FROM: General Electric Company, Philadelphia, PA

DATE OF DOCUMENT: May 7, 1973

DATE RECEIVED: May 9, 1973

NO.: 3045

LTR. X MEMO: REPORT: OTHER:

TO: F. C. Davis

ORIG.: 1 CC: OTHER:

ACTION NECESSARY ☐ NO ACTION NECESSARY ☐

CONCURRENCE ☐ COMMENT ☐

DATE ANSWERED: BY:

CLASSIF: U POST OFFICE REG. NO:

FILE CODE: Docket No. 40-7344

DESCRIPTION: (Must Be Unclassified)
Ltr. submits additional information to the renewal request.....

ENCLOSURES:

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REMARKS:

ACKNOWLEDGED

U.S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1971—446—158

D-117

DOCKET NO. 40-7344

REGULATORY FILE CY

GENERAL ELECTRIC

RE-ENTRY AND
ENVIRONMENTAL
SYSTEMS DIVISION

GENERAL ELECTRIC COMPANY . . . . . 3198 CHESTNUT STREET
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May 7, 1973

U. S. Atomic Energy Commission
Attn: Mr. F. C. Davis
Materials Branch
Directorate of Licensing
Washington, D.C. 20545

Dear Mr. Davis:

Regarding your letter of May 1, 1973 in which you have questions about the renewal of License No. SUB-831, I will try to clarify each item.

1. Yes, we will be handling the depleted uranium in the powder form. In answering Item 8 of the application, I interpreted physical form to mean either solid, liquid or gaseous form.

2. There will be no processing and machining of the depleted uranium (under your interpretation of solid form).

3. See attachment for the specification description of the requirements for a Contamination Control Station to be used in the compounding and testing of radioactive mixtures.

If further information regarding the renewal of this application is required, please contact me at your convenience.

Yours truly,

J. S. Davis

J. S. Davis, Health Physicist
Industrial Safety Engineering

Enclosure

/ktd

This Specification describes the requirements for a Contamination Control Station to be used in the compounding and testing of radioactive mixtures.

1.0 Applicable Specifications

1.1 Military standard 282
1.2 Federal Standard 209

2.0 General System Performance

2.1 Particle Removal

The work station shall be capable of removing all dust or solid particles from the air down to 0.3 micron particle size with a minimum of 99.9% assurance before exhausting to the atmosphere. Overall requirements shall meet the requirements of the above documents, Federal Standard 209, equivalent to Class 4. This equivalency shall be determined by drawing a line on page 9 of Federal Standard 209 parallel to the class 100 line starting at 4 particles/cubic feet; 0.5 micron particle size, to approximately 1 particle per $ft.^3$, 1.0 micron particle size.

2.2 Air Velocity

Air moving across the work surface shall be capable of moving 200 FPM using a new secondary and final filter(s). Electrical provision shall be incorporated to vary the blower speed independently on all blowers.

2.3 Lighting

The working surface shall be illuminated from above and shall be illuminated to a minimum of 150 foot candles. Wire reinforced safety plate glass shall be placed between the lighting source and the working volume to reduce glare and hot spots. Florescent lighting shall be used as the source.

2.4 Noise level within the working volume shall be below 70 db. at all points. The vibration level shall not exceed 0.001 inches in any plane. Both conditions shall be with blowers operating at rated speed.

3.0 Unit Size Requirements

3.1 The vendor shall use these dimensions to pick a standard unit on which to quote. Variations will be allowed and accepted based on the use of standard designs approximating the following dimensions. The work volume shall be 36" deep x 30" high x 72" long minimum. Overall height shall not exceed 87".

4.0 Filter Requirements

4.1 The final filter(s) shall be MSA Ultra Hepa or equivalent. If a filter other than a MSA is used, the vendor shall then also provide

the catalog number of the MSA equivalent.

4.2 Pre-filters shall be used to reduce the dirt load on the final filters. These shall be woven aluminum or equivalent. A secondary pre-filter 90% effective on 0.3 micron particle sizes shall be placed between the woven aluminum and the final filter.

4.3 The filter media shall be double-bead sealed to the frame and shall have aluminum separators. The filter gasket shall be of one piece construction. All final filters shall be certified to meet the requirements of paragraph 2.1. Certification may be made by the filter manufacturer.

4.4 Filters shall be of standard size for maintenance and replacement.

4.5 All filters shall be removable and easy access for maintenance purposes.

5.0 Air Flow Requirements

5.1 The air flow shall pass through the work volume into the filters. After filtration it shall be exhausted to the atmosphere. No air shall pass through the blowers without complete filtration.

5.2 Provisions shall be included for probing after the final filter.

5.3 The air flow shall be adjustable by the use of motor controls.

6.0 Electrical Requirements

6.1 All electrical requirements shall be 110 volt, 60 cycle.

6.2 A separate switch to control lighting shall be included.

6.3 All switches, breakers and pilot lamps shall be front mounted.

6.4 All electrical components shall be explosion proof. This includes all switches, motors, lamps, etc.

6.5 Convenience outlets (two minimum) shall be placed on the front surface easily accessible just below bench top. These outlets shall be protected by a circuit breaker rated to 20 amps.

7.0 Special Utility Services

Provision shall be incorporated in the work area to provide:

a) 3" x 5" cup sink,
b) a gooseneck type faucet shall be used to provide cold water,
c) all work table penetrations shall be silicone rubber sealed,
d) working surface shall be fabricated from stainless steel seamless within the working volume.