



Attorney General
Betty D. Montgomery

September 23, 1996

Mark Thaggard
Low Level Waste and Decommissioning Projects Branch
Mail Stop T7D-13
Division of Waste Management
Office of Nuclear Material Safety & Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Thaggard:

Please find the enclosed Response to PTI's Letter of August 30, 1996 regarding
Shieldalloy Metallurgical Corp.

Very truly yours,

A handwritten signature in cursive script, reading "Luann L. Hoover".

Luann L. Hoover
Assistant Attorney General
Environmental Enforcement Section
Telephone: (614) 466-2766

LLH/srh

Enclosures

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OHIO DEPARTMENT OF HEALTH

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GEORGE V. VOINOVICH
Governor

PETER SOMANI, M.D., Ph.D.
Director of Health

September 20, 1996

Mr. James Valenti
Environmental Manager
Shieldalloy Metallurgical Corp.
12 West Boulevard
Newfield, NJ 08344

Mr. Patrick Lee
Cyprus Foote Minerals Co.
9100 East Mineral Circle
Englewood, CO 80122

Re: Response to PTI's Letter of August 30, 1996; Shieldalloy Metallurgical Corp. Site, Cambridge, Ohio

Gentlemen:

The Ohio Department of Health, Bureau of Radiation Protection has reviewed the August 30, 1996 letter from PTI that was submitted in response to comments and recommendations made by this Department in previous correspondence. Attached please find a document prepared by F. Thomas Rucker, SAIC, and Ohio agencies that sets forth Ohio's response, and confirms PTI's comments made in a phone conference dated September 6, 1996. The State of Ohio requests that your companies implement these recommendations as specified.

If you have any questions regarding this issue, please feel free to contact me at (614) 644-2727. The State of Ohio is available to discuss this matter and other issues with you.

Respectfully,

Ruth H. Vandegrift
Supervisor Contaminated Sites
Ohio Department of Health/Bureau of Radiation Protection

cc: S. Eves, SMC
W. Shields, PTI
C. Ray, ODH/General Council
J. Webb, ODH/BRP
O. Ackman, OEPA/SEDO
B. Blair, OEPA/SEDO
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J. Payne, Ohio, AGO/EES
K. Shimeall, Ohio AGO/HHS
E. Porter, Ohio, AGO/HHS
P. Whitehouse, OEPA/DERR
Y. Feng, OEPA/DERR

Response to PTI's August 30th Letter

In their August 30, 1996 letter, PTI submitted a response to comments and recommendations made in the Ohio Department of Health's August 8 and August 23, 1996 letters. This letter is to confirm our understanding of PTI's response based on the letter and subsequent phone conversations which took place on September 6, 1996. Our understanding of PTI's response to specific recommendations is as follows:

Recommendation #1: Use the entire valid data set of net results and uncertainties for the data analysis.

It is our understanding that PTI has included all net results and uncertainties (irrespective of detection limit and regardless of level) in the data set used for statistical analysis less any rejected data. This data set will be presented in the final RI Report. This response is acceptable subject to review of the final RI Report.

Recommendation #2: Remove data qualified as rejected from the data set and document this data set.

It is our understanding that the data set used for statistical analysis will be clearly identified in the final RI Report. All data will be presented in the tables of the final RI Report but rejected data will be identified with an R qualifier indicating that this data was not used in the analysis. This response is acceptable subject to review of the final RI Report.

Recommendation #3: Fully document the parameters and results of the Wilcoxon Rank Sum Test and use these results to identify the radionuclides to include in the risk analysis.

It is our understanding that results of the Wilcoxon Rank Sum Test will be included in the final RI Report including the number of sample results used for each parameter, the statistical assumptions, and a presentation of the statistical results. This response is acceptable subject to review of the final RI Report.

Recommendation #4: Include the Th-232 and U-235 (at least starting at Pa-231) decay chains in the risk assessment at the 95% upper confidence level of their mean concentration because of lack of sensitivity of detection at background levels. The pathway and exposure assumptions should be the same as those assumed in the final RI Report.

It is our understanding that PTI will include the Th-232 and U-235 decay chains in the risk assessment presented in the final RI Report. It is recommended that PTI

either 1) perform the risk assessment at the 95% upper confidence level (based on analytical uncertainty) of the maximum result rather than the mean for radionuclides for which fewer than ten analysis results are available, or 2) include the results for other samples based on analysis results for other radionuclides in the decay chain and appropriate equilibrium assumptions. Furthermore, it is recommended that the calculated standard deviation of the mean for the samples be compared to the propagated analytical result uncertainty for the mean. It is our understanding that PTI will include in the final RI Report a description of all assumptions made for the risk analysis, a listing of the concentrations assumed for each radionuclide, a full description of the data from which the concentrations were derived, a list of all parameter values used in the risk assessment, and a description of all equations used in the risk assessment. We request that this material be provided in advance of the final RI Report as expeditiously as practicable. Disposition of these recommendations will be subject to review of the final RI Report.

Additional radiological sampling of the media surrounding the piles and of background may be needed during the RD/RA phase to confirm the validity of the values used as the basis for the radiological risk calculations for this media.

Recommendations made in the August 23 Letter.

PTI's response to the recommendations made in the August 23 letter are acceptable subject to a review of the data presented in the final RI Report.

In addition, we do not have a version of Table 107 which matches the data presented in the responses. We request that the most recent version of Table 107 be provided in advance of the final RI Report as expeditiously as practicable and that any differences from previous versions be explained.