

Westinghouse
Electric Corporation

Lamp Divisions

One Westinghouse Plaza
Bloomfield New Jersey 07003

September 22, 1977

Mr. Boyce H. Grier, Director
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

40-2286

RE: Inspection 40-2286/77-02

Dear Mr. Grier:

This letter will indicate actions taken and plans formulated to correct violations noted in your letter of August 25, 1977. Individual dates are forwarded including completion of the entire project.

Corrective Steps Taken

The Bloomfield plant was visited by Mr. W. Bickerstaff, Manager Westinghouse Industrial Hygiene Laboratory on September 6 and September 9, 1977. He observed our manufacturing operations involving thorium, reviewed our monitoring procedures and equipment and discussed improvements in the exhaust system serving our thorium operation. His recommendations are as follows:

1. Replace the rusted portions of the Building 9 (thoriated tungsten) ventilation system (fan and duct work). Install absolute filters.
2. Reposition the Building 10 (thoriated emission) absolute filter housing to the upstream side of the fan to permit isokenetic sampling.
3. Air sample each part of the manufacture of thoriated tungsten, thorium metal and thoriated emission mixture.
4. Take air sample at exhaust system discharges during all phases of thorium operation.
5. Enclose Building 9 sieve (thoriated tungsten) and connect enclosure to exhaust system.

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6. Develop and present a training program for supervisors and operators.
7. Provide an alpha meter to be used by personnel to monitor hands, clothing and shoes before leaving thorium processing area.
8. Take air samples at any change in manufacturing process involving thorium.
9. Redecontaminate Building 7 basement floor drains.

To augment Mr. Bickerstaff's ideas, along with those recognized after your inspection, the following program has been initiated:

1. We have appropriated \$30,000 for work to be done in Building 9. A new fan and motor are on order with delivery date December 1.
2. Personnel air samples are now being taken for each phase of both manufacturing operations involving thorium.
3. Air samples at exhaust systems are now being taken during all phases of thorium operations.
4. A two hour training program on working with radioactive materials has been scheduled for September 29, 1977. It will be presented by the Radiation Safety Officer.
5. Instructions have been issued to notify the Radiation Safety Officer of any change in manufacturing process or equipment.
6. Signs reading "No Smoking" and "Caution Radioactive Materials" are now posted in the sections of Buildings 9 and 10 where thorium is used.

As regards actions still to be taken to correct violations:

1. Replacement duct work will be fabricated and installed as part of the appropriation for Building 9. Absolute filters will be provided. The estimated date of the total Building 9 exhaust system repair is February 1, 1978.
2. The positions of the fan and absolute filters of the Building 10 exhaust system will be reversed. Isokinetic stack sampling can then be made. Completion date is December 30, 1977.
3. The enclosing and ventilating of the sieve is included in the Building 9 exhaust system repair.

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4. An alpha survey meter will be provided in the Building 9 thorium process area by November 1, 1977.

5. The floor drains of Building 7 will again be vacuumed by an outside contractor to remove any removable radioactive material. This will be done when the contractor is in the plant to clean equipment in the emission lab. The approximate date would be December 1.

To summarize, our monitoring of operations and personnel has been upgraded to insure recording during both periods greatest and least exposure. The condition of the exhaust system also will be improved by February 1, 1978 to provide proper monitoring of air discharged to the atmosphere. This date is based on:

- . Receipt and installation of fan, motor, switchgear
- . Decontaminated, remove old duct work, install new system
- . Installation of correct air filter system

Through the changes listed, and greater attention to our employee safety commitment, we expect to eliminate instances of violations. We appreciate the help your office has given us in improving our control of exposure to thorium and trust that our plan of operation is satisfactory.

Very truly yours,



Harold J. Rourke
Operations Manager

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