Leo Dubinski, Assistant Director for Materials, Division of Compliance, HQ

April 16, 1963

Robert W. Kirkman, Director
Region I, Division of Compliance

TRANSMITTAL OF TYPE "B" INVESTIGATION REPORT

CO:I:JRR

Transmitted herewith is the investigation report of a Type "B" incident:

MARTIN-MARIETTA CORPORATION
Baltimore, Maryland

License No. SNM-53

All Martin personnel interviewed emphasized that they considered all references to the spheroidizing operation as proprietary information. For this reason, we are recommending that the entire report and the exhibits be considered "company confidential" inasmuch as there are references to this operation throughout the entire report.

This report has been classified as a Type "B" incident, however, we feel that this is subject to interpretation (i.e., that it is possibly a Type "A" incident) inasmuch as the use of the spheroidizing equipment was lost for more than one week.

We concur with licensee personnel that the explosion was probably caused by a build-up of acetylene gas in the system. Please note that the licensee's corrective action, as indicated in paragraph 36 of the report details, includes purging the system with air before ignition of the acetylene gun and turning off the acetylene and oxygen tank valves after a shut down.

As indicated in paragraph 7 of the report details, three referenced documents (MND 2603, MND 2603B and MND 2603C) describe the spheroidizing process. However, none of these documents contains a hazards evaluation relating to the actual spheroidizing of the UO_2 powder with burning acetylene gas. Inasmuch as the license comes up for renewal on 4/30/63, we believe that L&R may wish to consider requesting a hazards evaluation from the licensee, in view of this incident. Please note that an inspection of SNM-53 will be conducted on 4/30/63 by Mr. R. Chitwood of Compliance, Headquarters. Mr. D. Nussbaumer of L&R has been advised of this inspection.

R. Ferri & D. Nussbaumer

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Licensee personnel were advised of the provisions of 20.405(a). Boutelle said that he intended to comply with this requirement. As of the date of this memo, however, no report has been received by this office.

Please note that we are not citing the licensee for 20.201(b) for failure to determine if there was any release of UO_2 through the stack. As indicated in paragraph 30 of the report details, the force of the explosion displaced the filters and Boutelle indicated that he would take a smear survey on the stack side of the final filters in an effort to determine if there had been any release of UO_2. In a telephonic conversation on 4/1/63, Boutelle said that the survey was completed and that the results would be sent to this office. As of the date of this memo, however, these results have not been received. The licensee's air evaluation procedures will be reviewed during the next inspection.

The results of the investigation were discussed with Dr. Ralph D. Bennett, Vice President of the Martin-Marietta Corporation. Bennett confirmed that a constant stack monitor had been ordered and would be installed as soon as it was received. Bennett expressed concern that the explosion had occurred and added that he hoped that the corrective action would preclude any recurrences.

Enclosure:
4 cys rpt