

CONTRACT NAME:	Potable Water and Wastewater Studies, Evaluations and/or Designs		
CUSTOMER	Naval Facilities Engineering Command Southeast		
CONTRACT NUMBER:	N62467-03-D-0153	CONTRACT PERIOD OF PERFORMANCE	2004 - 2009
CONTRACT VALUE	\$10M	CONTRACT TYPE:	IDIQ FFP

Contract Summary: AH provided a range of compliance support including Clean Water Act permit applications, engineering evaluations to meet Safe Drinking Water Act and Clean Water Act regulatory requirements, and water system vulnerability assessments and emergency response plans. The services were for 11 active military installations including Marine Corps Recruiting Depot Parris Island. Three projects are highlighted that show how we helped bring a facility back into compliance, where we overcame a tight project schedule and where we saved the facilities money.

Safe Drinking Water Act Compliance Assistance, Naval Submarine Base Kings Bay, GA:

AH provided specialized services that allowed the base to achieve compliance with the Safe Drinking Water Act’s Stage 1 Disinfection Byproduct Rule. The Base received a notice-of-violation for exceeding the Maximum Contaminant Level for trihalomethanes. AH performed a comprehensive evaluation and developed a hydraulic and water quality model that was used to identify the problem as water age in the distribution system. AH developed, field tested and calibrated a hydraulic and water quality model and performed simulations that allowed the base to achieve compliance with the Safe Drinking Water Act’s Stage 1 Disinfection Byproduct Rule. AH collected data on the water system distribution system and developed a preliminary hydraulic model in NWHSoft H2OMAP software. AH performed preliminary model simulation to develop a field test plan, selected locations for C-factor testing of up to eight different pipe types, selected 12 locations for installation of automatic pressure loggers, fluoride monitoring and fire flow testing and determined water requirements for fire protection. AH performed two weeks of field testing by monitoring and collecting distribution system parameter data. The field testing data was used to calibrate and verify the hydraulic and water quality model. The model was used to identify the travel paths and determine the age of the water at nodes throughout the distribution system, to locate hydraulically locked-out storage tanks and areas of excessive water age an/or chronically low disinfectant residual levels, evaluate storage facility fluctuation and their impacts on water quality, evaluate different scenarios of infrastructure changes and the result in reduction of residence times,. AH provided training to Navy personnel to analyze and monitor the water system using the AH developed hydraulic model.

AH evaluated different options and recommended several methods to solve the problem. After the Base implemented these measures they were able to achieve and remain in compliance.

As a long-term DBP control alternative, AH also performed advanced treatment pilot studies with GAC adsorption, anion exchange and membrane nanofiltration. The latter process proved to be a viable option to replace the existing precipitative softening process. AH recently completed detailed design and engineering cost estimates for a full-scale 2.0 mgd membrane filtration plant at NSB Kings Bay.

Industrial Wastewater Treatment Plant Evaluation, Marine Corps Logistics Base, Albany GA:

AH performed an operational study and process evaluation of the industrial wastewater treatment plant (IWTP) at the Marine Corps Logistics Base (MCLB) in Albany, GA. This effort included a site visit to characterize the plant, a comprehensive 3-week sampling program of influent and effluent streams as well as bench-scale testing of alternative process options. Based on the findings of the studies, AH recommended replacement of the existing process, consisting of sulfide precipitation, polyaluminum chloride and organic polymer coagulation, with treatment using iron-based coagulants and anionic flocculants. AH also proposed to move chemical addition points to fully utilize the facility's dissolved air floatation unit.

Advanced Wastewater Treatment Study, NAS Key West, FL:

AH provided technical support to NAS Key West which owns and operates a wastewater collection and treatment system. Because the system is discharging treated wastewater to nutrient-sensitive waters, Florida Law will require the system by 2010 to comply with very stringent effluent limits for BOD, TSS, nitrogen and phosphorus. AH performed a feasibility study to determine the most economical alternative for satisfying the future regulations. As part of this project, AH evaluated process alternatives to meet stringent limits including extended aeration and membrane biological reactor treatment and developing preliminary engineering designs for selected alternatives. As a subtask of this project, AH staff also evaluated the effects of treating AFFF-contaminated water with the existing activated-sludge treatment system. These efforts included designing and building a temporary batch feed system, performing a 3-day full-scale study and providing recommendations for low-cost disposal of this waste. To date, AH's efforts saved the base \$80K to dispose of 50,000 gallons of AFFF-contaminated water.

Upper Base Wastewater Treatment Process Plant Evaluation, Naval Submarine Base Kings Bay, GA:

AH performed a detailed evaluation of the treatment processes and effluent quality goals including a review of the existing sludge quality data. The plant includes a lagoon that provides over 30-days of detention. In addition to a weak domestic wastewater, plant personnel were adding solids from the water treatment plant, based on a consultant's recommendations. The addition of the solids resulted in chemistry changes that led to problems with the solids limit. AH developed recommendations to comply with the solids limit and an approach to negotiate new permit limits. AH also provided cost estimates for the most economical means of sludge disposal.

Waste Water Treatment Preliminary Engineering Report, MCCD Parris Island, SC:

AH prepared a Preliminary Engineering Report for the wastewater treatment plant to address permit modifications based on newly promulgated Total Maximum Daily Load (TMDLs). The PER included an assessment of current conditions, development of alternatives, and preparing cost estimates for the alternatives.

Water System Corrosion Control Study, Naval Air Station Meridian, MS:

Naval Air Station (NAS) Meridian receives ground water from three active wells that draw water from the Wilcox aquifer and provides treatment for iron removal and disinfection. The activity had been experiencing severe leaking of copper pipes in hot water systems which was thought to be caused by corrosion. AH determined that reductions in hot water thermostat settings as part of an energy conservation effort had allowed sulfate reducing bacteria to proliferate resulting in the occurrence of the pin-hole leaks that developed in the recirculating hot water piping. Recommendations to alleviate this problem included increasing the hot water temperature and replacing the failed copper piping with CPVC piping.



Drinking Water System Vulnerability Assessments and Emergency Response Plans:

As part of the force protection efforts and in compliance with the Public Health Security and Bioterrorism Preparedness and Response Act, AH conducted Vulnerability Assessments and prepared Emergency Response Plans for NTC Great Lakes, NCBC Gulfport MS and NAS Kingsville TX.

Storm Water Pollution Prevention Plan for Naval Air Station (NAS) Pensacola, Florida:

AH developed a consolidated SWPPP to meet NAS Pensacola's NPDES permit requirements. AH also developed BMPs' for the prevention of pollutants entering the storm water collection system and ultimately the surface waters of the U.S.

Drinking Water System Sanitary Survey and EMS support to National Naval Medical Center Bethesda, MD:

AH provided Environmental Support Services to NNMC including Environmental Management System (EMS) support, asbestos, lead and mold surveys, sanitary survey of the drinking water system, and SPCC Plan update.

Environmental Compliance and Assessment Management System Support, Naval District of Washington:

AH provided technical support to the NAVFAC Washington and Naval District Washington's Environmental Compliance and Assessment Management System (ECAMS). The ECAMS system is used to manage the environmental management system (EMS) and environmental compliance programs across 10 Navy facilities.

AH provided technical support to maintain, expand and enhance the ECAMS system.

Assistance included collecting and inputting compliance data, customizing the system to enhance internal compliance auditing, tracking construction and capital improvement projects, writing technical documents, developing EMS promotional materials, reviewing technical documents, conducting internal assessments, conducting compliance assessments, developing compliance management support, and other EMS projects. AH developed manuals and standard operating procedures and provided guidance and technical expertise and training as requested. AH provides server hosting functions for the ECAMS system.

MAJOR SUBCONTRACTORS:	Major Subcontractors: ENSAFE, Brown and Caldwell		
CLIENT POC:	Mary Oxendine P.E. Telephone: E-mail: Name:	PHONE:	904-542-6196
ADDRESS:	NAVFAC SE PO Box 30, Bldg. 903, Jacksonville, FL 32212-0030	E-MAIL:	mary.oxendine@navy.mil
CLIENT POC:	April Coffman, Project Manager	PHONE:	904-542-6196
ADDRESS:	NAVFAC SE, PO Box 30, Bldg. 903, Jacksonville, Fl 32212-0030	E-MAIL:	april.coffman@navy.mil
CONTRACTING OFFICER:	Candice Borden	PHONE:	(904) 542-8745
ADDRESS:	NAVFAC SE, Bldg. 903 PO Box 30, Jacksonville, Fl 32212-0030	E-MAIL:	candice.borden@navy.mil