 Original Plan

Written By: Emilie A. Wien

Date: _____

Approved By: Tiffany H. Whitson

Date: _____

4.2 Revisions

Revisions Made By: _____

Date: _____

Revisions to Plan: _____

Date: _____

Revisions Approved By: _____

Date: _____

Appendix A

Work Schedule

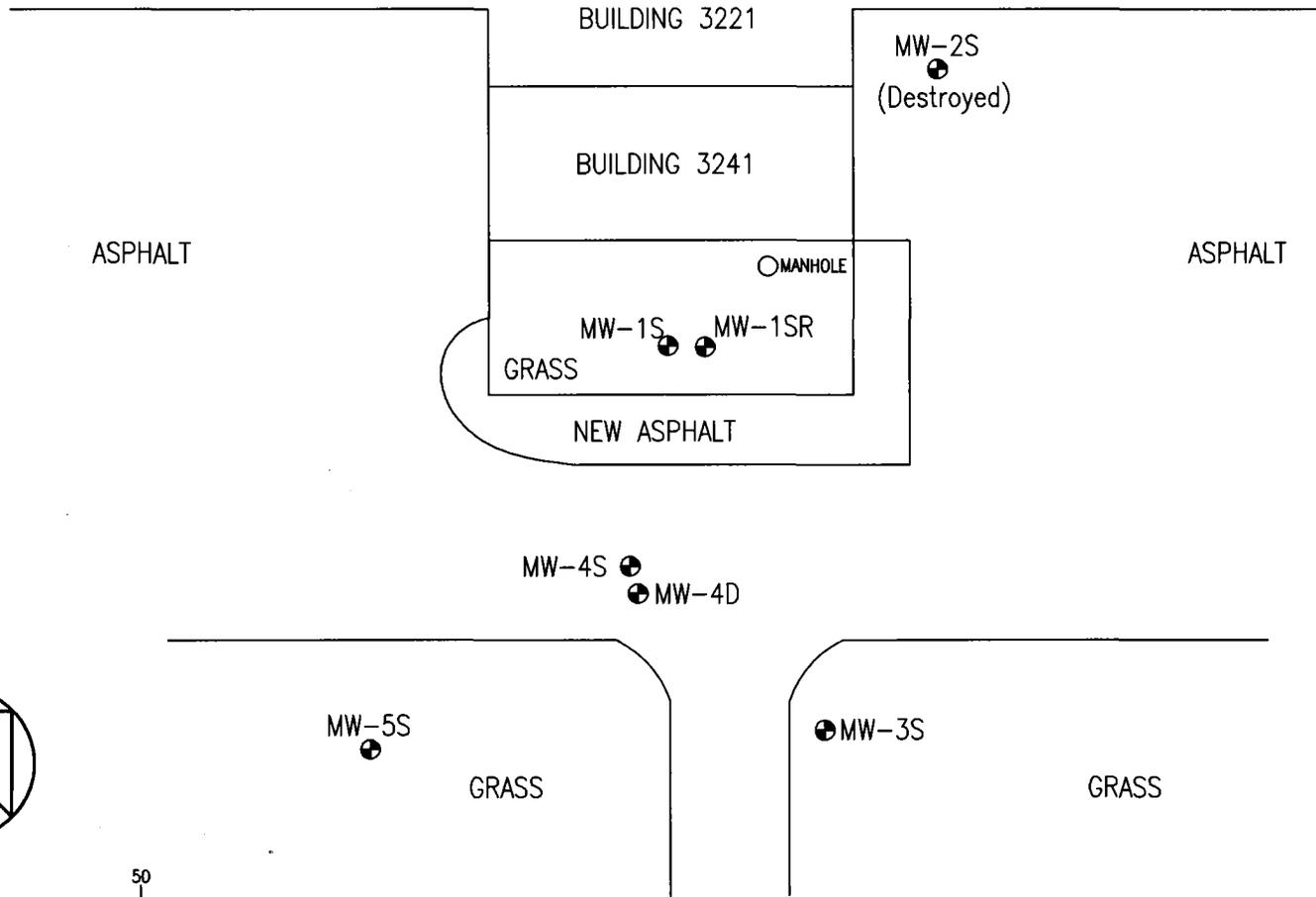
**BUILDING 3241
NAVAL AIR STATION PENSACOLA
SCHEDULE
FY 2004/2005**

Task		May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1:	Work Plan								
Task 2:	Well Abandonment								
Task 3:	Draft Letter Report								
Task 4:	Final Letter Report								

Appendix B
Site Plan

LEGEND

⊕ Monitor Well Location



PROJECT # 0404-197-24

FIGURE 1 - SITE PLAN



UNDERGROUND STORAGE TANK 19
BUILDING 3241
NAS PENSACOLA, FLORIDA

DRAWN BY: PRF

DATE: 12/20/04