Region I 40-7344

GENERAL ELECTRIC

RE-ENTRY SYSTEMS OPERATIONS
GENERAL ELECTRIC COMPANY • P.O. BOX 7722 • PHILADELPHIA, PENNSYLVANIA 19101 • (215) 823-2000

#22233

May 2, 1983

U.S.N.R.C.
Material Licensing Branch
Division of Fuel Cycle & Material Safety
Washington, D.C. 20555

Attention: Dr. D. Howe
Mail Control No. 01121

Gentlemen:

This refers to GE/RSO's application for amendment to License No. SUB-831 (Docket or Reference No. 040-07344).

Attached is a floor plan of the track level showing the restricted area. It is now planned to utilize three machines within this area and to perform deburring and abrading (handwork) of machined parts within this area.

In addition to air sampling described in previous correspondence, air sampling for concentration in unrestricted areas will be accomplished by one or more of the following methods:

a. Sampling at multiple points on the boundary of the unrestricted and restricted areas

b. Results of personnel air sampling for the machine/process operators will be used to determine concentrations in the unrestricted area

c. Results of area air sampling at two meters from the points-of-operation will be used to determine concentrations in the unrestricted area

The basis for the determinations in b. and c. would be as follows: operator is present for 100% of machining/processing activity and is always two meters or closer to point-of-operation; the closest return air intake or boundary between restricted and unrestricted areas from any of the proposed points-of-operation is six meters; this would yield a dilution factor of 27 ($216m^3/8m^3$); using the NRC's ALARA guideline of 1% of MPC (unrestricted area) for effluents to unrestricted areas as a goal, area air sampling results for samplers at two meters from points-of-operation (or personnel air sampling results for operators) should not exceed 1% of MPC (restricted area). If the results of this air sampling for effluents to unrestricted areas indicate that the normal processing could generate airborne concentations of thorium which exceed one to two percent of levels cited in 10 CFR 20.106(a), processing activities will cease until engineering controls are installed.

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When air sampling during the pilot studies indicates that full-time processing should not cause airborne concentrations in restricted and unrestricted areas to exceed the levels cited in this and previous correspondence, normal processing will commence.

Routine air sampling on a daily or weekly basis for restricted and unrestricted areas will be performed during normal processing for the first six months.

The scope of "normal processing/full-time processing" for GE/RSO is limited. At this time, approximately 800 man-hours of this type work is planned over the next twelve months. Based on the results of this activity, subsequent work may be contemplated.

The following information was obtained from a firm with approximately 15 years of experience with manufacturing operations on thoriated magnesium alloy: (a) air sampling of conventional machining operations indicates that airborne thorium concentrations are low and usually measure at natural background levels; (b) conventional machining processes yield particles as chips and turnings which are too heavy to become airborne and consequently need no exhaust; (c) air sampling of mechanical operations (ex. grinding) on machined parts have not indicated the need for ventilation control.

If there are any questions, please contact the undersigned as soon as possible since the proposed start date for the pilot program is imminent.

Sincerely,

Jack McFadden

J. McFadden
Health Physicist
Room 3026
(215)823-3745

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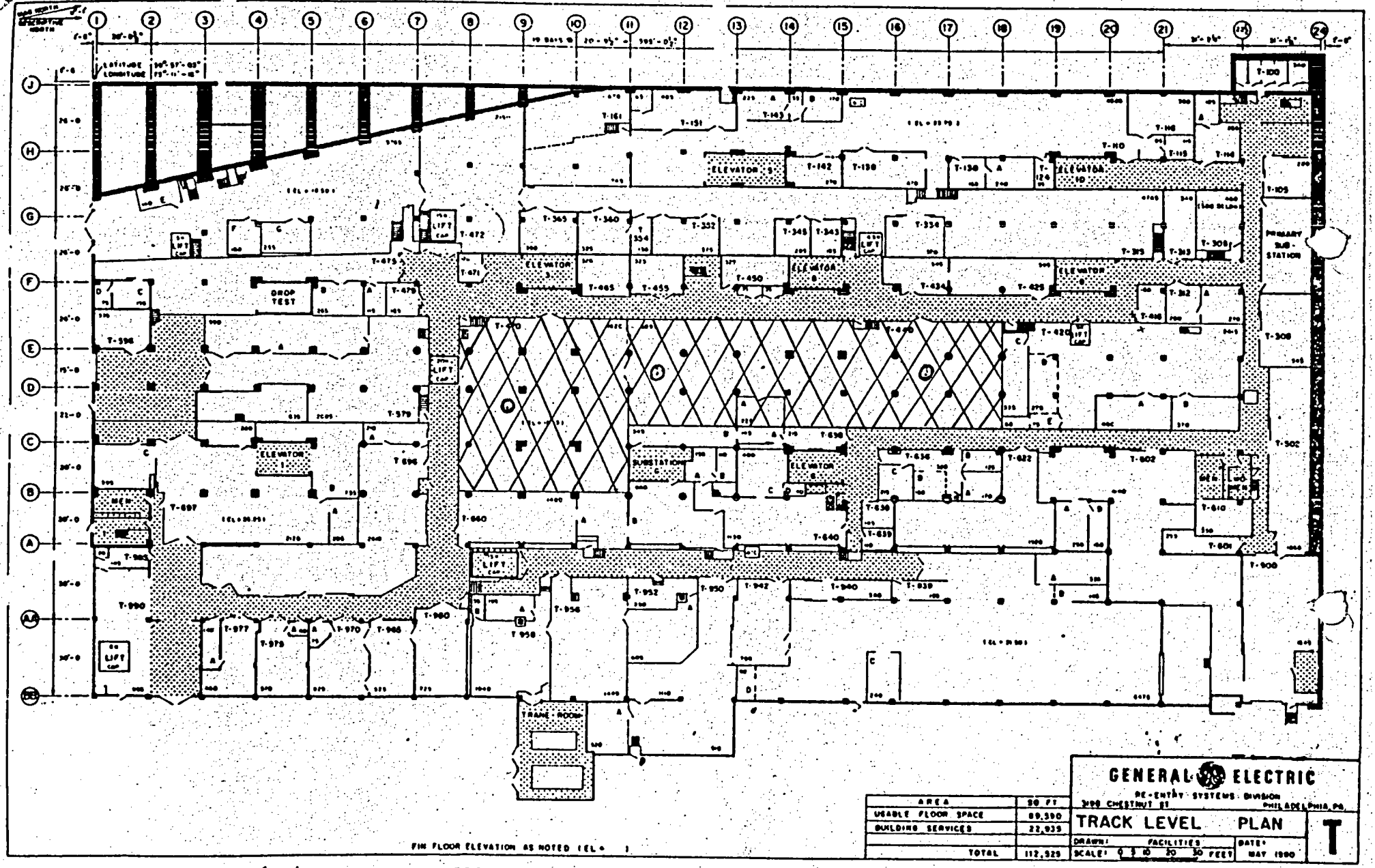

TRACK LEVEL FLOOR PLAN (GE/RSO BUILDING,3198 CHESTNUT ST.,PHILA.,PA 19101; CROSS-HATCHED AREA IS PROPOSED RESTRICTED AREA; OPEN CIRCLES IN RESTRICTED AREA REPRESENT LOCATIONS OF 3 FIXED CONVENTIONAL MACHINING TOOLS)