

**CRANE****MIDWEST FITTINGS***License File*TELEPHONE (314) 621-8300  
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March 07, 1985

Director  
Office Of Inspection and Enforcement  
United States Nuclear Regulatory Commission  
Washington, DC 20555

Dear Sir:

Following is Crane Midwest Fitting's (C.M.F.) response to NRC Notice of Violation and Proposed Imposition of Civil Penalty dated 02-12-85 against By-product Material License number 24-00563-02 (EA 85-11) transmitted by Mr. J. G. Keppler's letter of 02-13-85 received in this office 02-18-85.

Enclosed is our check # M022884 in the amount of \$5000.00 payable to the Treasurer of the United States in payment of the proposed civil penalty .

In accordance with the provisions of 10 CFR 2.201, C.M.F. addresses the five (5) requested responses below. Based upon the verbal advice given by NRC personnel during the Enforcement Conference on 01-03-85, (appealing the civil penalty and/or requests for remission or mitigation are seldom successful) C.M.F. has elected to admit the alleged violation and remit the proposed civil penalty. We have however, identified several areas by asterisk (\*) wherein further discussion for the record is provided.

(1) Admission or denial of the alleged violation:

C.M.F. admits the alleged violation.

(2) Reasons for the violation: \*

C.M.F. believed that the corrective actions taken (postings) as a result of the 1980 NRC citation (Inspection Report 80-01) were sufficient to preclude exposure to the general public in that:

- a) Work on utility poles and/or transformer platform would be minimal,
- b) the utility poles could not be climbed without proper equipment,

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- c) power utility personnel would see and recognize posted warning signs, and
- d) power utility personnel would heed posted warning signs.

(3) Corrective steps that have been taken and results achieved: \*

- a) On October 30, 1984, C.M.F. established a five party Radiation Task Group to plan and execute immediate corrective steps and to develop/implement further short term/long term corrective actions. This group has met eight (8) times through this date.
- b) As of October 10, 1984, the transformers, transformer platform and one utility pole have been removed by the power utility as part of their planned ongoing work. Three utility poles remain in place and have been reposted with warning signs which are more impervious to weather fading. The power utility was again reminded to contact C.M.F. before working on the utility poles in the future. Additional new warning signs on our roof and east building face were in place as of November 09, 1984.
- c) By November 16, 1984, C.M.F. had developed and installed a portable (in-booth) collimation shielding device and a supplementary film side shielding device. In addition, source collimation is being employed. Radiographers have been instructed to perform all exposures using these devices and to re-direct the radiography source to the west (within our facility) and away from the east outside wall and windows. The collimated source is to be directed in a downward and/or horizontal exposure angle wherever practical.

Before these changes were made, radiation survey results indicated 900-1000 mR/hr outside and above the east wall windows and 3-4 mR/hr outside the east brick wall below the windows directly opposite the radiation source. With the changes identified above, current survey readings indicate radiation levels of 125-260 mR/hr for the former and less than 2 mR/hr for the latter locations.

- d) By December 28, 1984, C.M.F. had purchased additional high density concrete blocks and planned to increase the height of the booth walls and to increase the thickness of the existing east booth wall. Completion of this work had been planned for January 1985 but was suspended following the Enforcement Conference on January 03, 1985. Plans to investigate underground relocation of the utility power lines were also discontinued at that time.
- e) Following the Enforcement Conference, C.M.F. began direct visual physical surveillance of unrestricted areas outside our facility using radio communications to ensure the radiography

source would be retracted in the event any individual attempted to enter the unrestricted area. This action began on January 04, 1985 and continues when the facility is in use. This activity supplements the inside silhouette surveillance that is and was being performed.

- f) A study was undertaken on January 07, 1985 to determine the feasibility of building a new underground booth with a floor level sliding roof. This concept was discarded because of an existing sump in the proposed area of booth construction. Further Radiation Task Group discussion on January 15, 1985 resulted in the following plan of action:
- 1) Complete inprocess radiography in the south booth.
  - 2) Remove existing north booth.
  - 3) Increase the existing south booth wall thickness and height on three sides (north, south, east).
  - 4) Construct drive-in opening in the west wall and install a moveable door.
  - 5) install a steel reinforced concrete roof on south booth.
- g) Item 1) was completed and work began on Item 2) when our Engineering Department advised that the existing plant floor and substructure would not support the anticipated weight of Items 3), 4) and 5). This plan was terminated during the week of February 11, 1985.

(4) The corrective steps that will be taken to avoid further violations:

A Radiation Task Group Meeting was held on February 21, 1985 with management and staff participation. A complete overview of the situation resulted in the following modified action plan:

- a) C.M.F. Quality Assurance to advise Engineering of the desired new Gamma Ray Booth configuration, wall thicknesses, height, roof thickness and physical plant location.
- b) C.M.F. Engineering to engage a Soil Consulting Engineering firm and a General Contractor to determine the footing and structural requirements necessary for a) above.
- c) C.M.F. Engineering to prepare a Safety Related CER (Capital Expense Request) for Crane Corporate approval to accomplish a) above in three phases; i.e., footing, walls and roof. The footing and walls to be of a structural design and configuration capable of supporting the addition of a roof at a later date.

- d) Following Corporate approval in c) above, begin new booth footing and wall construction.
- e) During steps a), b), and c) above, intermittent required use of the radiographic source will continue utilizing the existing south booth and direct physical surveillance as described earlier. During the construction stage as described in d), C.M.F. will perform ONLY necessary work requiring the radiographic source. This work will be performed well within C.M.F.'s physical facility on a back shift basis utilizing setup and surveillance techniques associated with field radiography i.e., cleared area inside our plant, direct physical surveillance, establishment of a 2mR/hr boundry line and adequate supervision.

For background, C.M.F.'s current utilization of the radiation source is at a minimal level because of facility work load reductions. For December 1984, we made 30 exposures for a total time of 34 hours; January 1985 was 15 exposures/10 hours and February was 18 exposures/5 hours. March 1985 is anticipated at 18 exposures/6 hours. We are not projecting any exposures for April through July 1985 based on present day work load schedules.

- f) When construction outlined in d) above is completed, C.M.F. will perform new radiation surveys utilizing all the described corrective actions to assure operations within regulatory requirements.
- g) In the event full regulatory compliance is not achieved, C.M.F. will consider installation of the booth roof as described or other adequate overhead shielding to assure regulatory compliance.
- h) Following f) or g) above, C.M.F. will request further amendment to our current Byproduct Material License renewal application.

5) The date when full compliance will be achieved:

Step 4a was completed on 02-22-85 and details a 17 X 26 X 8 foot high booth to be constructed with equivalent 36-inch thick high density concrete walls (147 lb/cu-ft) with the capability of adding a 30-inch thick equivalent high density concrete roof. The new booth would be physically located where the south booth now exists but would be centered in the bay away from the east wall.

Step 4b was begun on 02-21-85 and is targeted for completion during the week of March 11, 1985.

Step 4c is anticipated complete by the week of March 25, 1985.

Corporate approval of step 4c is anticipated by the week of April 22, 1985. NOTE: Crane Corporate approval group meets monthly. Should this group need additional information, etc. to disposition funding request, schedule slippage in monthly increments may be experienced.

Construction completion of step 4c is targeted for the week of June 24, 1985 pending Corporate approval.

Step 4f completion is anticipated by the week of July 8, 1985 with completion of step 4h to follow within 30 days.

In the event step 4g is required, a revised plan and completion schedule will be developed along with a rescheduled completion of steps 4f and 4h.

\* DISCUSSION:

For response (2), we believe there are additional circumstances that impact the cause of the violation. The NRC News Announcement (85-07) dated 02-21-85, Mr. J. G. Kepler's letter of 02-13-85 and NRC Special Inspection Report 030-05066/84-01(DRSS) page 4, section 7, all address the 1980 NRC citation (Inspection Report 80-01). Without benefit of additional background, a public reviewer might conclude that C.M.F. was again in violation and having been warned in 1980, the proposed civil penalty was a prudent NRC action. However, in consideration of all available information, a public reviewer may draw a different conclusion.

Following the 1980 citation, C.M.F. responded on August 21, 1980 with corrective action that consisted of utility pole postings. This action was reviewed during a NRC routine safety inspection and was acknowledged in your 05-05-81 response letter. At that time, and through the four years until the incident and through the three NRC visits to our facility since the incident, the need for and/or lack of direct visual outside surveillance was not identified. It became a subject of discussion during the Enforcement Conference on January 03, 1985 and C.M.F. took action as described in (3)e) the following day.

While C.M.F. cannot disclaim responsibility for meeting all regulatory requirements, had NRC highlighted the need for direct outside visual surveillance at any of the previous opportunities, C.M.F. would have taken necessary action sooner and possibly prevented the current incident. We feel that the 1980 citation is not germane to the current incident.

Section 5, page 3, fourth paragraph of the referenced report again used the term illegible with reference to the second sign. C.M.F. identified during the Enforcement Conference and again with this transmittal that we do not concur with the NRC description. Page 2, second paragraph of C.M.F. October 10, 1985 notification states our position.

We believe our response addresses the requirements outlined in the referenced Notice Of Violation.

Should you need additional information, please advise.

Yours truly,

CRANE MIDWEST FITTINGS

  
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General Manager

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