UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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EPA Region 5 Records Ctr.
387506

REPLY TO THE ATTENTION OF

December 30, 2003

Roy Ball
Environ Corporation
740 Waukegan Road
Suite 401
Deerfield, IL 60015

Re. Preliminary Information on Human Health and Screening Level Ecological Risk Assessment document dated November 3, 2003-Eagle Zinc Site, Hillsboro, Illinois

Dear Roy:

I have received and reviewed this document, and have coordinated comments with the Illinois EPA regarding its contents. The following constitute Agency input at this stage of the risk assessment process.

General Comments

On page 1 of your document, you describe the human health risk assessment process as following the steps outlined in the IEPA's "Tiered Approach to Corrective Action Objectives"-Title 35, Part 742 of the Illinois Administrative Code. You further state that TACO is based on assumptions developed by EPA and "is consistent with EPA guidance."

As stated to you previously, the use of TACO is not sufficient to meet risk assessment requirements for NPL caliber sites. Neither EPA nor Illinois EPA considers the TACO criteria to be ARARs for CERCLA remedial actions. These criteria are not enforceable and not mandated by IEPA, rather, they are used as soil screening guidance. As they are not considered an ARAR for the Eagle Zinc site, their use is limited to their primary function, which is to help screen soil contaminant data. The absence of exceedances of TACO criteria is not a sufficient reason for screening out constituents from further risk analysis under established CERCLA procedures.

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You state beginning on page 4 that no further action is the appropriate response to COPC concentrations below TACO criteria. This is not acceptable as outlined above. The Risk Assessment Guidance for Superfund (RAGS) is the correct guidance for the risk assessment at Eagle Zinc and is what EPA requires as the basis of the completed draft risk assessment.

Specific comments

1. HHRA Section 4. Additional detail should be provided regarding how data will be presented and evaluated for purposes of estimating exposure point concentrations, particularly with respect to how distribution testing will be conducted, how hierarchy of various estimating methods will be applied to data sets, and how data will be grouped into exposure units.

2. HHRA Section 5. While the conclusions about future land use may appear reasonable based on current zoning, and given the recent communication from the City regarding the site, some sort of tangible evidence must be presented before EPA can preclude the potential for future residential development at the site. Other potential COPCs may be added to the site list based on the additional sampling conducted in November 2003, particularly additional organics. These should be added to the list of COPCs based on the results of this additional sampling. Given that the potential for trespassers is higher now that site production has now been halted, it is uncertain that the conclusions presented in Section 5.1.3 can be justified-consequently, the trespasser scenario must be included in the HHRA. There exists the potential for completed pathways for groundwater to surface water for on-site receptors, particularly in the southwestern pond-this potential should be fully evaluated in the HHRA, based on available site data.

3. HHRA Section 6 Adjustments to toxicity values to be consistent with exposure assumptions should be applied and evaluated as uncertainties, and not applied to the RME scenarios.

4. HHRA Section 7. The progression of chemicals and media from one tier to the next must be very well documented and TACO should not be used as the deciding factor for establishing these tiers.

5. Table 2. If the potential for dermal exposure to groundwater is small, then the exposure pathway is complete and should be evaluated, regardless of whether Environ considers the exposure to be negligible. There continue to be reports of area citizens using private wells in the site vicinity-without some sort of comprehensive survey, it cannot be stated with certainty that the aquifer is not a source of water for the area. Finally, EPA comments asked for the evaluation of off-site migration of dust from the residue piles as a part of the investigation. Modeling results or specific data must be presented to substantiate any preliminary conclusion here that dust has not migrated off site and no complete exposure pathway exists.

6. SLERA. One consistent guidance should be used for the preparation of the SLERA-this should be EPA-1997 as is referenced herein. The impact of physical disturbances on ecological receptors is indicated as a significant stressor at the site. Differentiating chemical and physical

stressors at the site will be an important step. For the benthic community, sample locations downstream of sediment inputs may have both physical and chemical impacts. Other stressors, particularly physical stressors, should be considered at the site. However, conservative assumptions should be employed for a SLERA and assessment endpoints with complete exposure pathways should be evaluated for chemical stressors. Specifically, the benthic community and terrestrial receptors should be considered impacted from chemical stressors without other site-specific assumptions.

7. SLERA screening level problem formulation. Screening ecotoxicity values (NOAELs and LOAELs) and exposure parameters compiled for wading birds and piscivorous mammals must be provided in the SLERA. Sources are not provided for values listed here but must be reviewed for correctness in the review of the SLERA.

8. Page 2 par 2. Assessment and measurement endpoints should be provided for review to ensure appropriateness. It is suggested that a list of all terrestrial and aquatic receptors on the site be provided, as well as an expanded description of the habitats.

9. Page 2 par 4. An evaluation of the on-site terrestrial receptors is recommended. The Appendix A checklist identified several terrestrial receptors observed during the site visit. Because adverse health effects were observed during the site visit, these receptors should be evaluated. Some portions of the site will most likely remain undeveloped, even as other portions of the site are redeveloped. Ecotoxicity values and exposure parameters for these receptors should be provided and tissue uptake and bioaccumulation from soil should be added to the site CSM.

10. Page 3 par 2. It is recommended that the chronic exposure surface water screening ecotoxicity values (Illinois WQC and ~~US~~EPA) and lowest effect levels (LELs) from Persaud et al. (1993) be used for the SLERA.

11 Page 3 par 5. Note that bioaccumulation factors are appropriate and recommended for estimating dietary exposure to higher trophic levels if measured tissue concentrations are not available.

12. Page 4 par 2. Correct to "An HQ <u>more</u> than 1.0 suggests that..."

13. Page 4 par 3. The SLERA should provide a definition of the community-level of effects to be evaluated. A community- or population-level of assessment should be clearly defined, as this level of assessment may include an evaluation of site-specific assumptions, such as spatial evaluation or a refinement of contaminants of concern, which is not appropriate for a SLERA. Refining contaminants of concern by evaluating frequency and magnitude of detection, background concentrations, or dietary considerations should be reserved for a baseline ERA.

14. Checklist. Should provide additional description of the adverse impacts to trees in the northern part of the site.

15. CSM. Surface water ingestion should be included as a complete exposure pathway for wading birds and piscivorous animals. Further clarification should be provided on the "land use" column, or it should be removed. It is not clear if all relevant receptors considered have on-site habitat. "Habitat requirements consistent with current or future uses" for terrestrial receptors is not consistent with the main text (page 2, par 4).

If you have any questions regarding these comments or desire a meeting to discuss, please contact me.

Sincerely yours,

Dion Novak

Dion Novak
Remedial Project Manager

cc: R. Lanham, IEPA
T. Krueger, EPA
M. Mankowski, EPA
C. English, CH2M Hill