



ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND

# ENVIRONMENTAL ADVISOR



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The ENVIRONMENTAL ADVISOR is designed to provide up to date information on environmental and natural resources regulations, events, issues and news.

## BLACKWATER (BW) AND GRAYWATER (GW) COST REDUCTION INITIATIVE

**Linda Cole**  
**Wastewater Engineering Section**

Disposal of blackwater (BW) and graywater (GW) from United States Naval (USN) vessels in the Mediterranean costs approximately \$6.2 million annually. Five ports within this area account for 42 percent of those disposal costs: Gaeta and Naples, Italy; Rhodes, Greece; Cannes, France; and Palma de Mallorca, Spain. NAVSEA currently is pursuing development of a sewage treatment unit to be placed onboard the environmentally sound ship of the future. However, treatment which is acceptable while at sea may not suffice while in port. Concurrently, CNO N45 tasked LANTNAVFACENGCOM to investigate the most technically feasible, cost-effective shore-side option for sewage disposal.

The Navy Regional Contracting Command (NRCC), Naples, has the responsibility for providing husbanding services for COMSIXHFLT. On 1 April 1999, NRCC Naples consolidated approximately 15 contracts with various sewage disposal vendors, most of which provided barges and/or trucks for collection and transport for local disposal, into a single Med-wide husbanding contract with Mediterranean Logistics Services for all hotel and support services. The total husbanding contract will be on the order of \$50 million per year for 10 years. About \$5 million per year of this total is for BW/GW disposal. It is anticipated that the consolidation of the contract will result in savings of 15 percent per annum. This savings, however, is dependent upon the ability to accurately measure the volume of sewage discharged from USN vessels. It was not assumed that ship husbanding would be the best solution. A study was commissioned in October 1998 to examine various alternatives for disposal of BW/GW from USN vessels. The study was completed September 1999.

The A&E firm, CH2M Hill, fielded two teams to collect data at the various ports-of-call. Naples served as the prototype for the data gathering effort. In addition to evaluating the contracting options, other alternatives were examined: building a conventional wastewater treatment plant (WWTP) shore-side; procuring a shore-side, mobile WWTP; building a mobile WWTP integral to a barge; and connecting to existing sanitary sewer systems. In all ports-of-concern, building a shore-side or mobile WWTP was cost prohibitive, as well as, politically unpopular and technically complex.

Information obtained from technical assessment, cost estimates, and investigation of political and implementation constraints were used as inputs into an analytical evaluation model. The data was incorporated into a multi-attribute utility analysis (MUA) using Criterium Decision Plus software to model the MUA decisions. Net present value over a 40-year period with a 3 percent discount factor was used to evaluate the alternatives.

In all ports-of-concern, pursuing ship-to-shore connections to existing sanitary sewers was the preferred alternative due to cost savings, simplicity, and local support. Payback periods of 0.7 years in Gaeta, 1.7 years in Naples, 2.4 years in Palma, 5.2 years in Cannes, and 7.2 years in Rhodes can be realized. Because of the need to anchor USN vessels off-shore, the contract for barging services still will be required in all ports except Gaeta.

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Since 70 percent of sewage disposal cost is associated with trucking sewage overland to a local WWTP, significant savings can be realized provided that the contract with Mediterranean Logistics Services is renegotiated to recognize the reduced cost associated with sewage disposal. The contract with the sewage disposal agent in Gaeta can be terminated entirely.

DD1391's have been prepared for projects at each of the ports. LANTOPS has been working with CINCUSNAVEUR and OPNAV N452 to obtain funding via the MILCON program or, alternatively, OM&N money plused up for POM-02. Acquisition strategies are being developed for each port.

For further information, please contact Linda Cole at 757/322-4734 or [colell@efdlant.navfac.navy.mil](mailto:colell@efdlant.navfac.navy.mil).

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## **IMPROVED FACILITY MANAGEMENT WITH THE ASBESTOS MANAGEMENT DATABASE (AMD)**

**Terry Knight, PE  
Asbestos & Potable Water Section**

Value added solutions are fundamental to the success of Atlantic Division's (LANTDIV) Environmental Engineering Branch which is responsible for compliance work. It is critical to develop partnerships with contractors who can provide value-added solutions. LANTDIV's Environmental Engineering Branch has made it a priority to work with such partners in the environmental industry. CAPE Environmental Management, Inc. for example, an 8(a) contractor, has provided LANTDIV with value added environmental solutions for over three years.

CAPE has assisted LANTDIV with various value-added solutions including turnkey asbestos and tank services. Specifically, a comprehensive Asbestos Management Database (AMD) was developed and is currently being used by many LANTDIV customers including NAB Little Creek, MCAS Cherry Point, Naval Station Guantanamo Bay, and NSGA Sabana Seca, NSGA Sugar Grove and NSGA Northwest. The comprehensive AMD is designed to efficiently capture, store, update, manipulate, analyze and display all information necessary to manage asbestos data and regulatory compliance activities. The main components of the AMD are tables, forms, queries, macros and modules developed in Microsoft Access using Access Basic as the core programming language. The program links to Microsoft Access and Autodesk View, giving the user the option of viewing, annotating,

or printing photos (in a .jpg format) and drawings (in a .dwg format) associated with a selected building.

The menu driven application allows the user to add, edit and query the database, and to generate, view and print reports on a building by building basis. It also provides summary reports and a browser for viewing the Operation and Maintenance Practices. A report that the Activity Asbestos Program Mangers (APM) find very useful is the Rating and Ranking Summary which is provided by the database. The database computes a rating score based on the condition, friability, accessibility, and laboratory results of each material and then ranks the buildings by the worst case first.

An example of a value added solution associated with the AMD occurred at NSGA Northwest. The Asbestos Program Manager (APM) at NSGA Northwest was able to utilize the AMD during the up-front planning process for the removal of significantly damaged asbestos. Due to the high level of detail and accuracy of the drawings showing the location of asbestos in the AMD, the activity was able to remediate the significantly damaged asbestos without the use of the formal design/bid process.

### **MISSION STATEMENT**

- **Assist in the prevention and abatement of environmental pollution**
- **Execute, responsibly and expeditiously, Department of Defense funds entrusted to our care**
- **Keep our customers and partners informed on all current environmental issues**

**The Environmental Advisor is a quarterly publication of the Environmental Division, Code 18. It is designed to keep readers informed on issues relating to the environment. If you are interested in contributing an article, please contact:**

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## ATLANTIC DIVISION

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Using LANTDIV's 8744 8(a) environmental contract with CAPE and the asbestos location drawings, LANTDIV, NSGA Northwest, and CAPE personnel walked the site to finalize the Scope of Work. The fee for remediation was developed based on this site visit and the drawings from the AMD. This process significantly reduced the activities cost (no formal design) and the time from project identification to completion (no formal design/bid process), while not sacrificing safety or quality.

By utilizing the Comprehensive Asbestos Management Database, LANTDIV and their customers are able to:

- Update asbestos information as changes occur, which reduces resurvey costs
- Improve accuracy of data for projects (i.e., renovations, demolitions) impacting asbestos since the information is readily available and easily obtainable
- Improve performance and reduce time spent managing asbestos related issues

For further information how the AMP can aid your Activity Asbestos Program, call Terry Knight, PE, AMP at 757-322-4738 or [knightte@efdlant.navfac.navy.mil](mailto:knightte@efdlant.navfac.navy.mil).

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## MCAS CHERRY POINT NEWS

### Lance Laughmiller Installation Restoration Program

Marine Corps Air Station (MCAS), Cherry Point, is the world's second largest Marine Corps air station and is home to 2nd Marine Aircraft Wing, Naval Aviation Depot (NAVAVNDEPOT), and Naval Hospital. The Air Station is populated by 10,000 Marines and Sailors, their dependents and more than 6,500 civilian employees, for a total population of approximately 30,000. MCAS, Cherry Point, and the NAVAVNDEPOT, the Air Station's largest tenant command, have been in operation for more than half a century.

MCAS, Cherry Point, is located on a peninsula of land formed by Craven and Carteret Counties between the Neuse River to the north and Core and Bogue Sounds to the south. The Air Station covers 11,717 acres with an additional 15, 980 acres in outlying support areas. The uplands consist generally of pine flatwoods along with various habitats that support numerous species of plants and animals, which include white-tailed deer, wild turkey, and endangered species such as the American Alligator,

Spring Goldenrod and the Bald Eagle. Slocum Creek, Hancock Creek, and the Neuse River serve as recreational areas and also serve as habitat for many species of migratory birds. Coastal species of shore birds use marsh areas along the creeks and the Neuse River as nurseries.

MCAS, Cherry Point, is the largest employer in eastern North Carolina. Agriculture, fishing, and tourism are the major employers for the area population. MCAS, Cherry Point, resides within the city limits of Havelock, North Carolina, and enjoys a productive and cooperative relationship with the city and county governments.

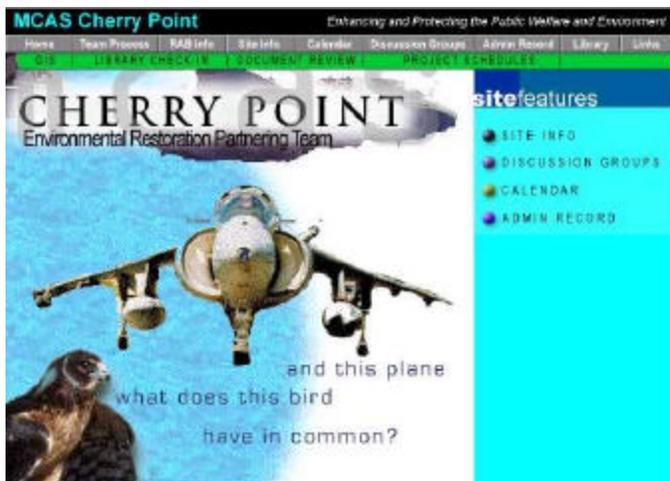
## BACKGROUND

The most challenging and complex environmental problems aboard MCAS, Cherry Point, stem from past activities at the industrial center of the Air Station, primarily aboard the NAVAVNDEPOT. Poor practices related to the handling and disposal of industrial chemicals and wastes over the years have resulted in an extensive area of contamination that extends beneath a large portion of the industrial center. This area alone, which includes the CERCLA site designated as Operable Unit 1 (OU1) and several underground storage tank sites, covers more than 500 acres, contains more than 100 potential contaminant source areas, and includes multiple commingled contaminant plumes.

The volume of sampling and analytical data required to adequately characterize an area as large and complex as OU1 is tremendous. There are approximately 50,000 groundwater; 46,500 soil; 5,500 sediment; and 4,300 surface water analytical data records. (This represents approximately 40 percent of the Air Station's total analytical database.) To help make sense of this overwhelming amount of site characterization data in a timely and effective manner, the MCAS, Cherry Point, project team needed innovative solutions.

## INNOVATIVE SOLUTIONS AND THE PARTNERING TEAM

The MCAS, Cherry Point, partnering team turned to the latest information technologies to solve its data overload problems. The team makes extensive use of geographic information system (GIS), electronic document, and world-wide web technologies to increase access to the site characterization databases, increase public participation, increase the productivity of its teleconferences and partnering meetings, and decrease document review times.



**WEBSITE FRONT PAGE**

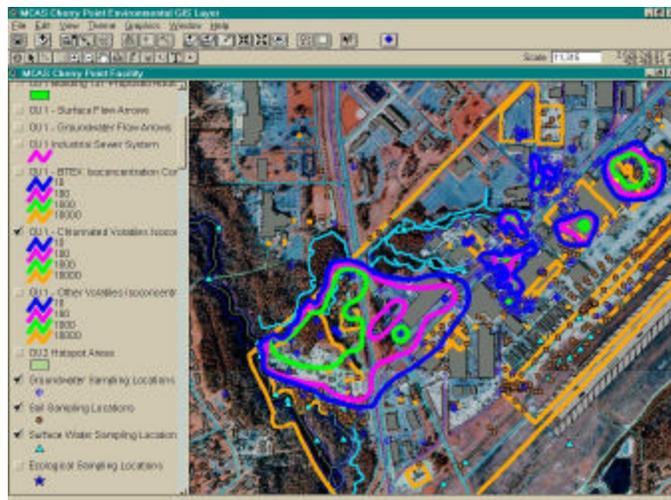
The centerpiece of the Air Station's data management system is its Environmental GIS. With ready access to its large database of historical information, the GIS user can quickly and easily examine current site conditions, investigate historical activity, and analyze trends. Easy access to this information has dramatically increased the accessibility of historical data for both the partnering team and the local facilities directorate personnel. The increased accessibility allows document reviewers to quickly and easily verify site conditions and has resulted in a faster, more streamlined document review process.

The partnering team also makes extensive use Adobe Portable Document Format (PDF) documents to speed the document review process. PDF documents can easily be transmitted electronically and can be accessed using a simple, no cost, viewer. Using the PDF creation software, documents can be created with hot links to supporting data, tables, and figures. Use of these documents reduces or eliminates the 'searching' and 'flipping back and forth' that typically occurs when reviewing hard copy versions of data intensive documents. (If you are viewing the PDF version of this document, click on either of the figures appearing on this page for a quick demonstration. To return, simply click on the 'Previous View' button on the tool bar.)

The Air Station's use of the worldwide web has dramatically increased the partnering team's efficiency while simultaneously increasing the public's access to authorized records. In addition to providing searchable public access to the administrative record, the MCAS, Cherry Point, installation restoration web site contains a library of all documents currently under review. These PDF documents can be 'checked out' by the reviewer, who then makes comments on the electronic copy using

Adobe Exchange. Once the comments are addressed, the software can then be used to compile a summary of the comments and responses for the administrative record. Having the abilities to quickly and easily research and access historical documents and review documents electronically are key factors in the team's increased productivity.

The team also uses the worldwide web to conduct virtual meetings. Using NetMeeting, a free software package, each of the participants is able to view the image that appears on the host's computer screen. Any of the participants may take control of the computer to manipulate the cursor and make edits. Use of this technology greatly increases the productivity of the team's teleconferences by ensuring that everyone is literally 'on the same page' of the complex, data intensive documents. Since most of the less controversial issues can therefore be dealt with before hand, this ultimately increases the effectiveness of the Tier I meetings.



**GEOGRAPHIC INFORMATION SYSTEM (GIS)**

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## **ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) TAKING HOLD**

### **Andrew Kissell Environmental Program Management**

With the recent promulgation of the EQA chapter of the OPNAV 5090.1B, interest in implementing Environmental Management Systems (EMS) has risen dramatically. LANTOPS has responded by providing training and implementation assistance teams. OPNAV now requires auditing of management systems at both the installation and claimant levels. As a result, claimants, regions and installations are at various stages of system implementation. Commander Naval Region Mid-Atlantic (CNRMA) has recently adopted ISO 14001 EMS principles by integrating them into their annual operating and execution plans. Ann Stephenson at CNRMA is integrating automated compliance checklists with their new EMS through a model program at the Oceana storefront.

Commander in Chief U.S. Naval Forces, Europe (NAVEUR) continues full claimancy implementation with aspect analysis near completion at all installations, all draft policy statements completed, and implementation and senior management committees in place. Establishment of targets and objectives is the next critical step. Naval Security Group Command (NAVSECGRU), Naval Reserve Force (NAVRESFOR) and the Atlantic Fleet are exploring EMS options through training, pilot tests, and implementation plans.

LANTOPS has developed introductory training courses for process owners, environmental staff and senior management. North and South Divisions will be sponsoring the courses for Navy Region Southeast and Northeast respectively, in coordination with Marvin Barnes at Commander in Chief, U.S. Atlantic Fleet (CINLANTFLT) in the next few months.

Jackie Francis at Civil Engineer Corps Officers School (CECOS) will be developing an interactive CD-ROM of the courses for use by those unable to attend "live" sessions or as a refresher.

Additional Engineering Field Division (EFD) personnel are now being trained to assist installations with EMS implementation. We believe that once activities begin to audit management systems as required by the new 5090 Chapter 20, they will quickly see the need to improve environmental management systems and some will formally institute them. ISO 14001 provides an environmental management standard by which the Navy can integrate environmental programs with mission

requirements, identify high impact processes, establish objectives for improvement, assign and document responsibilities and gauge progress. Those installations that have already implemented an EMS have typically seen improvement in P2 solutions and in reducing personnel turnover impacts.

For more information contact Andrew Kissell at (757) 322-4621 or [kissellar@efdlant.navfac.navy.mil](mailto:kissellar@efdlant.navfac.navy.mil); Charlie Thompson at (757) 322-4767 or [thompsoncr@efdlant.navfac.navy.mil](mailto:thompsoncr@efdlant.navfac.navy.mil) or Jim Steinberg at (757) 322-4782 or [steinbergjf@efdlant.navfac.navy.mil](mailto:steinbergjf@efdlant.navfac.navy.mil).

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## **ADMINISTRATIVE RECORD MANAGEMENT SYSTEM (ARMS) COMMITTEE**

The Administrative Record Management System (ARMS) committee is updating the existing material and adding a new chapter to the COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) ADMINISTRATIVE RECORD MANAGEMENT SYSTEM (ARMS) USER'S GUIDE (UG-2024-ENV).

The guide describes the steps in organizing documents and reports in order to create a CERCLA Administrative Record File in accordance with U.S. EPA, Department of Defense and Department of the Navy guidance.

The ARMS committee was chartered in 1994 by NAVFAC Headquarters to investigate, recommend, develop and implement an automated ARMS system. The first edition of the ARMS USER'S GUIDE was published by NFESC in 1997. All Engineering Field Activities and Divisions contributed to the publication. An electronic copy is located on the NFESC web page at: <http://erb.nfesc.navy.mil/>. Information on obtaining paper copies can also be found at the web site.

The new chapter will encompass conversion of both paper and existing electronic files to an electronic format which can be placed onto CD-ROM, a server, or put up on the Web.

Emphasis will be placed on data entry screens and search features. The search results screens will mimic web search results. The updated guide should be available for distribution by the end of fiscal year 2000.

For further information, contact Bonnie Capito 757-322-4785 or [capitobp@efdlant.navfac.navy.mil](mailto:capitobp@efdlant.navfac.navy.mil).