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NAVY RESPONSES TO TRC COMMENTS ON DRAFT IR REPORT (AUGUST 1991)

Town of Waterford (October 16, 1991)

1. *The recommendations contained in Section 8 summary and conclusions relative to moving forward with Step II investigations and feasibility studies for remediation are supported. We are particularly interested and supportive of the additional testing to be conducted in the Thames River. These investigations should include ground and surface water quality monitoring on a regular interval.*

   Additional ground water and surface water sampling and analysis will be conducted in future investigations.

2. *Sediment testing and sampling of fish and shellfish adjacent to the base should be done. I have attached a report from John Volk, Director of the Agriculture Division of the State Department of Agriculture. This report on the status of shellfishing in the Thames River indicates that due to chemical and sewage discharges from the base (page 3) a prohibited area was established 1000' into the River.*

   The provided information will be considered in designing future field investigations.

3. *In your consideration of ARAR, the degree of remediation to be undertaken, particularly as it relates to compliance with state surface and ground water quality classification goals, it is recommended that all reasonable efforts be taken to identify and control discharges to the river. It is recommended that you contact Mr. Volk for any guidance he may be able to provide to you in studying the shellfish resources adjacent to the base. I have also attached the maps showing the location of shellfish beds leased by the Town of Waterford in the Thames River.*

   Comment so noted.

4. *In reviewing the information for the Goss Cove Landfill, there appears to be some uncertainty regarding levels of radioactivity in samples taken. I raised the question at the last TRC meeting, whether or not the Navy had verified the disposal of all low level radwaste generated on the site. The answer is no. Will the Navy be reviewing its records of disposal of low level and other nuclear wastes generated onsite?*

   NAVY - Please provide comments.

   The ground water samples have been reanalyzed for radioactive parameters; the results will be provided when available.

5. *Sewage discharge was assumed to have been resolved with the connection of the base to public sewers. Mr. Volks letter indicates that sewage discharges are one of the reasons for the prohibited shellfish designation. Have all buildings been connected and are there any tests of surface and ground waters for fecal chloroform that have been conducted to determine if in fact sewage discharges are still occurring?*

NAVY - Please provide comments.

6. *In my review of the study, there was not any discussion of efforts to institute a set of best management practices to insure that spills and discharges of chemicals are prevented in the future. What actions have been taken to comprehensively address the handling of materials and should these efforts be documented in this study.*

NAVY - Please provide comments.

ROBERT FROMER LETTER (October 13, 1991)

1. *Section 8.1.4.1, Health and Ecological Risk Assessment, ¶ 3, page 8-5: The report claims that contaminant concentrations in the ground water at Goss Cover are expected to be below water quality criteria after further dilution in ground water, attenuation due to adsorption to soils, and dilution in the Thames River estuary. Further study is essential to determine the leachate rate as a function of time. Experience in Connecticut with the pesticide EDB indicates that the porosity of sand particles serves as a reservoir for long-term leaching. The previous philosophy that, "dilution is the solution to pollution" seems still prevalent in this report. Consideration should be given to removal of contaminated soils as a remediation method. While the contaminants discharged into the Thames River may be relatively small, the Navy must take into consideration the cumulative pollution in the river. This is especially important considering the State of Connecticut, Department of Environmental Protection's policy of "no net loss of attainment in water classification".*

Recommendation 4 on page 8-6 states that a quantitative health and environmental risk assessment of the potential impacts of the site on the Thames River should be conducted to verify the quantitative assessment. The Navy intends to proceed with this assessment.

2. *Section 8.2, Area A Downstream Watercourses, ¶ 2, page 8-9: Since the stream flows under the golf course, consideration should be given to any correlations between pollutant levels and any pesticide applications on the course.*

The source areas of pesticides have been determined to be upgradient of the golf course based on the analytical data.

3. *Section 8.2, Ecological Risk Assessment, pages 8-17 to 8-18: The study investigated the impact on terrestrial and aquatic species; however, since there is ground water contamination, an expansion of the study is essential to include subterranean species to a specified depth. Ground water is not so pure as to be devoid of fauna and flora.*

The assessment in inadequate, speculative and inconclusive. There is no correlation that the wildlife sampled in the study are representative of the ecological impacts. For example, to deduce that based on a few samples of catbirds, the risks to birds feeding on soil invertebrates appears to be low is preposterous. This presumes that all birds in the area feeding on the same menu have and identical biochemistry. In the absence of hard evidence to the contrary, I claim that the presumption is mythical and mystical.

Further, the assessments are not statistically based creating serious questions as to their conclusive legitimacy. There is too much presumption in the analysis. For example, because the shrew is maximally exposed by diet, the investigators conclude that it would have the greatest exposure to DDTR. There is no objective study clearly demonstrating the level of exposure by shrews in the area. Even if the exposure is greatest, the shrews body chemistry may metabolize the DDTR without harmful effects.

The methods employed in the ecological risk assessment were either developed by the EPA for use in similar situations such as the equilibrium partitioning (EP) method or are currently widely used for the same purpose as they were used in this assessment such as the simple bioaccumulation models. They are therefore appropriate for use in ecological risk assessment.

Because of the large number of species present at the site and the complexity of the their interrelationships (which is true of many sites), certain species were selected for assessment based on their feeding and migratory patterns and their abundance on the site. The intent of the assessment was not to assess risks to all species. The EPA and U.S. Fish and Wildlife Service were consulted as to the appropriateness of species selected for assessment.

There is additional sampling planned for the site with regard to ecological receptors. This plan will be reviewed by the TRC and EPA. This will provide further opportunity to have direct input.

4. *Section 8.2.3, Lower Subase, pages 8-23 to 8-25: Because of nuclear activities at the lower base, this area requires study and monitoring of radioactivity. Such expansion of the study would secure the public's confidence in its integrity. In fact, all Step I and II areas should be monitored for radioactivity.*

NAVY - please provide comment.