



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

July 9, 1996

In Reply to: 3HW90

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Susan P. Adams, Director
Environmental Division
Department of the Navy
Indian Head Division
Naval Surface Warfare Center
101 Straus Avenue
Indian Head, MD 20640-5035

RE: Verification Investigation Report Approval
EPA ID MD 417 009 0001

Dear Ms. Adams:

The U.S. Environmental Protection Agency (EPA) has completed reviewing the draft Verification Investigation Report dated February 1996 at the Naval School Explosive Ordnance Disposal (IOD) Sites at Stump Neck Annex. The document was reviewed to determine if the report followed the approved Verification Investigation Workplan and fulfilled the conditions of the facility's RCRA permit.

EPA accepts your draft Verification Report as the Final Report for SWMUs 5, 25, 26 and 27 at the Stump Neck Annex.

Based on the analytical data collected, a release of hazardous constituents from SWMUs 5, 25, 26 and 27 to ground water, surface water, soil and sediments exceeds the Practical Quantitation Limit. Justification for this conclusion can be found in the attachment.

Consequently, EPA has determined that additional investigation is warranted at all four SWMUs at the facility. In accordance with Permit Condition II.C.1, EPA requires you to submit a RCRA Facility Investigation workplan within 180 days of receipt of this letter.

If you have any question regarding this matter, please call me at (215)566-3436.

Sincerely,



Mike S. Smagh
RCRA Project Manager

Enclosure

cc: Amin Yazdanian, MDE

VERIFICATION INVESTIGATION REPORT
THE NAVAL SCHOOL EOD SITES
STUMP NECK ANNEX
INDIAN HEAD, MD

Justification of Hazardous Waste Releases

RANGE 6 (SWMU 5)

Section 4.6.1 "Soils" states that "--- a contamination "hot-spot" exists in the vicinity of monitoring well location MW05 (Figure 4-2 and Table 4-2)." (It is a possible typographic error; the only well in this figure is SMW01, and TNT and RDX contaminated samples 06SS13 and 06SS19 are immediately south of it.)

Several inorganics (Table 4-1), copper and lead five to ten times background, were detected in the soil.

Section 4.6.2 "Ground Water" indicates that a number of semivolatle organic compounds and energetics (Table 4-3) were detected in the sample collected from monitoring well S5-MW01. Four of these organics were also detected in soil samples. Moreover, chromium and several other inorganics are detected in the ground water samples collected from this well.

AREA 8 (SWMU 25)

Section 7.6.1 indicates that carbon disulfide, trichloroethene and xylene above PQL (Table 7-1) were detected in the soil samples.

Arsenic, beryllium, cobalt, magnesium, nickel and zinc were detected at concentrations greater than five times background in surface soil sample at S25-SB01-002, and subsurface soil sample at air-shot location SB01. Ammonia and TOC in most surface and subsurface soil samples were also detected.

Section 7.6.3 "surface water and sediments" indicates that phenanthrene at location S25-001 and benzo(a)pyrene at location S25-SD003 above background were detected in sediment samples.

Copper (S25-SD001), and cyanide S25-SD001 and S25-SD003) were detected in sediments at concentrations greater than ten times background. Various other inorganic analytes (Table 7-4) in surface filtered and unfiltered water as well as in sediments were also detected above background in Area 8.

THE IMPROVISED EXPLOSIVE DEVICES (IED) SITE (SWMU 26)

Section 5.6.1 states that several inorganics, namely toluene, carbon disulfide, chloroform and methylene chloride above practical quantitation limit (PQL) were detected in the soils at the detonation demonstration area. Chloroform was detected in

the incendiary demonstration area. Methylene chloride was detected in the soil boring samples in front of the bleachers.

Arsenic, lead and nickel five times background; silver and copper 10 times background; antimony twice the background were detected in surface and subsurface soil samples. Moreover, TOC, TPH, ammonia and nitrate above area background were detected at IED.

THE INERT ORDNANCE DEVICES (IOD) SITE (SWMU 27)

Section 6.6 "Nature and Extent of Contamination" states that methylene chloride and toluene above PQL (Table 6-1) were detected in the soil samples.

Cadmium and copper, five times background, were detected in soil sample S27-SS-002.