



01.01- 03/07/95-00807

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Date: March 7, 1995

Ms. Brenda Norton, PE
Atlantic Division, Naval Facilities Engineering Command
Environmental Quality Division
Code: 1822
Building N 26, Room 54
1510 Gilbert Street
Norfolk, Va 23511-2699

Re: Naval Weapons Station, Yorktown, Va.
Roosevelt Pond
EPA review of past sampling data/Site-Screening Area Nomination

Dear Ms. Norton:

The U.S. Environmental Protection Agency (EPA) has reviewed both the Navy's draft *Focused Biological Sampling and Preliminary Risk Evaluation Report* (FBSPRER) and the Virginia Department of Environmental Quality's *Bioaccumulation Initiative in Virginia's Coastal Zone Management Area* (BIVCZM) as they pertain to Roosevelt Pond, located at the Naval Weapons Station-Yorktown (WPNSTA) NPL facility. The above documents report the multimedia sampling analytical results obtained from Roosevelt Pond, including the identification of the chemicals which were found in fish tissue samples, sediment samples, amphibian tissue samples, and water samples taken from the Roosevelt Pond vicinity. Based upon the review of the multimedia sampling analytical results contained in the above documents, EPA has screened the chemicals detected at Roosevelt Pond for potential human health and ecological risk.

Based upon the results of the Navy's FBSPRER sampling event at Roosevelt Pond, 4,4'-DDE and Mercury were detected in fish tissue (Bass) at 46 $\mu\text{g}/\text{kg}$ and 0.48 mg/kg respectively. Please note that EPA-Region III's COC screening guidance table value for ingestion of fish tissue containing 4,4'-DDE is 9.3 $\mu\text{g}/\text{kg}$ and for Mercury is 0.041 mg/kg . Thus, the detected value of 4,4'-DDE and Mercury in fish (Bass) tissue sampled by the Navy from Roosevelt Pond exceed the COC screening values for human ingestion of fish tissue. The results of the VDEQ's BIVCZM sampling event at Roosevelt Pond found Aroclor 1260, Chlordane (alpha), and 4,4'-DDD in fish tissue (Sunfish) above EPA-Region III's COC screening guidance table value for ingestion of fish tissue. The BIVCZM document reports Aroclor 1260 in fish tissue at 18 $\mu\text{g}/\text{kg}$, Chlordane (alpha) in fish tissue at 6.8 $\mu\text{g}/\text{kg}$, and 4,4'-DDD in fish tissue at 37 $\mu\text{g}/\text{kg}$. The corresponding Region III COC screening values for human ingestion of fish tissue are: 0.41 $\mu\text{g}/\text{kg}$ for PCBs; 2.4 $\mu\text{g}/\text{kg}$ for Chlordane; and 13 $\mu\text{g}/\text{kg}$ for 4,4'-DDD. Thus, it can be concluded that potential risk to human health exists from the ingestion of fish taken from Roosevelt Pond, and that further site characterization is required to delineate the nature and extent of this risk.

Also, based upon the results of the VDEQ's BIVCZM sampling event at the Roosevelt Pond vicinity, Aroclor 1260 was detected in sediment at 270 $\mu\text{g}/\text{kg}$, which is above the NOAA Screening Guideline table value (ER-M) for PCBs in sediment of 180 $\mu\text{g}/\text{kg}$. Additionally, the VDEQ's BIVCZM sampling event detected multiple occurrences of Chlordane and 4,4'-DDD in sediment in the Roosevelt Pond vicinity above NOAA Screening Guideline table values. The BIVCZM document reports the highest detection of Chlordane (alpha) in sediment at 4.98 $\mu\text{g}/\text{kg}$ and Chlordane (gamma) in sediment at 4.47 $\mu\text{g}/\text{kg}$, along with 4,4'-DDD in sediment

at 19.9 $\mu\text{g}/\text{kg}$ and 4,4'-DDT in sediment at 12.7 $\mu\text{g}/\text{kg}$. It appears that the highest concentration of sediment contamination at Roosevelt Pond occurs at its confluence with a tributary leading from SSA 5. In light of the above, it can be concluded that potential risk to ecological receptors exists in the Roosevelt Pond vicinity, and that further site characterization is required to delineate the nature and extent of the ecological risk presented.

Based upon EPA's review of the past multimedia sampling data available for Roosevelt Pond, leading to the determination that the potential for human health and ecological risk associated with the Roosevelt Pond environs exists, EPA nominates the Roosevelt Pond environs as a Site-Screening Area in accordance with Subsection 9.3 of the Federal Facilities Agreement for the WPNSTA.

If you have any questions regarding the above, please feel free to call me at (215) 597-1110,

Sincerely,



Robert Thomson, PE
VA/WV Superfund Federal Facilities (3HW71)

cc: Stephen Mihalko (VDEQ, Richmond)
Jeff Harlow (WPNSTA, 09E)
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