

JUL 29 1994

Docket No. 040-07102

License No. SMB-743

Shieldalloy Metallurgical Corporation  
ATTN: Robert L. Swenson  
Senior Vice President  
General Manager - Alloys & Metals Division  
West Boulevard  
P. O. Box 768  
Newfield, NJ 08344

Dear Mr. Swenson:

SUBJECT: ROUTINE INSPECTION NO. 040-07102/93-001

This letter refers to your March 15, 1994 correspondence, in response to our January 31, 1994 letter.

Thank you for informing us of the corrective and preventive actions documented in your letter for Violation A. These actions will be examined during a future inspection of your licensed program.

In response to Violation B, you dispute that you are in violation with 10 CFR 20.106 based upon the conclusions reached in the 1988 Oak Ridge Associated Universities (ORAU) report "Radiological Survey of the Shieldalloy Corporation, Newfield, New Jersey" and "Radiation Dose Estimates for Members of the General Public at the Newfield, New Jersey Facility" dated February 16, 1993.

After careful review of your response, we conclude that you were in violation of 10 CFR 20.201 (now 10 CFR 20.1501) as specified in the Notice of Violation attached to our letter dated January 31, 1994. Section 15 of Inspection Report No. 040-07102/93-001 provides a discussion of the changes in the effluents from Department 111 since the ORAU measurements in 1988. Specifically, the stack measurements made by ORAU in 1988 were performed prior to the installation of the enclosure around the electric arc furnace in Department 111 which increased the collection efficiency of the dust and may have changed the distribution of particle sizes filtered by the baghouse; the ORAU report did not consider the impact of bag breakage in the baghouse on radionuclide concentrations; and the concentration of uranium in the raw material supplied by the Niobec Mine has increased the last two years which may have increased the concentration of radioactive material in the effluent from the baghouse.

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Your estimate of the off-site dose to members of the general public, enclosed with your March 15, 1993 letter, depends on mass balance estimates to determine the quantity of licensed material released from the stacks. However, it does not compare the estimate of material going to the baghouses with estimates of material actually recovered from the baghouses. Although we have no objection to the methodology used to estimate the off-site doses, the report also does not address the impact of the three items specified in the Notice of Violation on the estimate. These items could contribute to large variations in the effluent concentrations. In fact, the conclusions section of the report states "the greatest contributor to the error is the estimate of emissions from the production building". We believe it is difficult to produce a reliable estimate of effluent discharges without periodic measurements, especially when large amounts of material are available for discharge and conditions of the discharge change. In your response please specifically address the issues raised in the Notice of Violation and the inspection report and either provide a schedule for measuring the concentration of radioactive material in the effluent or provide additional justification for why such measurements are not necessary.

Please respond to this letter within 30 days describing corrective action to demonstrate compliance with 10 CFR 20.1501(a) and (b) (formerly 10 CFR 20.201).

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:  
John D. Kinneman

John D. Kinneman, Chief  
Site Decommissioning Section  
Division of Radiation Safety  
and Safeguards

cc:  
Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

Shieldalloy Metallurgical Corporation

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bcc:

Region I Docket Room (w/concurrences)

Gary Comfort, NMSS

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