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United States Department of the Interior



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AUG 26 2004

Mr. Christopher T. Penny
US Navy Vieques Project Coordinator
US Naval Facilities Engineering Command
Atlantic Division, Code EV23
1510 Gilbert St.
Norfolk, VA 23511-2699

Re: Draft Remedial Investigation Report for
Solid Waste Management Unit (SWMU) 7,
Former NASD, Vieques

Dear Mr. Penny:

This is in reply to the request for comments on the Draft Remedial Investigation Report for Solid Waste Management Unit (SWMU) 7. The Service has previously commented on the Draft Remedial Investigation/ Feasibility Study for this and other sites in July 2003. Below are our comments on the draft document.

General Comments:

First we would like to express our concern with the change in nomenclature of the intermittent streams located on this and other sites. Previously the Spanish word quebrada was used to refer to these streams. Apparently there is a legal definition of quebrada in Puerto Rico Water Law which is inconsistent with it being used in this document. Therefore all the quebradas have all been changed to the word ditch.

The term **ditch** does not adequately describe these sites geologically or ecologically. The word ditch is defined as a **long** narrow excavation dug in the **earth** which clearly denotes a man-made drainage and **not a natural** feature in the **terrain**. The Soil Survey maps of Vieques lists these streams as "intermittent **not** crossable with **tillage** implements" (See Figure 1) The March 9, 3000. U S Army Corps of Engineers Federal Register Notice on Nationwide Permits contains a list of definitions, one of which is ephemeral stream. According to the Corps of Engineers (Corps) an ephemeral stream is a stream that has flowing water only during and for a short duration after a rain event in a typical year. The stream beds are located above the water table year round. Groundwater is not a source of water for the stream. Instead runoff from rainfall is the primary source of water for these streams

We feel that the Corps' definition best fits the steep streams that are found in the hill areas of Vieques and would prefer that the term ephemeral stream be used in this and all future documents for all streams not influenced by ground water. The term intermittent stream can be used to describe those streams that may derive their flow seasonally by ground water.

Previously we expressed concern that although the site is located on steep terrain, the site boundary that you have defined does not extend to the stream's outlet to the sea. Instead the site boundary stops at Road 200 where the stream enters a culvert under the road. This delineation has continued in all subsequent investigations including this one, ignoring that the stream has a logical terminus less than 1 kilometer away in the sea. We suggest that your delineations extend to the streams outlet to the sea.

Specific Comments:

Section 3.4. Sediment Sampling: The locations of sediment samples NDW07SD04 & 05 are not accurately shown on any map. On July 6, 2004, United States Environmental Protection Agency and United States Fish and Wildlife Service (Service) representatives inspected the discharge point of the SWMU 7 stream. The stream is typical of any stream located on small Caribbean islands. Its mouth is closed off by a sand berm, although there were indications of recent overflow, and a small mangrove estuary is located just behind the berm and a bit further inland (see photos). A survey was conducted from the stream mouth up to Road 200. The small mangrove is dominated by black mangroves (*Avicennia germinans*), with some white mangrove (*Laguncularia racemosa*). There was standing water in the mangrove at the time of the inspection. Standing water continued from the beach to about 100 feet inland, with a channel width of about 3 feet. Beyond the mangrove there is a secondary channel that curves east and apparently overflows into a coconut grove. There was no defined exit channel. The area from the beach berm to this point, although small, is the floodplain and estuary of the stream. The main channel continues south. The banks are steep and about 5 feet above the stream bed. The banks are well vegetated and some small trees are located in the stream channel itself.

The stylized location map shown in Figure 4-8 indicates that one sample may have been taken in the mangrove estuary and the other about 200 feet out in the Caribbean Sea. However, Appendix F, Sediment Sampling Logs, indicates that NDW07SD04 was taken at the back end of the mangroves and that NDW07SD05 was taken in the beach berm. These sites should be better represented in Figure 4-8 or placed on an aerial photograph of the site.

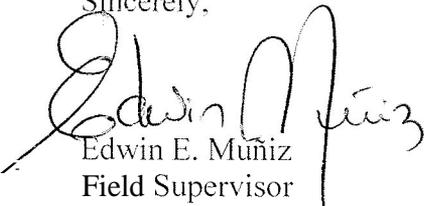
The rationale for sampling in the mangrove estuary is not well justified, especially if the data is to be used later for ecological risk assessment. The ecological risk assessment for this site, much like all previous investigations, concentrated on the upper portion of the site and does not address the lower estuary area which is the depositional zone for the stream. Although the document discusses the transport of possible contamination down stream, very little effort was made to sample down stream. It is our understanding that

the two samples taken in the area of the stream mouth were not included in the risk assessment even though this would be the area at risk from long term contaminated runoff from upstream. We suggest that these two samples should have been included in ecological risk assessment and the areas in the depositional zone of the stream be included in any future sampling events.

The risk assessment and sampling plan should have been divided into the upper stream area where the Navy defined the site up to Road 200 and a lower section which addressed impacts and risks to the loner portion of the stream where the mangrove and coconut grove are found.

Thank you for the opportunity to comment on this action. if you have any questions please contact Felix Lopez at 787 851-7297 x 226.

Sincerely,



Edwin E. Muniz
Field Supervisor

cc:

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