



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

May 19, 1997

Mr. Douglas K. Strickland  
Safety and Environmental Compliance Officer  
Sheffield Steel Corporation  
P. O. Box 218  
Sand Springs, Oklahoma 74063

SUBJECT: NRC INSPECTION REPORT 999-90004/97-01

Dear Mr. Strickland:

On March 7, 1997, the NRC completed an inspection at your facility in Sand Springs, Oklahoma. The inspection included a review of an incident reported to the NRC by you in February 1997 involving the discovery of a nuclear gauge in a shipment of scrap steel received at your facility. The enclosed Inspection Report 999-90004/97-01 presents the scope and results of that inspection. A telephonic exit briefing was subsequently conducted with you on March 7, 1997.

The inspection included a review of information provided by you to the NRC Region IV office, interviews with members of your staff and others, and a review of a written report maintained by your office documenting Sheffield Steel's review of the incident. In addition, several other facilities were visited in conjunction with the inspection as noted in the enclosed report.

Our inspection determined that the nuclear density gauge found in a shipment of scrap metal received at your facility was originally sold to and installed at the Somex facility in Bartlesville, Oklahoma, in 1981. The Somex plant was subsequently shut down in 1983. Apparently the plant was jointly owned by several other companies until 1990, when it was purchased by Zinc Corporation of America. It appeared that the gauge remained in its original location from 1981 until January 1997 when demolition of the former Somex facility commenced. A scrap metal shipment from this facility, which contained the gauge, was transported via truck to Twelfth Street Scrap Company in Joplin, Missouri, where it remained for a short time. The gauge was then transported by rail car to Sheffield Steel in Sand Springs, Oklahoma, where it activated radiation alarms. During the inspection, interviews were conducted with individuals involved in the scrap handling process who might have been in close proximity to the gauge to evaluate any potential radiation dose received by these individuals.

As discussed with you during the exit briefing, the gauge that was inadvertently transferred to your facility was originally obtained by Somex under a general license pursuant to 10 CFR Part 31. The general license does include specific provisions for proper transfer of devices possessed under the license, as specified in 10 CFR 31.5(c)(8) and (9). The NRC considers improper transfer of generally-licensed devices to be a matter of regulatory concern, particularly when such devices are released to the public domain

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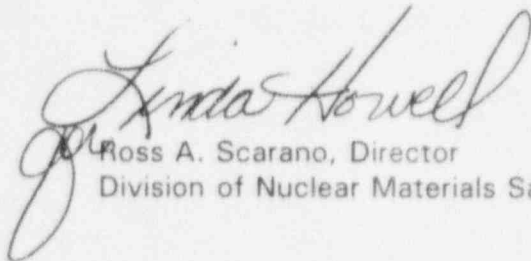


where they may inadvertently enter the scrap metal recycling stream. However, due to the time elapsed since the Somex facility was closed and the subsequent transfer of the property to several other companies, which remain unidentified, we are unable to identify which general licensee improperly transferred the device. Our inspection confirmed that Zinc Corporation of America had not used the former Somex facility and was not aware of the presence of the gauge before the building was dismantled and the gauge was discovered in the shipment of scrap metal received at your facility. Therefore, no violation is being cited at this time.

Your cooperation in assisting us in tracing the origin of the scrap metal shipment is appreciated. This report is being released to document the efforts taken to identify the origin of the device and to evaluate radiation doses which may have been received by individuals who worked with, or in the vicinity of, the scrap metal shipment. Should you or your staff have any questions concerning the information provided in the enclosed report, we will be pleased to discuss them with you. Any questions regarding this matter should be directed to Ms. Linda Howell at (817) 860-3213.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be placed in the NRC Public Document Room (PDR).

Sincerely,



Ross A. Scarano, Director  
Division of Nuclear Materials Safety

Docket No.: 999-90004  
License No.: NA

Enclosure:  
NRC Inspection Report  
999-90004/97-01

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Oklahoma Radiation Control Program; Director

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