



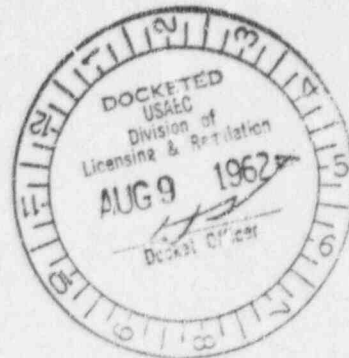
E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON 98, DELAWARE

DOCKETED NO. 44-6664

PURCHASING DEPARTMENT

August 7, 1962

Mr. Donald A. Nussbaumer, Chief (4)
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D. C.



DLR:RLL - 40-6664
YOUR LETTER 8/1/62

Dear Sir:

This is to supplement my letter of July 20 requesting an amendment to Source Material License STB-489.

The answers to the first two questions in your letter of August 1 involve data of a confidential nature, and are answered in the attached supplement to Appendix A of my original letter of October 16, 1961. The answers to questions 3, 4 and 5 follow:

3) The vent duct serving the four hoods and the thoria calcining oven will be sampled by a Gelman filter, holder No. 1200-A, using 2" Gelman Glass Filter Paper, Type E or equivalent. Air at the rate of 1.0 cubic feet per minute will be drawn through the filter, using a Bell & Gossett air pump, number SYC 18-1 or equivalent. The blower will run 24 hours per day. Sampling will be continuous; the filters will be changed and monitored on a daily basis, using a Nuclear Measurements Corp. Proportional Counter, Model PC-3A, or equivalent.

Similar sampling, using like equipment, will take place at the fan location where conditioned air is exhausted to the outside. Because no radioactive dust is expected in this area, a weekly schedule of filter change and monitoring is planned.

The vent from the reduction furnaces will also be sampled by the Gelman filter on a weekly basis. However, in this instance gas flow will be induced by the positive pressure inside the reduction furnaces and metered by a small rotameter.



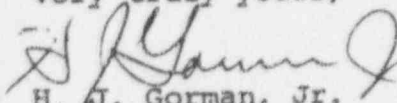
4) Wipe tests are conducted by cutting Whatman No. 42 filter paper (or similar soft paper) to fit the NMC-PC-3A proportional counter, wiping the paper with light, uniform pressure over a measured area of 100-1000 cm² and counting. The level detected must not exceed 0.2 alpha counts (corrected for geometry) per cm² per minute.

Routine smear tests will be taken as follows: One per day in the metal-oxide preparation area, at locations in or just in front of one of the hoods, the daily location to be varied randomly. One per week in each laboratory in which small samples are being opened for testing or experimental use.

Non-routine smear tests will be carried out at the oven after the calcination of each batch and after the cleanup of each major spill. ("Major spill" is defined as one containing over 0.25 lbs. of thorium or its equivalent.) Other adjacent plant areas will be checked on a monthly basis with a survey meter to assure against transfer of thorium contamination.

5) We do not plan to monitor the liquid effluent for radioactivity. All of our effluent will have a pH higher than 6.0, in which the solubility of ThO₂ is several orders of magnitude less than 10⁻⁶ uc/ml. All effluent will be siphoned (decanted) to the sewer from a settling tank, and will contain negligible amounts of ThO₂, which will be further diluted by the plant sewers before discharge.

Very truly yours,



H. J. Gorman, Jr.

Asst. Purchasing Agent
Chemicals & Containers Div.

HJG/lc
Attachment

