



Naval Facilities Engineering Command,
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MILITARY RELOCATION TO GUAM AND CNMI PROGRAMMATIC AGREEMENT (PA) MEMO #2

Project: Water Phase 2 (Water Well Development Studies) (with adjusted APE)	Date: June 15, 2016
Project Location: Andersen Air Force Base	Prepared By: NAVFAC Marianas
PROJECT SUMMARY:	
<p>The purpose of this project is to provide reliable average daily potable water supply of 1.2 million gallons per day (mgd) in addition to existing water supply sources to support the increase of personnel, facilities, and operations associated with the relocation of United States Marine Corps (USMC) to Guam. This project proposes to conduct topographical surveys, geotechnical surveys, and exploratory well drilling to support project design efforts for water well development at Andersen Air Force Base (Figure 1). The effort may also require munitions of explosive concern (MEC) removal. Topographic and geotechnical surveys and exploratory well drilling/testing will entail clearing vegetation to allow access and work areas for drilling and test pit excavating equipment, and to provide line of sight for topographic surveying. The Area of Potential effect is within previously surveyed areas without any historic properties observed.</p>	
<p>This project was identified after preparation of the Final Environmental Impact Study (FEIS) for the military relocation to Guam and the Commonwealth of the Northern Mariana Islands (CNMI) and Appendix E under various projects of the 2011 Programmatic Agreement (PA). In accordance with Stipulation I.E. of the PA, it is a new project associated with the Guam and CNMI Military Relocation (the Undertaking).</p>	
<p>Project works will include vegetation clearance for the purpose of accessing specific study locations, conducting geotechnical borings (via auger or rotary wash drilling), geotechnical test pits by mechanized excavation, and exploratory water well drilling to facilitate soil and groundwater sample collection. It will also include vegetation clearance to provide line of sight and to facilitate placement of survey markers (wooden stake hubs and/or rebar) for topographic surveying and support.</p>	
<p>Generally, geotechnical surveys for structures, buildings, tanks, and roads entails drilling borings with a truck-mounted drill rig using 20.2 to 30.5 centimeter (8- to 12-inch) diameter augers or using rotary wash drilling with temporary steel casings and drilling fluid. Total number of borings</p>	

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will vary depending on facility type from 1 to 5 borings per structure. Boring depths vary, but generally range from 3.0 meters (10 feet) to 36.6 meters (120 feet). Test pits will be excavated every 229 to 305 meters (750 to 1,000) feet along future permanent roads, and in future permanent facility yard areas for the treatment/transfer pump station and water storage reservoir. Test pit depths vary, but generally range from 1.5 to 3.0 meters (5 to 10 feet).

Exploratory water well work entails drilling 25.4 centimeter (10-inch) to 30.5 centimeter (12-inch) diameter boreholes with a truck-mounted drill rig using rotary wash drilling with air and/or drilling fluids. Pump tests will be carried out at each borehole to develop and determine the water production capacity of the well. If test wells have sufficient yield, boreholes will be widened to 45.7 centimeter (18-inch) to 55.9 centimeter (22-inch) diameter. Water well test borehole and production borehole depths vary, but generally range from 140 meters (460 feet) to 180 meters (590 feet) depending on existing ground surface elevations and depth to the groundwater table. Exploratory water well locations were determined by project planners to offer the best project feasibility while avoiding historic properties. The Navy will submit a separate PA Memo in the future for the construction of the complete production, treatment and distribution elements of the proposed water well system (to include features such as the access roads, pipelines, pavements and other above-ground vertical structures).

PROJECT LOCATION:

The proposed well field site at Andersen Air Force Base (AAFB) is located near Potts Junction and Route 9 on the west side of the Munitions Storage Area (MSA) as shown in Figure 1. This project was previously identified in Appendix E of the PA. The identified Area of Potential Effect (APE) in the map incorporates a 15.24 meters (50 foot) buffer zone. The buffer zone is included in planning to allow the contractors to avoid environmentally sensitive areas including historic properties and threatened and endangered plant species.

AAFB covers 6,275 ha (15,500 acres) and occupies a mostly flat, uplifted limestone plateau in the northern portion of the island of Guam. The Main Operations area in the eastern third of the base includes the main active airfield and an array of operations, maintenance and community support facilities, most of which are located along the South Ramp. The North Ramp area includes operations of the Navy's HSC-25, munitions storage in the former Strategic Air Command storage area, and parking apron space for contingency operations. The central third of the base is a Munitions Storage Area (MSA). The western third is Northwest Field, a WWII-era airfield that is currently used for fixed-wing aircraft, helicopter training, and various field exercises and bivouacs.

The total APE for P-103 is 36.1 hectares (89.2 acres).

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IDENTIFICATION OF HISTORIC PROPERTIES:**Scope of DoD Identification Efforts**

In planning for the Undertaking, the Department of Defense (DoD) conducted extensive archaeological and architectural surveys and evaluations, and, in consultation with the Guam SHPO, Advisory Council on Historic Preservation (ACHP), National Park Service (NPS) and some Concurring Parties, we have applied the results to the siting/lay down of individual projects to avoid and minimize effects to historic properties. The DoD has provided documentation of these efforts to the Signatories and Invited Signatories via Appendices D and E of the PA.

The entirety of the P-103 project area was included in one or more of the following studies of cultural and/or historic resources conducted prior to, or in support of the Environmental Impact Statement (EIS) by the DoD beginning in 2004.

Church, M., J. Hokanson, J. Gallison, and M. Jennings

2009 Cultural Resources Survey of 297 Acres at Andersen Air Force Base, Guam. Prepared for AAFB, Guam. June.

Dixon, B. and S. Walker

2011 Cultural Resource Investigations Conducted in the Territory of Guam Supporting the Joint Guam Build-Up Environmental Impact Statement: Final Archaeological Surveys on Guam 2009 at Proposed Utility Sites, Harmon Property, and AAFB. Prepared by for Naval Facilities Engineering Command, Pacific Division. Prepared by Cardno TEC, Inc., Honolulu, HI.

Dixon, B., S. Walker, and R. Schaefer

2011b Final Report Cultural Resource Investigations Conducted in the Territory of Guam Supporting the Joint Guam Build-Up Environmental Impact Statement: Final Archaeological Surveys on Guam 2010 on AAFB, Prepared by the Naval Facilities Engineering Command, Pacific Division. Prepared by Cardno TEC, Inc., Honolulu, HI.

Dixon, B., T. Rudolph, A. Jalandoni, I. Nelson, M. Hroncich-Conner, S. Leary, R. Schaefer, E. Lash, M. Todd

2014a Draft Proposed Guam and CNMI Military Relocation 2012 Roadmap Adjustments SEIS Live-Fire Training Range Complex Footprint and Main Cantonment Alternatives and Access Route Options In-Fill Cultural Resource Studies. Prepared for the Naval Facilities Engineering Command, Pacific Division. Prepared by Cardno TEC, Inc., Honolulu, HI. 1 March.

Dixon B.

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2015 Andersen Air Force Base, Guam National Historic Preservation Act Section 110 Cultural Resources Identification and Evaluation Studies, 2015. Prepared for the Naval Facilities Engineering Command, Pacific Division. Prepared by Cardno TEC, Inc., Honolulu, HI. Forthcoming.

Yee et al 2004 Yee, S., D. Welch, and J. Allen

2004 Archaeological Overview Survey Report for Andersen Air Force Base, Guam. Prepared for 36 CES/CEVN, AAFB, Guam and Earth Tech, Inc., Honolulu, HI. Prepared by International Archaeological Research Institute, Inc. Honolulu, HI.

Results of these studies had indicated that known historic properties do exist in in close proximity to the APE. However, the APE for this project (green area of Figure 1) was very carefully laid out to exclude historic properties.

Following the submittal of PA Memo #1, the Guam SHPO objected to the DoD's determination of effect due to a disagreement on the identification of historic properties, and submitted a letter of non-concurrence. Following consultation between DoD and SHPO on April 14, 2016, both parties have agreed that the project would have no adverse effect on historic properties. However, they requested that the DoD archaeologist provide spot monitoring within portions of the project area that occur near archaeological feature concentrations (see Plan section below). No comments for the proposed project were received from the public following PA Memo #1.

A slight modification of the access roads was developed after PA Memo#1 had been reviewed. This entailed short extensions to the access roads, thus shortening the total amount of access road clearing and disturbance for this phase of testing. The additions allow direct access from the grass road (inside AAFB and parallel to Route 9) to the well sites. In a meeting at the SHPO office on May 6, 2016, the Guam Territorial Archaeologist agreed that this modification of the access roads could be just included and described in this PA Memo#2. The Guam SHPO concurred.

The Guam SHPO territorial archaeologist toured the project area for the well field on May 18, 2016 with DoD staff and determined that the project will not affect historic properties, as now planned, staying within the APE that will be flagged by DoD natural resource and cultural resource personnel. Steps the SHPO archaeologist requested are outlined in the section labeled Plan for Resolving SHPO concerns, below.

DETERMINATION OF EFFECT:

Considering the information presented here, the Navy has determined that this project will have no historic properties affected.

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This memo is to be retained as an administrative record of this finding.

PLAN FOR RESOLVING SHPO CONCERNS:

At a meeting at the Guam SHPO office on April 14, 2016, the Guam SHPO stated that the actual footprint for the wells and access paths has been well arranged to avoid historic properties, there will be no historic properties affected.

However, Guam SHPO requested that DoD shall:

- Walk the access paths flagged by the DoD Natural Resource staff (within the widely-buffered green path proposed, Figure 1), and flag the access corridors and well site footprint to contain any disturbance to those areas, and to record any unexpected cultural material discoveries,
- Spot monitor the geotechnical test borings,
- Spot check any earthmoving that may be required for either the borings or the topographic survey, and
- Prepare a bound monitoring report on any historic properties or cultural materials encountered, and if deemed necessary, enact section XI. A. on page 32 of the 2011 PA for “previously unknown archaeological sites”.

In accordance with Stipulation VI.F. of the 2011 PA, the DoD has retained a full-time Archaeologist (DPRI CRM) to provide site checks, oversee coordination and execution of the archaeological mitigation measures in the PA and to provide quality control. This individual is on-staff at NAVFAC Marianas and has also been tasked with supporting Command Joint Region Marianas (CJRM) in responding to and reporting of any inadvertent discoveries to the Signatories, Invited Signatories, and Concurring Parties per Stipulation XII of the PA.

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Figure 1. Footprint of well field wells and access roads.

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