


SRH-304

U. S. NAVAL HFDF STATION

CABO ROJO, PUERTO RICO

CERTIFIED TO BE UNCLASSIFIED
by Director, NSA/Chief, CSS

 Date: 20 July 1984

REVIEWER'S NOTE:

This document was prepared as UNCLASSIFIED by Naval personnel who had access to classified records. The first review to verify the fact that the report does not contain sensitive information was conducted by personnel of the Naval Security Group. The original of this document was retained by them and has been placed in the NSG Repository, Crane, Indiana. A final review to insure releasability was conducted by NSA.

U. S. Naval HFDF Station

Cabo Rojo, Puerto Rico

NOTE: The attached document was prepared by Naval personnel with access to various historical records with the objective of bringing diverse records into a usable narrative history of a Naval activity. The document does not constitute an official Navy history and no claims are made regarding its completeness and accuracy. Prepared at NAVSECGRUDET Crane, Indiana
28 April 1980

U. S. Naval HFDF Station

Cabo Rojo, Puerto Rico

On 25 March 1941, a letter was forwarded from the Commandant, TENTH Naval District, to the Commander, San Juan District, U. S. Coast Guard, which reported that, in response to an inquiry by the Chief of Naval Operations, a survey of the southern coast of Puerto Rico had been made to identify a suitable HFDF site. The survey had selected a site located on the U. S. Coast Guard Lighthouse property at Cabo Rojo (Cape Rojo) on the southwest point of Puerto Rico. Plans for the HFDF station called for the construction of an HFDF equipment shelter about 15 feet in diameter and 25 feet high, quarters for three operators, a storeroom (about 20'x20'), a garage, and a 5000 gallon cistern. The letter requested the Commander of the San Juan Coast Guard District comment on the plan with specific recommendations as to approval or disapproval. These comments would be forwarded to the Chief of Naval Operations as part of the original correspondence concerning the proposed direction finder station. On 26 March, the Commander of the San Juan Coast Guard District responded posing no objection to the establishment of the proposed HFDF station at Cabo Rojo.

On 9 July, CNO (OP-20G) forwarded a letter to the Chief of the Bureau of Ships which contained, as an enclosure, estimates on the establishment of an HFDF station on the southern coast of Puerto Rico and stated that CNO approved of the project but directed that it be held in abeyance pending further instructions. Further experience was desired regarding the ability of the existing HFDF station at San Juan to take accurate bearings in the southern sector over the mountains of Puerto Rico before a decision was made whether to construct the new station at Cabo Rojo or augment the San Juan station. In the interim, it was desired that authorization and funds for the Cabo Rojo station be obtained so work could proceed immediately if and when the decision was made to establish the station. The letter indicated that, if established, the Cabo Rojo station would be equipped with a Model DY

direction finder. On 14 July, CNO (OP-20G) informed COMTEN that the FY42 Allowance for Communication Activities Ashore, then under consideration, included an allowance of nine men for the proposed Cabo Rojo station but that no further action needed to be taken until receipt of formal authorization.

In an OP-20GX letter of 17 July to LCDR W. A. Lynch, District Communication Officer, 10ND, LCDR Lynch was informed that an RMC L. F. Myers, USN, and eight Radiomen were being transferred to San Juan for training and temporary duty until the construction of the Cabo Rojo station was authorized and begun. RMC Myers was qualified in both direction finder and radio intelligence duties. However, a 10 November 1941 letter mentioned that RMC Myers would have to be put in charge of the San Juan station due to another radioman being declared unsuitable for the work.

On 21 December 1941, the Officer in Charge, D/F San Juan forwarded a report on tests conducted with a Model DY-2 direction finder at Cabo Rojo during the period 6 through 8 December to DCO, 10ND. The tests were conducted at the Cabo Rojo lighthouse (17-56N 67-12W), about 15 miles from the town of Cabo Rojo. The lighthouse was run by the Coast Guard who had three men assigned. Quarters were available for five unmarried personnel but the available rooms were unfurnished. The kitchen was equipped with a kerosene stove and refrigerator. The water supply consisted of rain water caught in a cistern. Power for the lighthouse was supplied from three 2000W DC generators operated alternately since one could supply all power for the lighthouse. For the tests, the Model DY-2 direction finder (with 14 foot arms and short dipoles) was set up about 100 feet from the edge of a 75 foot cliff overlooking the Caribbean Sea. The tests concluded that Cabo Rojo was a good location for a direction finder station with good receiving conditions, low noise level, and excellent security. A Model DY-2 direction finder could be set up and put into operation immediately using a minimum crew of four DF personnel and one cook.

On 8 January 1942, LCDR Lynch sent a letter to OP-20GX which, among other

subjects, reported that the Cabo Rojo project was underway with completion optimistically estimated in two months.

In an undated portion of a document regarding the Cabo Rojo station, it was reported that the following personnel were assigned: RM1 Goss (RMIC), RM3 Abel, RM2 Beall, RM1 Chinnock, and RM3 Stapt. A recommendation was made that the allowance be increased to one RMC and eight radiomen. The station had a Model DY direction finder (borrowed from an unspecified Naval Air Station), a Model RAS receiver (borrowed from the COMTEN pool), a Model TBW transmitter (also borrowed), and a Model RBK UHF receiver. The document also contained a drawing of the station layout (see Appendix A). On 20 September, a message from COMTEN to OPNAV mentioned that the Model DY at Cabo Rojo would be shipped to the HFDF Station at Curacao as soon as the Model DAB HFDF unit was received at Cabo Rojo.

On 7 November 1942, an OP-20G memorandum to OP-20GA via OP-20GX proposed that the HFDF station at Cabo Rojo be disestablished since it was believed that it did not serve the purpose for which it was originally intended. The reasons for this proposal were:

- a. Practically the same bearings were received from San Juan and Cabo Rojo,
- b. Cabo Rojo was only 80 air miles from San Juan,
- c. It would relieve congestion on the HFDF circuits,
- d. It would provide more men and receivers for San Juan to cover more frequencies which would make the planned tip-off system more effective,
- e. Installation of the Model DAB HFDF unit would be a duplication of San Juan,
- f. The Cabo Rojo DAB could be better used at Curacao, St. Lucia or Trinidad,
- g. Cabo Rojo was difficult to supply since it was on the southern-most point of the island.

The memorandum stated, as background, that the Cabo Rojo site had been selected in

addition to San Juan because a separate Caribbean Net had been contemplated at one time of which San Juan would serve as control while Cabo Rojo would function in the East Coast Net. It was later determined that one large East Coast Strategic Net was better than three smaller nets; East Coast, Caribbean, and Panamanian. Since all of the equipment at Cabo Rojo was portable, it would be a simple task to disestablish the station before the permanent Model DAB was installed.

On 10 November, CAPT E. E. Stone, USN (OP-20G) forwarded a letter to LCDR Lynch requesting his comments on the proposal to abandon the Cabo Rojo station based essentially on the arguments stated in the 7 November memorandum. It is not known what LCDR Lynch's response was but, on 24 November, VCNO (OP-20G) forwarded a letter to BUSHIPS stating that the Cabo Rojo Strategic Direction Finder Station was being moved to Trinidad Naval Station.

In an 11 December 1942 memorandum from LTJG Carl M. Smith, USNR, at the U. S. Naval Radio Station, San Juan, to LCDR J. S. Cross (OP-20GX), it was reported that the Cabo Rojo direction finder station had secured operations that day. Personnel and equipment were being transferred as directed by DNC with the Model DY-2 (belonging to NAS San Juan) being shipped to Curacao for installation. On 28 December, it was requested that Cabo Rojo's callsign (NGC) be reassigned to the direction finder station at Trinidad. On 28 March 1943, BUSHIPS made reference to the Model DAB HFDF unit originally slated for Cabo Rojo also being reallocated to Trinidad.

In a 27 October 1943 OP-20G memorandum for OP-20 entitled, "Resume of What Has Been Accomplished and Status of the General Development Plan for Atlantic Coast Expansion for Radio Intelligence Activities", it was stated that due to its proximity to the HFDF station at San Juan, the HFDF station at Cabo Rojo, Puerto Rico, was found to be unnecessary and accordingly was secured; the equipment being transferred to Trinidad.

CAMP ROTTO D/F

Light
house

DAB
Bldg.

DY

Philco
Interphone

Approx.
20' x 20'

2 floor

Garage
Store Room
Power
House

Water

Local
Control

Mess
BARRACKS

Front

Road

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Salt Bod

22 February 1945

MEMORANDUM FOR THE FILES:

Subj: Summary of information regarding the installation at San Juan, plus arguments for prospective legal action.

1. At the outset of the war, the Navy Department had D/F installations at Cabo Rojo and San Juan, Puerto Rico. These locations were unorthodox and were so reported by Comdr. Arpa on August 27, 1942. Subsequently, Com10 selected another site. The description of this site, plus request for approval, was sent to BuShips by Com10 on May 18, 1943. This letter contained the statement that the present (Cabo Rojo) site was inadequate, and that a survey had been made of the island of Puerto Rico which resulted in selection of the Carolina site as being the only suitable one. Funds of about \$300,000 were requested for the installation. BuShips, on June 15, 1943, in the first endorsement to this letter, agreed that the Cabo Rojo site was poor and concurred that the Carolina site was an ideal high frequency direction-finder site, and that technically it was a satisfactory site for the proposed DAF, DAJ and DP equipment. The Chief of Naval Operations approved the acquisition of this land on June 25, 1943 and stated that the installation of the DAJ equipment was urgently needed to further the war effort. Subsequently, the Cabo Rojo personnel and equipment were moved to Trinidad and the San Juan personnel and equipment to Carolina.

2. On January 9, 1944, shortly after completion of the installation of the DAJ equipment, it was found that the operation of the equipment was very difficult due to interference (cross-modulation products) caused by several nearby broadcast stations. This interference took the form of "birdies" and "beats" which overrode signals that were being received. After testing the various parts of the equipment, it was found the cathode follower (vacuum tube coupling units) at the base of the monopoles was the item being affected. This was the first information Op-20-G-3 had that broadcast stations were located in the vicinity of the supplementary site.

3. In the meantime it was discovered that Station WAAQ was planning to move to a site nearer the supplementary station. On Jan. 15, 1944, the Chief of Naval Operations wrote Com10 and stated that unless the operators of WAAQ could provide satisfactory assurance that no interference would result from their operations, they should be urged to remain at their present location or consider a site further distant from the Navy Radio Station. On February 11, 1944, Com10 informed WAAQ their proposed move should be delayed until the interference could be cleared up. Com10 sent the Chief of Naval Operations information concerning WAAQ on Jan. 27, 1944. A brief history of the move of the station is as follows:

- (1) Negotiations started in 1941 for acquisition of necessary land.
- (2) Option on land secured in November 1941.
- (3) FCC construction permit issued April 29, 1942.
- (4) Naval Air Station and Headquarters Puerto Rico Department (Antilles) were informed of the proposed antenna tower move on

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Additional page(s) of 22 February 1945 MEMORANDUM FOR THE FILES not received for review. Navy was requested to search files at Crane for the rest of the memorandum but nothing further was found.

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