

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: NSW, Indian Head
Pre-Feasibility Study Field Investigation Work Plan

FROM: Alvaro Alvarado, Ph.D.
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Technical Support Section (3HS41)

TO: Dennis Orenshaw, RPM
Federal Facilities Branch (3HS50)

DATE: July 13, 1999

I have reviewed the Pre-Feasibility Study Field Investigation Work Plan for NSW, Indian Head, with particular attention to toxicological and risk assessment issues. The following comments are offered for your consideration:

1. Table 2-2, S12TP017: The decision rule states that if no landfill material is identified in S12TP017, assume the eastern limit of the landfill to be defined by S12TP003, S12TP004 and S12TP005. There is about 100 feet from S12TP017 to S12TP003, S12TP004 and S12TP005. I am concerned that we may miss the edge of the landfill by moving the boundary 100 feet based on one sample. I recommend that you consider an intermediate test pit.
2. Section 3.3.2.2, Statement of Problem, second paragraph: The primary contaminants are arsenic, cadmium, lead, iron, and Aroclor 1260.
3. Section 3.3.3.2, Inputs to Decision, second paragraph: The field activities for determining the horizontal extent of surface soil contamination will be limited to surface soil analysis for arsenic and Aroclor 1260. Lead and iron are also contaminants of concern. Lead in particular presents an unacceptable risk to fetuses of pregnant workers exposed to soil at the Scrap Yard. I recommend including iron and lead in the soil analysis.
4. Table 3-1: Include iron and lead with the primary contaminants with respect to human health.
5. Page 4-3, section 4.3.2.2, Statement of Problem: This section states that the future child HI was greater than 1.0 (HI=1.8). Therefore, a potential unacceptable risk exists. The main contributor to the risk is iron (HQ=1.3). I believe that it is overly conservative to characterize the surface soil as an unacceptable risk based on iron exposure to future residential children. The reference dose for iron is based on the Recommended Dietary Allowance (RDA) for an adult. The RDA supplies adequate levels of iron to meet the nutritional requirements of adults and adolescents over a lifetime. It does not supply the RDA to those members of the population that have greater requirements for a short, less

than lifetime duration such as infants, pre-adolescent children, and pregnant women. I recommend that the conservativeness associated with the iron HQ be stated in the text. Also, if the basis for capping the site is the iron HQ for children, then I recommend considering other options.

If you have any questions concerning the above comments, please e-mail me (Alvarado.Alvaro@epa.gov) or call me at 215-814-2709.

cc: Eric Johnson