



**G E N E R A L   S T E E L   I N D U S T R I E S ,   I N C .**

GRANITE CITY, ILL.

January 18, 1963

**REGISTERED MAIL  
RETURN RECEIPT REQUESTED**

Re: File No. LR:RH

Mr. Eber R. Price, Assistant Director  
Division of Licensing and Regulation  
United States Atomic Energy Commission  
Washington 25, D. C.

Dear Mr. Price:

Reference is made to your registered letter, in duplicate, directed to Mr. C. P. Whitehead, president of our company, calling attention to noncompliance on our part to certain regulations of the AEC's "Standards for Protection Against Radiation," Part 20, and "Radiation Safety Requirements for Radiographic Operations," Part 31, Title 10. Mr. Whitehead has referred this correspondence to me for disposition.

It is apparent from our analysis of the four citations that our major difficulty has been the proper interpretation of the Atomic Energy Commission's "Rules and Regulations." Coincident with the time we started on our program in the use of radioactive materials for radiographic purposes at our facility, we retained the services of Nuclear Consultants Corporation to advise us of the past practice and the "Rules and Regulations" of the AEC. To the best of our knowledge, they are the only local firm licensed by the AEC to conduct this type of work and we have relied heavily on their guidance.

Your inspection was made on November 6, 1962 by Mr. J. E. Oparka of the AEC and your citations are the result of his survey. Immediately after Mr. Oparka's visit, the following steps were taken with specific reference to the four citations contained in your letter, and we itemize these as follows:

Citation No. 1

"Surveys conducted of the radiographic facility were not adequate, contrary to 10 CFR 20.201(b), "Surveys." No evaluation was made to determine the quantities of radiation existing in the unrestricted area on the roof above the radiographic facility during use of byproduct material."



**ACKNOWLEDGED**

General Office: GRANITE CITY, ILL.  
Plants: GRANITE CITY, ILL. • EDDYSTONE, PA. • ST. LOUIS, MO. • AVONMORE, PA.  
Divisions: ST. LOUIS CAR • NATIONAL ROLL

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This citation indicates that the survey made of the radiographic installation was inadequate and refers to an objection on the part of the Atomic Energy Commission inspector to the calculation rather than direct measurement of radiation levels above the roof of #6 Building. Originally these calculations had been sent to the Atomic Energy Commission with the application for license to use Atomic Energy Commission byproduct material. At that time the use of these calculations was approved by the Atomic Energy Commission Licensing Division, but Mr. Oparka felt that a physical survey should have been made of this area. We are presently arranging to get such a survey made by a group licensed by the Atomic Energy Commission for such surveys.

Citation No. 2

"The two cobalt 60 sealed sources were not leak tested at six-month intervals as required by 10 CFR 31.105(b), "Leak testing.....of sealed sources."

The two cobalt 60 sealed sources were tested on the following dates:

Original leak testing at Budd Company - Feb. 27, 1962  
Leak testing performed by Nuclear Consultants Corp. - Nov. 24, 1962

We had been informed that this leak testing should be performed twice a year or at six-month intervals. Unfortunately, the regulations do not allow for inactive time i.e. storage while we were preparing to use the material and the interpretation is that the time interval for leak testing is not to exceed six-months. An examination of the above figures indicate the leak testing was done with an interval between tests of 8 months 25 days. Due to our wrong interpretation of this requirement we were in violation. Since the time of Mr. Oparka's visit we have arranged to have the source leak tested by Nuclear Consultants Corporation at intervals not to exceed 5-1/2 months. We have arbitrarily reduced the six-months figure to allow for unexpected difficulties in scheduling.

Citation No. 3

"The NRD model CS-40A survey meter was not calibrated on a three-month basis as required by 10 CFR 31.104, "Radiation survey instruments."

The above citation refers to a violation of the code which requires a calibration on a three-month basis of the two survey meters used to determine the position of the isotope prior to an individual entering the radiation area. The survey meters were calibrated on the following dates:

Nuclear Consultants (prior to receipt of instrument) - May 8, 1962  
Nuclear Consultants - August 1, 1962

Documented in our files is a letter attesting to difficulties experienced by Nuclear Consultants Corporation in calibrating the instrument. It indicates that they had difficulty in calibrating the instrument during a reasonable period of time due to a malfunction of a resistor.

Due to this we purchased another instrument in an attempt to prevent this from reoccurring. This instrument was calibrated on November 2, 1962 prior to the receipt of the instrument. We then sent the first instrument in to be calibrated and received from Nuclear Consultants Corporation a certificate of calibration dated December 4, 1962. Examination of the calibration graph indicated that although the instrument was useable, it did not meet the requirements of the Atomic Energy Commission. We immediately returned the instrument to Nuclear Consultants Corporation with instructions to repair it in accordance with our order. We have since learned that the difficulty was a bad resistor unobtainable in this area. Nuclear Consultants Corporation have accordingly ordered one from the factory, but it has not, at the time of this writing, arrived.

As can be seen, the intervals between calibration on instrument #1 was 2 months 23 days and 4 months 3 days. As we now know this instrument should have been calibrated at a date not later than November 1, arrangements have been made, barring unforeseen complications, to have these instruments calibrated in periods not to exceed 90 days. Arrangements will also have to be made (considering the present difficulty we are having with instrument #1) to have #2 calibrated overnight when the 90 day interval has elapsed. This instrument will be calibrated on or before February 2, 1963.

Examination of the above dates will show that we had on hand and in use one instrument at all times which had been calibrated within the 3 month period except for a matter of 1 day. It must be borne in mind that one instrument would satisfy our needs and the presence of the other instrument is necessary only so that the calibration dates will overlap.

Citation No. 4

"Quarterly physical inventories were not conducted as required by 10 CFR 31.106, "Quarterly inventory."

There is some confusion in our minds concerning exactly what the difficulty was in our quarterly inventory. The requirements are that these inventories were to be conducted quarterly. The material was received on April 24, 1962. Following are the dates of the inventories:

June 7, 1962  
September 4, 1962  
October 30, 1962  
January 4, 1963

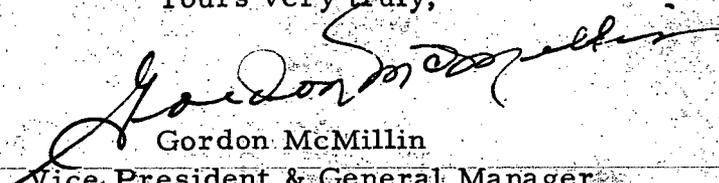
These dates give the following intervals:

- 1 month 12 days
- 2 months 26 days
- 1 month 25 days
- 2 months 4 days

Our difficulty on this citation appears to be that we inventoried this material based upon an inventory within every 3 months, starting with receipt of the material rather than within the periods January 1 to March 31 inclusive, April 1 to June 30 inclusive, July 1 to September 30 inclusive and October 1 to December 31 inclusive. Since it would seem that the violation was in erratic spacing between the dates of the inventory, we are making arrangements to inventory the material on hand on the date of April 4 etc. throughout the year 1963.

We trust the foregoing action indicates our sincere desire to conform to the complete content of the AEC's regulations, in toto, and in the interest of the employees of this company.

Yours very truly,

  
Gordon McMillin  
Vice President & General Manager  
Commonwealth Division

GMcM:js