

**NAVY RESPONSES TO NOAA'S LETTER (SEPTEMBER 27, 1991)
ON DRAFT IR REPORT (AUGUST 1991)**

The comments from the National Oceanic and Atmospheric Administration (NOAA) were reviewed. They principally included a summarization of the information included in the report. Most comments regarding additional investigation are already included in the site specific recommendations in Section 8.0. Therefore, no specific response to NOAA's letter is provided.

**NAVY'S RESPONSES TO THE FISH AND WILDLIFE SERVICE COMMENTS
(DECEMBER 6, 1991) ON THE DRAFT IR REPORT (AUGUST, 1991)**

1. General

Several of the "To Be Considered" (TBC) values and background concentrations used for the NSB-NLON investigation appear high. The soil or sediment TBC values for PCB (10 ppm), DDT (500 ppb) and the background concentrations for several inorganics exceed the tenth percentile effect range (ER-L) concentrations presented by Long and Morgan (1990). The effect ranges, ER-L for the tenth percentile and ER-M for the 50th percentile, suggest the potential for adverse biological effects. Though the effect ranges have varying degrees of confidence for different contaminants, and were developed primarily for marine sediments, the concentrations provide some guidelines for assessing freshwater sediments.

Many of the inorganic contaminant concentrations detected at the site may fall within the 95% background range of variation developed from Shacklette and Boerngen (1984), but it should be made clear that some of these levels may be potentially hazardous to biota. My concern is that soil or sediment samples with concentrations at or slightly above these upper-range background levels would be considered "safe". It may be prudent to collect soil samples in undisturbed areas of the site or in the general area to determine if the values derived from the U.S. Geological Survey paper are similar to site-specific background levels.

These values were used for illustrative comparative purposes. Even if we complied with this request, it would not affect the conclusions of the study with respect to human health or environmental impact. Actual metals concentrations were used in these assessments and in the calculation of risk. We would propose to add a discussion to indicate that actual background concentrations at this site are less than the USGS published values.

2. Rubble Fill Site Near Bunker A-86

At the site, an elevated concentration of arsenic (127 ppm) was detected in surface soil

sample 4SS3C. I could not locate this sampling station on Figure 4-2 (pg. 4-22); only 4SS1 and 4SS2 are marked. This concentration suggests a need for additional soil sampling to fully delineate the area requiring remediation.

As indicated in the text on pages 4-18, sample 4SS3C is a composite sample from location 4SS1 and 4SS2. Additional sampling has been recommended in Section 8.0.

3. Torpedo Shop

There is a small drainage ditch along the west site of Building 450, the Torpedo Shop. A small pipe under the building's asphalt apron connects the ditch to the catch basin that empties down to SW/SD-1. A soil/sediment sample should be considered for the small ditch beside the building. During the site visit, the cover for this ditch's catch basin appeared to be stained with paint residue. It should be noted for this site that since the swale at SW/SD 1 has been recently disturbed by land-moving activities, new sampling at this station may reveal lower contaminant levels.

Although there is considerable human activity at the Torpedo Shop and much of the area is built-up land, exposure to ecological receptors remains a possibility. The small grassy bank between Buildings 450 and 325, the drainage swale, and the nearby leach field/lagoon are areas likely to be utilized by several species of birds along with species of amphibians and reptiles.

These comments will be considered in the development of Step II work plan.

4. Goss Cove Landfill

The field investigation for the Goss Cove Landfill did not include sediment sampling in the adjacent Thames River. Elevated levels of several inorganics were detected in soils at the site and sampling of nearby river sediments appears appropriate. During the landfill operations, site contaminants may have entered the river through runoff or erosion. On the site visit, the oil containment booms below the large outfalls at the USS Nautilus, beside the former landfill, were noteworthy. The sewer drainage of the tank farm may not be part of the CERCLA investigation, but has there been any sampling in the sediments below the outfalls to determine SVOC levels or the impacts of oil discharges to benthic organisms? If small discharges occur on a regular basis, this area should be investigated.

Investigation of surface water and sediment quality within the adjacent Thames River has been recommended in Section 8.0 of the IR report.

5. Area A Wetland

It appears in Figure 4-16 (page 4-66) that SW-1 exists in a drainage between the Perimeter Security Road and Route 12. Plate 4-1 does not show the Perimeter Road, so the station may be within the wetland boundaries. Is SW-1 the upgradient location? If SW-1 exists in an upgradient drainage, a description of the drainage within the NSB-NLON boundaries and east of Route 12 would be useful. We did not visit this station during the site visit. It would be useful to know if this drainage contains the same heavy iron floc or orange

precipitate found downstream of the Area A wetland in the adjacent OBDA drainage. A comparison with upgradient sites may indicate that the wetland or Area A landfill are the sources of the floc.

In previous sediment sampling, DDT was detected in the range of 17 ppm within and upgradient from the Area A wetland. These levels are potentially harmful to fish and wildlife. Cadmium, chromium, copper, lead, mercury, and zinc were also detected above the ER-L concentration. A more comprehensive sampling plan, particularly to determine the extent of DDT contamination, appears warranted to identify portions of the wetland and Area A for remediation.

Sample 2WSW1 is located east of Perimeter Road and is an upgradient location with respect to the wetland and landfill. These sample points did not contain the "iron floc". The watershed is residential/undeveloped and wooded.

Regarding DDT contamination in the wetland, Section 8.0, page 8-18 includes a recommendation for additional sampling in the wetland.

6. Area A Wetland

A more intensive effort should be made to identify the fish species in the open water areas of the wetland. The habitat of the area and the reported sighting of otter further down the drainage suggests that semi-aquatic species may be exposed to site contaminants. Due to the presence of piscivorous birds and mammals in the area, this potential exposure route should be investigated more thoroughly.

Catbird fledglings were used to quantify exposure in the terrestrial food web near the Area A wetland and Downstream watercourses. I have not obtained the paper by Menzie et al. (1991), but I would echo the comment by the oversight contractor that the habitats and prey items at the NSB-NLON and the Manomet Bird Observatory may not be similar. I have requested a copy of the paper from Atlantic; perhaps Menzie describes the differences in the two sites in his paper. I do not view this issue as a problem, only as a point requiring clarification.

These comments will be discussed with the USEPA relative to the ecological assessments.

7. Downstream Watercourses and OBDA

In the drainage between the upper pond and the Area A wetland, SW/WD samples were not collected. This drainage contains the same iron floc or orange precipitate described above. SW/SD samples should be collected from this drainage, and an assessment of the fisheries or benthic fauna, if any, in the drainage should be provided. If a depauperate macroinvertebrate community is found, toxicity testing may be the next step for these drainages. Even if laboratory bioassays indicate that the waters or sediment are not toxic to the test organisms, the impact of the floc or precipitate on the quality of the habitat for fish and macroinvertebrates in the stream should be discussed. During our visits, the depth

of the floc layer on the bottom substrate and on the rocks and woody debris in the streams was striking.

Fish species in the two small ponds below Area A should be identified for the exposure assessment. The report states that fish were not observed in these ponds, but it is unclear if any fish collection was attempted. The upper pond appears more suitable fish than the lower pond. If fish are not present in the lower pond, I would expect a variety of amphibians to utilize the area. During the site visit, this pond looked like a good mole salamander breeding pool.

These comments will be discussed with the USEPA relative to the ecological assessments.

8. DRMO

As discussed during the October 8th visit, the Thames River sediments directly adjacent to the DRMO should be sampled due to the likelihood of transformer oil and other contaminants entering the river through erosion, surface water runoff and periodic flooding. Station SW/SD-12 may not detect PCBs from the DRMO and higher concentrations may be found in sediments closer to the site.

Refer to Section 8.0, page 8-25, which provided recommendations for Thames River sediment sampling.

9. Miscellaneous

Since it is likely the wetlands at the site will require remediation, a wetlands delineation along with a function and value analysis should be conducted.

We are aware that wetlands exist in Area A, and the general boundaries are known. The wetlands regulations will be considered as an ARAR. Following the Feasibility Study, and as part of any remedial design, specific wetlands boundaries will be established at that time.