

Contract Summary

Contract: INDEFINITE QUANTITY CONTRACT FOR ENVIRONMENTAL SERVICES FOR SAFE DRINKING WATER AT VARIOUS LOCATIONS (N40080-D-10-0304)

Location: NAVFAC ATLANTIC Area of Responsibility

Client: NAVFAC Washington

Value: \$20,000,000

Scope: Safe Drinking Water Act and Clean Water Act Compliance Support

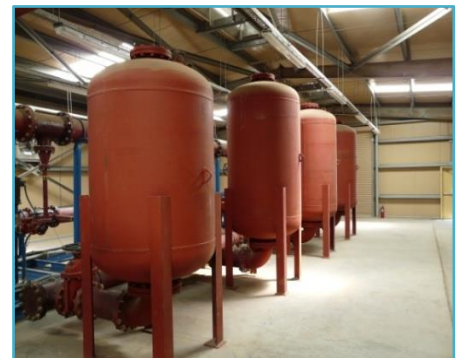
Date: 2008 – 2014 (estimated)

Background

AH Environmental Consultants, as the managing partner of a joint venture, was contracted by the United States Naval Facilities Engineering Command (NAVFAC), Washington to provide Engineering Services in support of the Navy's Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) compliance programs. These services include preparation of studies, plans, specifications design, reports, cost estimates and all associated engineering services. Locations include various Navy and Marine Corps installations within the NAVFAC Atlantic's corporate AOR world-wide including the continental United States, Europe, North Africa, Southwest Asia, and the Azores. Representative project include:

Potable Water System Sanitary Survey Camp Lemonier, Djibouti, Africa

As part of the ongoing effort to ensure the consistent and continuous production and delivery of safe potable water, AH Environmental Consultants, Inc. (AH) was contracted by Naval Facilities Atlantic Division (NAVFAC Atlantic) to conduct a Sanitary Survey of the Drinking Water System at Camp Lemonier. The overall goal for this sanitary survey was to provide an evaluation of the adequacy of the source, facilities, equipment, and operation and maintenance for producing and distributing safe drinking water. As part of this survey, inspections were conducted of all systems and equipment associated with the production, storage, and distribution of water. The onsite survey identified a number of deficiencies in the water supply and provided a practical well head protection plan to reduce the



potential for contamination of the wells. As a result of this project, recommendations were made and implemented to correct the deficiencies and to develop a new well field and associated treatment utilizing membrane desalting technology.

Drinking Water Operator Certification and Water System Certificate to Operate Criteria, Various Facilities, Europe

Following an Inspector General report that found significant deficiencies in a number of overseas Navy water supply systems, AH assisted NAVFAC Atlantic and CNIC in the creation of a Water Quality Oversight Group, development of a Drinking Water Operator Training and Certification Program and a Certificate to Operate Program to address the concerns of the Inspector General and to provide consistency in the management and operation of overseas Navy water supply systems.

Wastewater Treatability Study, NS Mayport, Florida

Naval Station Mayport is located in Duval County, approximately 10 miles east of Jacksonville, Florida and owns and operates a wastewater treatment plant (WWTP) permitted to discharge 2.0 million gallon per day (MGD) to the St. Johns River. The St. Johns River is on the State of Florida's 303(d) list of impaired waters for total nitrogen levels and disinfection byproducts. Based on data collected during the permit application process, the NS Mayport WWTP was found to exceed the limits of its National Pollutant Discharge Elimination System (NPDES) discharge permit, issued on August 27, 2009 for several contaminants of concern (COCs): total recoverable mercury, total recoverable copper, total recoverable lead, total recoverable iron, total recoverable nickel, bromoform and chlorodibromomethane. Since the contaminants of concern exceeded the Florida Water Quality Criteria, the Florida Department of Environmental Protection (FDEP) issued Administrative Order (AO) No. 126 NE on August 27, 2009. The AO gives NS Mayport until June 30, 2014 to reduce the COCs below the maximum contaminant levels specified in the NPDES permit. In addition, a second AO, No. 119 NE, requires that total nitrogen levels be reduced to meet the waste load allocation in the Lower St. Johns River Main Stem Total Maximum Daily Load (TMDL). The total nitrogen allocation for the Mayport discharge was established as part of a combined waste load allocation for NS Mayport and Naval Air Station (NAS) Jacksonville. NS Mayport and NAS Jacksonville must meet an operational deadline of October 1, 2015, and a compliance deadline of October 1, 2016 as mandated by the FDEP.



The purpose of this study was to develop a plan to upgrade the existing sewage treatment plant at NS Mayport so that it will have the capability of meeting the discharge limits specified in NPDES permit #FL000922 and comply with the Florida Department Administrative Orders AO 126 NE and AH 119 NE. This treatability study was conducted to evaluate, fine tune, and verify the performance of selected commercially available treatment technologies needed to meet these requirements. These technologies do not currently exist at the NS Mayport WWTP.

The Navy mandated that the study focus on treating all the sanitary sewage generated onsite. In this study, that included all domestic wastewater generated by the shore component of the base, as well as the wastewater generated on ships serviced at NS Mayport. Treating the combined waste stream is challenging because the effluent from the new WWTP must comply with newly imposed low metals limits contained in the new NPDES permit and the existing raw waste stream contains a significant concentration of salt. AH characterized the incoming waste streams, designed and built a pilot treatment system that mimicked those under consideration for the full-scale WWTP.

AH is currently in the final stages of the pilot plant testing study in an effort to ensure that the selected design ("best processes" for nutrient removal, metal removal and UV disinfection) will comply with the discharge regulations. AH is also currently generating budgetary cost estimates for design and construction at full scale and a recommended list of post-design services including but not limited to overseeing 100% design and construction.

SWPPP Update, Cooling Tower/Boiler Inventory, Naval Station Norfolk, Norfolk, Virginia

AH recently completed a comprehensive storm water Site Compliance Evaluation and updated the Storm Water Pollution Prevention Plan for the largest naval complex in the world, Naval Station Norfolk. Virginia storm water regulations require that Naval Station Norfolk maintain an updated inventory of all cooling towers and boilers that discharge to the storm water system, thus NAVFAC Norfolk requested that AH conduct a survey of all facility cooling towers and boilers and determine the disposition of the discharges. AH conducted field surveys to include



dye tests where necessary to establish the effluent receiving systems (sanitary sewer system or storm water system) for each cooling tower/boiler (nearly 500 units). AH reorganized the existing cooling tower/boiler database, providing a more user friendly database in addition to satisfying the facility's regulatory requirements.



Storm Water Pollution Prevention Plan (SWP3) Update, Storm Water Outfall Monitoring Plan (SWOMP) Update and Low Impact Development (LID) Storm Water Permitting Tool and Electronic SWP3 Database, MCIEAST-Marine Corp Base Camp Lejeune, North Carolina

AH was tasked to provide a wide range of services for overall enhancement of the Stormwater Program at MCIEAST-MCB Camp Lejeune and MCAS New River. As part of the installation-wide SWPPP update, AH generated a Microsoft® Access database for managing field inspection data and for generating the inventory of stormwater assets (part of the SWPPP report). The following asset inventories were incorporated into the SWPPP database: facilities engaging in regulated industrial activities, outfalls, outdoor aboveground storage tanks, outdoor material storage areas, hazardous material management areas, illicit discharges, outdoor liquid transfer areas, oil/water separators, and stormwater treatment facilities. The SWPPP database was linked to ESRI® ArcMap™ using Visual Basic for Applications (VBA) programming. The linkage between the SWPPP database and ArcMap™ provided a tool that could be used in the field to update the SWPPP report as well as all SWPPP-related GIS data layers at Camp Lejeune. The tool was developed to assist Camp Lejeune personnel with future updates to the SWPPP report. An example of the functionality programmed into the tool is a GIS button that allows the user to click on a GIS feature and then view all inspection data for that particular feature.

AH conducted field investigations at all industrial facilities throughout MCIEAST-MCB Camp Lejeune and MCAS New River (a total of 173 facilities). Using the SWPPP database-GIS tool, AH updated the SWPPP asset inventories and all associated GIS data layers in the field. The remainder of the SWPPP report was also updated to satisfy the requirements of Camp Lejeune's NPDES stormwater discharge permit.

AH was also tasked to update the Stormwater Outfall Monitoring Plan (SWOMP) for MCIEAST-MCB Camp Lejeune and MCAS New River. Since the previous version of the SWOMP (March 2005), new development and redevelopment at Camp Lejeune had occurred. New industrial facilities and changes to the activities occurring at existing facilities altered the “industrial” vs. “non-industrial” classification of various outfalls. As part of the SWOMP update, AH identified all industrial outfalls (total of 74 outfalls) and assigned new representative analytical sampling points. Based on Camp Lejeune’s NPDES permit, visual monitoring is required at all industrial outfalls and representative analytical monitoring is required at seven of the industrial outfalls. To assist with this requirement, maps and photographs of all recommended visual observation and analytical sampling points were provided in the updated SWOMP. Standard operating procedures for visual monitoring and analytical monitoring were also provided in the updated SWOMP.

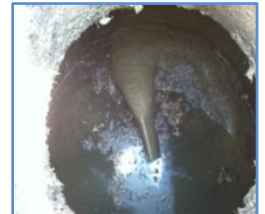
AH also developed a technical memorandum for submittal to the North Carolina Department of Environment and Natural Resources (NCDENR) that summarized the updated SWOMP and outlined all recommended changes to the visual and analytical outfall monitoring program.

The final task of this project was to develop a Low Impact Development (LID) design and permitting tool, for the design and permitting of LID-based construction projects throughout MCIEAST-MCB Camp Lejeune and MCAS New River. The LID tool was developed to meet the requirements as stated in the current NC Coastal Stormwater rules and applicable design requirements and permitting policies described in the current version of the NC Stormwater Best Management Practices (BMP) Manual. The LID tool was also developed to show compliance with the Navy LID policy and the Energy Independence and Security Act (EISA) Section 438, low impact design criteria. Once complete, the LID tool will enable Camp Lejeune to track compliance with EISA Section 438 and the Navy LID policy. Camp Lejeune will also see cost savings associated with each stormwater permit application when using the LID tool, based on NCDENR’s promotion of low impact development throughout the state.

Tide Valve Study, Washington Naval Yard



As part of AH’s continued support of Washington Naval Yard’s storm water management program, AH performed detailed assessments of the facility’s storm water system tide valves. These tide valves were installed in the early part of 2000 to prevent backflow of the Anacostia River into Washington Naval Yard’s storm water system. AH, with assistance from our subcontractors, performed CCTV of targeted storm water systems, conducted dye testing, and performed confined space inspections to identify the conditions of 12 tide valves and to assess the effectiveness of the installed devices. AH provided detailed inspection results and recommendations for repair/replacement of ineffective devices.



Navy Recreation Center Solomons Storm Water Pollution Prevention Plan (SWPPP) Update

AH prepared a SWPPP update for Navy Recreation Center (NRC) Solomons. AH prepared the SWPPP update using a SWPPP template supplied by the Navy and the SWPPP requirements found in the Maryland Department of the Environment General Discharge Permit for Storm Water Associated with Industrial Activities (General Permit). AH visually inspected the industrial areas of NRC Solomons with respect to potential pollutant sources and structural and non-structural control measures. AH gathered additional information required for the SWPPP through personnel interviews and examination of other facility environmental plans. AH conducted a wet weather visual inspection in order to determine the storm water runoff pathways within

each storm water catchment and documented this information on updated storm water mapping as required by the General Permit.

Storm Water Support Naval District Washington

AH completed an update of Joint Base Anacostia/Bolling, US Naval Observatory, and Arlington East by updating storm water system infrastructure GIS mapping. AH employed the use of submeter accurate GPS equipment and differential correction protocols to obtain the required positioning accuracy for all located structures. Challenges that were handled by AH included close coordination with Georeadiness Center personnel in determining the necessary feature class and attribute nomenclature while working within the confines of SDSFIE 2.6 and forthcoming 3.0 and working with the Secret Service and HMX Helicopter personnel to gain access to sensitive areas to complete infrastructure assessments. Additionally, AH combined and updated the Storm Water Pollution Prevention plan at Joint Base Anacostia/Bolling.

Potable Water and Industrial Pretreatment Assessment, Marine Corps Logistics Base Albany, GA

The ground water supply at MCLB Albany was experiencing exceedances of the MCL for zinc and the industrial pretreatment facility was experiencing process failures. AH successfully identified galvanized service lines as the source of the zinc and the use of a zinc-free orthophosphate corrosion inhibitor to reduce the levels of zinc in the potable water. AH also identified the process alternatives to improve the reliability of the industrial pretreatment plant.

Storm Water Mapping Update, Naval Air Station Oceana, Virginia Beach, Virginia

Having relied on AH in the past to provide subject matter expertise on GIS infrastructure mapping consulting services, NAVFAC Midlant contracted with AH Environmental to update NAS Oceana's storm water geodatabase. AH initially developed storm water field mapping from AutoCAD source files for use in field surveys. Following field verification of the entire storm water infrastructure system, AH constructed a revised storm water geodatabase for NAS Oceana which showed buildings, roads, topography, storm drainage infrastructure, and drainage basin boundaries. Above-ground features were located with resource-grade GPS capable of an accuracy level of less than one meter. The resulting dataset had topologically correct system flow on storm lines. Attributes captured from existing sources included structure ID, structure type, pipe material, pipe size, and elevation (ground) information. AH extracted existing SWP3 data and plotted points utilizing unique symbology for each individual SWP3 feature on a separate layer on the mapping system to allow NAS Oceana storm water program managers to comply with their storm water permit requirements and assist in storm water pollution control management activities.



Ground Water Supply Evaluation and Development, Various Facilities

AH has been providing ground water supply evaluation and development assistance to the Navy and Marines since its inception. Projects have included the development of water supply master planning and well head protection programs for MCB Camp Lejeune, MCAS Cherry Point, and MCAS New River. For the past 5 years, AH has assisted MCB Camp Lejeune in regional water supply planning efforts to prevent salt water intrusion into the Castle Hayne Aquifer as a result of over pumping from nearby municipal supplies. This assistance has included the design, implementation and evaluation of a ground water monitoring network. Current projects include the identification and development of new ground water supplies for MCB Camp Lejeune and Camp Lemonnier Djibouti, Africa

