



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

DEC 06 1991

Gerald F. Hoover
Project Engineer, Code 142
Environmental Restoration Branch
U.S. Navy, Northern Division
Naval Facilities Engineering Command
U.S. Naval Base, Bldg. 77Low
Philadelphia, PA 19112-5094

Re: Naval Weapons Station (NWS) Earle

Dear Mr. Hoover:

The U.S. Environmental Protection Agency has reviewed the human health portion of the Draft Risk Assessment Protocol, dated November 1991, for NWS Earle. Please have the enclosed comments included in the Final Risk Assessment Protocol. The Ecological Risk Assessment is still under review and will be sent under separate cover.

If you have any questions concerning this matter, please contact me at (212) 264-6609.

Sincerely yours,

Paul G. Ingrisano
Project Manager
Federal Facilities Section

Enclosure

cc: CPT W.M. Migrala, Jr., NWS Earle
G. Hermann, NWS Earle
J. Freudenberg, DEPE
R. Johnson, Weston

General Comments

Several exposure scenarios necessary for a characterization of risk to humans, are lacking. According to the Risk Assessment Guidance for Superfund (RAGS), current and future land uses should be evaluated. Although it may be true that workers and hunters represent those individuals who are most likely to be exposed currently to onsite chemicals, the potential for a residential population to be at risk under future land uses must be investigated as well. Potential risks associated with groundwater use should be evaluated. As children represent a particularly sensitive subpopulation, they too should be included in the risk assessment, under a separate exposure scenario.

The document itself, on page 7, acknowledges on-site residents, and resident non-workers as human populations potentially exposed to chemicals at NWS Earle. Therefore, the risks to residents in addition to the workers and hunters should be assessed.

Specific Comments

1) page 5, Section 2.2.2: suggested language to insert here is that all chemicals should be considered as contaminants of concern unless the criteria in RAGS allow for eliminating several contaminants. Furthermore, consideration of potential contaminants of concern will be given after the RI is reviewed.

2) page 5, 4th paragraph: the term 'preliminary list' (which is used in the following paragraph) should be coined here.

3) page 5, last sentence: change as: 'The chemicals evaluated in the risk assessment may differ from the preliminary list.'

4) page 6, 4th sentence: the word 'that' is extraneous.

5) an explanation is needed for future land use scenarios not being incorporated into this protocol.

6) page 8, 2nd paragraph, 1st sentence: suggest 'many' be replaced with 'five'.

7) page 11, Sites 20 and 22: either the table or the text is incorrect. The hatched line indicates data is unavailable, yet for groundwater, the associated write-up states that groundwater is not evaluated because there is no current exposure.

8) page 13, 3rd paragraph: the upper 95% confidence limit formula to be used is provided in the attachment; its' basis is the arithmetic mean, and not the geometric mean. Reference to the latter should be stricken.

9) page 14, Section 2.4 (Toxicity Assessment):

a) the references (1st and 3rd paragraphs) to toxicity values being 'derived' from the listed sources, are incorrect and should be removed.

b) a third source should be added to the list - consultation with EPAs' Environmental Criteria Assessment Office (ECAO), in Cincinnati, Ohio.

c) the reference to EPA Region III is erroneous; entire sentence should be stricken.

10) page 15 (Table 1): the following exposure assumption values should be used:

FI, the fraction ingested, must be set at 1.0 (i.e., 100% ingested) as in Table 5;

EF, the exposure frequency,

-for hunters should be 40 days as a minimum; 80 days would be preferred. There are 84 deer hunting days in the state of New Jersey. For a reasonable maximum exposure, we should assume that a person goes hunting on at least half of these days, if not on all of them;

-for workers should be 250 days/yr.

11) page 16 (Table 2): the EFs', exposure frequency, should be as in point #10, above. The ET, exposure time, should be 8 hours/day, for both workers and hunters.

12) page 17 (Table 3): in the dermal contact via surface water pathway, arms should be considered in the SA (skin surface area available for contact) for the 'worker', as they are for the hunter.

13) page 18 (Table 4): absorption factors for the three classes of contaminants (volatiles, semivolatiles, inorganics) must be obtained from the ECAO.

14) page 21, Section 2.5.2: Estimated Daily Intake (EDI) should be replaced with Chronic Daily Intake (CDI) as per the RAGS guidance.