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United States Department of the Interior



FISH & WILDLIFE SERVICE

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July 9 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: Final Draft Soil and Groundwater
Background Investigation Work Plan,
Sampling and Analysis Plan, Former
AFWTF, Vieques

Dear Mr. Penny:

This is in reply to the request for comments regarding the above referenced document. This document is part of the January 2000 RCRA Consent Order between the Navy and EPA.

The Service had previously commented on this plan in March, 2004. The new plan has addressed most of our comments and concerns. However, there still remains a concern regarding the soil sampling.

In our previous comments we stated that the rationale for sampling the soil from 0 to 6 inches and then from 4 to 6 feet is not clear. We believed that there should be some soil samples in the 6-inch to 4-foot vadose interval. Also we recommended that pesticides be analyzed in the vadose zone soil samples. Since pesticides can migrate to groundwater, they should be sampled in surface and subsurface soils samples.

Attachment A of the above referenced document contains responses to agency comments. In answer to our concerns regarding the soil depth of 0-6 inches, the first part of the response stated that the 0-6" interval was used for sampling in the western part of Vieques. While the 0-6" interval may have been an appropriate interval for sampling, we note that the sampling technique used in the west side of Vieques for the former NASD sites may not be appropriate for the environmental concerns in eastern Vieques. The contamination in the east side of Vieques is more widely spread and varied. Since this background investigation will be used for all subsequent investigations regarding the

former AFWTF, including small arms ranges, the Live Impact Area, Surface Impact Area, gun positions and other sites not yet identified, we believe that the movement of contaminants through the vadose zone should be well documented.

The second part of the response stated that the 0-6 inch depth represents a biologically active zone where human and ecological exposure is likely to occur. We do not agree that the biologically active zone is limited to 0-6 inches, especially for tropical ecosystems. With a year round growing season (defined by soil temperature taken at 20 inches below the surface) biological activity goes far beyond the 6 inch depth.

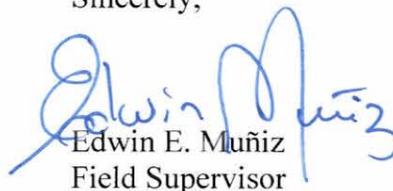
Burrowing organisms, plant roots, even insect burrows extend beyond 6 inches below soil surface. In addition, normal refuge management actions such as fencing, reforestation and wildlife surveys require digging past 6 inches for placement of fence posts, seedlings or saplings, mist net supports, etc. Refuge workers, contractors or volunteers would be exposed to contaminants beyond the proposed 6 inch depth as well.

In spite of the fact that previous soil samples to date have been taken from the 0-6 inch and the 4-6 foot intervals, we continue to recommend sampling in the 0.5 to 4 foot interval starting with this new background study. This is important to properly characterize both human health and environmental risk. The sampling intervals for biological activity should go beyond 6 inches and additional samples should be taken throughout the vadose zone up to 6 feet in depth.

The above recommendations are directly related to our other concern regarding the sub soil sampling for pesticides in the background study. To use the 0-6 inch interval for pesticides analysis obviates the fact that many of these products may have been used 20 years prior or more and may have migrated out of the 0-6 inch upper surface layer of soil. In this respect, we continue to recommend that in the vadose zone below 6 inches, pesticides, especially organochlorides, furans, and other persistent formulations should be part of the analytical constituents.

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. Muñiz
Field Supervisor

cc:

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Adolf Everret, EPA, New York
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