

Contract Summary

Contract: MISCELLANEOUS ENVIRONMENTAL ENGINEERING AND DESIGN SERVICES
(N40080-09-D-0499)

Location: Various Locations

Client: NAVFAC Washington

Value: \$7,500,000

Scope: Water Treatment Plant Assessments; Distribution System Modeling; Unidirectional Flushing Programs; Vulnerability Assessments & Emergency Response Plans; Storm Water Management & Compliance; Sanitary Sewer System Evaluations; I&I Studies; Wastewater Treatment Plant Evaluations; Development of Environmental Management Systems

Date: 2008-2013

Background

In March of 2003, AH Environmental Consultants, Inc. (AH) was awarded a 5-year, unrestricted, indefinite quantity contract with the United States Naval Facilities Engineering Command (NAVFAC) Washington to provide general environmental science and engineering services to facilities within NAVFAC Washington's AOR. AH was awarded this contract again in December of 2008 for an additional 5 years. Delivery orders included water treatment plant assessments, distribution system modeling, development of unidirectional flushing programs, development of vulnerability assessments and emergency response plans, storm water management and compliance services, sanitary sewer system evaluations, Infiltration and Inflow (I&I) studies, wastewater treatment plant evaluations and development of environmental management systems. Representative projects are included below.

Naval District Washington Regional Storm Water Management Support, NAVFAC Washington



The project involved a number of components to include: developing a revised and updated storm water sampling and analysis plan based on the new NPDES storm water permit requirements and site activity, revising GIS mapping of storm water drainage system infrastructure, verifying and updating drainage catchment areas, estimating pollutant loadings for a number of parameters of concern, conducting illicit discharge surveys, developing a comprehensive fecal coliform source tracking plan, and updating of the current WNY Storm Water Pollution Prevention Plan (SWPPP).

Sanitary Sewer Evaluation Study (SSES), Dahlgren, VA

In 2010 AH completed a Sanitary Sewer Evaluation Study at NSF Dahlgren, Virginia. This multi-faceted project was primarily designed to assist the facility in identifying and prioritizing deficiencies in the wastewater collection system, with the ultimate goal of reducing excessive inflow and infiltration (I&I) impacting their newly upgraded Enhanced Nutrient Removal (ENR) wastewater treatment plant. AH inspected nearly 30,000 LF of sanitary sewer pipeline using NASSCO certified CCTV inspection protocols, performed smoke testing to determine significant pipeline and manhole defects, and used in-house Manhole Assessment and Certification Program trained inspectors to investigate over 300 manholes. The comprehensive report provided updated GIS maps of the investigated sewer basins and estimated cost repair tables that were prioritized based on NASSCO defect repair codes.



Naval Support Activity Annapolis, Sewage Treatment Plant Evaluation



AH performed a wastewater treatment plant (WWTP) enhanced nutrient removal assessment and alternatives evaluation at Naval Support Activity Annapolis (NSAA), Annapolis, Maryland. AH provided decision making guidance regarding proposed WWTP modifications to ensure that NSAA wastewater discharge would consistently meet future effluent permit limits under various flow conditions.

Naval Support Facility Dahlgren, Virginia Sewage Treatment Plant Evaluation

AH completed a comprehensive sewage treatment plant evaluation for Naval Support Facility Dahlgren, VA. AH provided both an interim optimization plan and a basis of design report for nutrient removal process improvements in response to stricter VDEQ requirements. This resulted in the implementation of a nitrification-denitrification 4 stage Bardenpho process and enhanced phosphorus removal allowing the upgraded WWTP to meet the Navy's intention of complying with the Enhanced Nutrient Removal goals of the 2000 Chesapeake Bay Agreement.

Water Conservation Plans for Indian Head and Dahlgren

AH prepared Water Conservation Plans for Naval Support Facilities Indian Head and Dahlgren in accordance with AWWA Manuals M55 and M36. The developed plans presented recommendations for water conservation projects and opportunities based on the water consumption information collected during water audits of 100 buildings at both facilities. A component of these studies was the performance of pipeline leak detection tasks, entailing 110 miles of potable water pipeline, that were beneficial in identifying leaks that were resulting in over a million gallons per year of lost water.

National Naval Medical Center, Bethesda, MD. EMS Implementation

AH designed and implemented an Environmental Management System for the Navy's flagship hospital facility. AH's work was a major contribution to NNMC Bethesda's ability to self-declare the EMS as conforming to ISO14001.

VPDES Permit Renewal, Marine Corps Base Quantico

The MCB Quantico Industrial VPDES permit expired May 22, 2011. In order to renew the permit for another 5 years, additional sampling and data evaluation as well as a permit renewal package was required to be submitted to Virginia Department of Environmental Quality by September 1, 2010. To comply with the Quantico MCB Municipal Separate Storm Sewer System (MS4) Permit, a survey of all storm water outfalls had to be conducted to determine whether any of those outfalls had a discharge caused by something other than storm water. This survey, conducted by AH, aided the base in determining if there were any illegal cross connections with sanitary sewer, leaks in the potable water system, or in some cases, if there was just ground water discharge entering the pipes. A survey of Mainside (portion of the facility located east of I-95) was conducted in 2004. A survey of the facility west of I-95 to include Camp Barrett, Camp Upshur, Camp Goettge, the FBI Academy and Weapons Training Battalion areas, as well as any other areas where storm water outfalls were annotated was conducted in 2007, also by AH. The 2004 Mainside survey needed to be updated to fulfill the permit requirements. AH, working closely with the water program manager, was able to complete the project on time, allowing MCB Quantico to successfully obtain a permit renewal.



Potable Water System Operations and Maintenance Manuals, MCB Quantico, Virginia



MCB Quantico's main potable water treatment facility consists of a 3.2 million gallon per day conventional surface water treatment plant. It is supplied by two in-stream reservoirs. A raw water pump station is available to transfer water from one reservoir to the other. The distribution system contains three booster pump stations to serve multiple pressure zones. The Base has two other water systems. One is a consecutive system where water is being purchased and has one booster pump station. The other is a groundwater system served by two wells. AH was contracted to prepare eight detailed O&M manuals: one for the raw water pump station, one for the surface water treatment plant, one for each of the two wells, and one for each of four pump stations. The project was completed on time and within budget in July 2011.