

2005

Secretary of Defense Environmental Award Naval Air Station Pensacola, Florida

Nomination Package

The official mission of Naval Air Station (NAS) Pensacola is to fully support the operational and training missions of tenants assigned; enhancing the readiness of the U.S. Navy, its sister armed services, and other customers. Some of the tasks required to accomplish this mission include operation of fuel storage facilities, performance of aircraft maintenance, maintenance and operation of engine repair facilities and test cells for aircraft engines, and support of weapon systems.

This award nomination package provides the background and accomplishments of Team Pensacola as part of environmental restoration activities in support of the NAS Pensacola mission.

Background

The U.S. Navy has maintained a presence in the Pensacola area since 1825, when a Navy Yard was established on Pensacola Bay, Pensacola, Florida. Between 1828 and 1835, the Navy acquired approximately 2,300 acres as operations expanded. Several natural disasters in the early 1900s destroyed the yard and forced it into maintenance status in 1911. Three years later, the Navy's first permanent air station, NAS Pensacola, was established on the site of the old Navy yard. NAS Pensacola has been the primary training base for naval aviators since that time and continues to expand.

Today, NAS Pensacola occupies 5,800 acres on a peninsula in southern Escambia County, five miles southwest of the City of Pensacola. The peninsula is bounded on the



Team Pensacola

Team Pensacola consists of NAS and NAVFAC management personnel, contractors, and federal and state representatives.

- Front Row (left to right): Betsy Voss, TUNUS; Allison Harris, EnSafe; Bill Hill, SOUTHDIV, Tracie Vaught, FDEP; Greg Wilfley, CH2M HILL.
- Back row (left to right): Joe Foran, Management Edge; Greg Cambell, NAS Pensacola; Greg Fraley, EPA Region 4; Brian Caldwell, TUNUS; Garry Walker, TUNUS.

north by Bayou Grande and on the east and south by Pensacola Bay. Various housing, training, and support facilities are on the base. A large naval aviation depot that repairs and refurbishes aircraft engines and



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frames was in the area surrounding Chevalier Field. Most industrial operations were conducted in the older portion of the base (east side of the peninsula). The naval aviation depot was decommissioned in September 1995. The west side consists of the main airfield (Forrest Sherman Field) and undeveloped forest land.

Position Description

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment in ways unacceptable by today's standards. With growing knowledge of the long-term effects of hazardous materials on the environment, the Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at their facilities.

The NAS Pensacola and the Southern Division, Naval Facilities Engineering Command manages/oversees and the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) provides regulatory overview/compliance of the Navy environmental program at NAS Pensacola. All aspects of the program are conducted in compliance with federal and state regulations, as ensured by the participation of these regulatory agencies.

Team Pensacola was established in December 1993 to manage the environmental restoration of NAS Pensacola, originally tasked with the management of 39 sites. For more than a decade, Team Pensacola has achieved No Further Action at 19 sites (by either site screening or execution of the CERCLA process), obtained 9 Records of

Decision (RODs), and implemented innovative technologies and a sound partnering approach that has saved the program millions of dollars. The following pages highlight the accomplishments of Team Pensacola from 1 October 2003 through 30 September 2005.

Accomplishments

Achieving Program Goals Despite Hurricane Ivan Damage

Hurricane Ivan caused substantial damage to NAS Pensacola. Team Pensacola quickly adapted to the environmental challenges caused by this severe storm. Below is one example.

In 1972, Building 604 was expanded to accommodate a plating operation, which operated until 1995. Soil testing under the surface cover identified hazardous materials similar to those in the former plating shop operations. The area of concern consisted of approximately 12 acres, which was almost completely covered by asphalt or concrete slabs. Team Pensacola originally agreed to maintain the asphalt and concrete surfaces and conduct Monitored Natural Attenuation for groundwater. However, Hurricane Ivan struck NAS Pensacola in September 2004. Building 604 was damaged from the storm, and it selected for demolition along with seven other historical buildings in the area.



TEAM PENSACOLA CHARTER

VISION:

Environmental conditions at NAS Pensacola that are conducive to and support its beneficial use.

MISSION:

The Environmental Restoration of NAS Pensacola.



Two Waterfront Sites Granted No Action Due to Partnering

This year, NAS Pensacola reached a significant milestone in its decade-long environmental cleanup program. Two final pieces of the waterfront puzzle were granted No Action status in FY2005, clearing all waterbodies bordering the facility. The cleanup effort at NAS Pensacola has been a huge success — in terms of environmental restoration, cost savings, and partnership.

These two final sites were known as the Waterfront Sediments (Site 2), and Bayou Grande (Site 40). Combined with Site 42 (Pensacola Bay), these comprise the entire waterfront bordering NAS Pensacola, an ecologically rich zone that is a home and breeding ground for many aquatic creatures and fish. The No Action designation for the entire waterfront is recognition that active remediation of near-shore sediments and waters would be invasive, expensive, time-consuming and, most importantly, unnecessary.

Site 2 consists of the near-shore sediments of Pensacola Bay along the southeastern shoreline of NAS Pensacola, where 56 sewer and industrial wastewater outfalls emptied into Pensacola Bay. The site had been investigated, and in 1997 the Navy sought official approval, through a Record of Decision, to monitor the sediments for any changes to contamination there. A public comment prompted the Navy, with input from FDEP, EPA, and the National Oceanographic and Atmospheric Administration (NOAA), to reevaluate that proposal.

Together, the Navy, FDEP, EPA, and NOAA agreed that this comment warranted some action in response. The agencies worked together to create a plan for supplementary sampling that would address the citizen's concern. More importantly, the agencies worked together to determine how the data from this sampling would be used. This cooperative decision streamlined the data review and

analysis process by avoiding the lengthy back-and-forth review and comment process typically followed. Based on this new sampling data, Site 2 received a No Action status in September 2005.

Site 40 is a large and diverse site, consisting of 8.5 miles of shoreline along Bayou Grande. Like Site 2, Site 40 was the focus of cooperative decisions that saved money and time. In this case, the Navy, FDEP, EPA, and NOAA jointly developed sampling and data analysis programs with the goal of reaching defensible decisions quickly.

The Site 40 sampling program was focused, exclusive, and holistic. It was focused: sampling only in areas most likely to cause adverse effects to ecological receptors. It was exclusive: sediment was sampled for chemistry and number and quality of benthic invertebrates. It was holistic: considering the entire ecosystem, smaller fish were sampled to analyze the potential risk to predatory bird and aquatic species.

Ecological studies, such as those required for Sites 2 and 40, are very complex. However, the participation of environmental regulators and their close cooperation with the Navy resulted in smoother and more streamlined activities. The end result is that the entire shoreline of NAS Pensacola will require No Action.

Finally, the installation's environmental program appears to have strengthened the ecological systems along the waterfront. A community member of the installation's Restoration Advisory Board has stated publicly several times that he has seen dolphins in recent years in Bayou Grande, a formerly unheard-of situation.

EPA divers working with Navy contractors to sample Site 2 sediments.



Based on the Team Pensacola study, linear regression can be used to quantify the relationships between inorganic constituents in sediments and to measure the range of background concentrations. This type of analysis saves significant time, effort, and costs in remediation. It's a technique that can be used at other military installations.

Diligent Sampling Efforts and Use of the 95% UCL Risk Evaluation Significantly Reduce Required Excavation

Based on remedial investigations at Sites 8 and 24, Operable Unit 13, at NAS Pensacola, the Navy was tasked to perform two large soil excavations to remove various contaminants in soil to prevent the contaminants from leaching into the shallow groundwater.

However, through diligent sampling effort and one of the initial applications of the 95% upper confidence level (UCL) statistical risk evaluation method in the State of Florida, it was determined that the excavation required at Site 8 could be reduced from 4,000 cubic yards to 1,000 cubic yards and the excavation required at Site 24 could be eliminated without increasing risks to human health and the environment.

A cost savings of more than \$1 million was realized by the Navy. Through strong partnering, regulatory agencies were able to make well-informed decisions throughout the additional investigative efforts.

Awards and Services

AWARDS

- Received the *Gulf Guardian Award* at the 2003 Southern States Environmental Conference for NAS Pensacola and FDEP Partnership development and use of the Environmental Compliance and Training (ECAT) website.

- Received the CNO and SECNAV Natural Resources Conservation Small Installation Award in Fiscal Years 2000, 2001, and 2003
- Won Honorable Mention for the DOD Natural Resources Award in Fiscal Years 2001 and 2003
- Won the COMNAVREG Southeast Environmental Stewardship Award in 2001 and selected as Runner Up in 2003–2005.

Environmental Papers/Presentations

- Use of Multiple Linear Regression and Virtual Remediation to Define Inorganic Background - Joint Services Environmental Conference, Tampa, Florida, March 2005.*
- Assessment of Inorganic Background Concentrations in Nearshore Saltwater Sediments Using Linear Regression.* Presented at the 25th Annual Conference of the International Society of Wetland Scientist, January 2005.
- Natural Attenuation of a Co-contaminated Solvent-Metal Plume.* Presented at the 13th Annual West Coast Conference on Contaminated Soils, Sediments, and Water at San Diego, California, March 2003.
- Applying the DQQ Process to the Sediment Quality Triad and its Outcome.* Presented at the 13th Annual West Coast Conference on Contaminated Soils, Sediments, and Water at San Diego, California, March 2003.

