

SIEMENS

April 11, 1994

U.S. Nuclear Regulatory Commission
Attn: Mr. Robert C. Pierson, Chief
Licensing Branch
Division of Fuel Cycle Safety and Safeguards, NMSS
Washington, D.C. 20555

License No. SNM-1227
Docket No. 70-1257

Dear Mr. Pierson:

Siemens Power Corporation (SPC) requests the NRC to authorize SPC to begin construction on an addition to its Specialty Fuels (SF) Building to house a sintering furnace for neutron absorber fuel (NAF) production. Currently NAF pellets are produced in the SF Building, transferred to the UO₂ Building for sintering and transferred back to the SF Building for grinding, outgassing, and rod loading. The new furnace is required both because of SPC's increasing NAF production and process requirements resulting in longer sintering cycles. The addition will include a new HVAC system separate from the system for the remainder of the SF Building.

Because the activities to be undertaken in the addition are allowed under our current license, no unreviewed safety questions are involved, and SPC will obtain local approval to construct and operate the gaseous emission system, SPC does not believe that a license amendment is required.

Project Description

General Facility

The furnace room facility consists of a two-story tall 26 feet wide by 126 feet long addition to the south side of the SF Building. The addition will house a 3200 square foot production area and a 1000 square foot steel grate mezzanine. The outside walls will be CMU concrete block. The roof will be constructed of steel deck plates supported on steel trusses and covered by a vapor barrier insulation plus twenty year, built-up asphalt. The inner sides of the concrete block walls will be insulated and have a fire-rated gypsum board interior applied on furring strips. The gypsum panel joints will be taped and sealed and the interior surfaces suitably painted for ease of decontamination. The compressive strength of the poured concrete will be 3000 psi

Siemens Power Corporation

Nuclear Division - Engineering and Manufacturing Facility

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and the slab floors designed for 400 psf. The wind load design is for 80 mph (sustained) and the seismic design is Zone 2B.

The room will contain the sintering furnace, designated as the "Line 5 sintering furnace," the associated conveyor system to deliver boats of pellets to and from the furnace, and storage tables for pellets in boats. The attached sketch shows the room layout and its relationship to the rest of the SF Building.

Safety Considerations

Criticality Control

The pellet handling operations in the addition will be carried out under slab height and enrichment control. The criticality safety program described in chapters 4 and 14 of SPC's license application defines the basis for the criticality control activities in the addition. The existing criticality detector system will cover the addition.

Radiation Protection

All gaseous exhausts will pass through double HEPA filtration. Radiation survey equipment will be provided and surveys will be required when leaving a contaminated area. Air sampling and regular equipment/facility surveys will also be undertaken. In addition, the interior walls of the facility will be finished for ease of decontamination. The radiation protection program described in chapters 3 and 12 of SPC's license application will control the radiation protection activities in the addition.

Fire Protection

Smoke and temperature detectors which activate fire alarms both at SPC and the City of Richland Fire Department will be present in the addition as are portable fire extinguishers.

Environmental Impact

The gaseous exhaust from the addition will pass through double HEPA filtration prior to being exhausted through a new stack, the top of which is 25 feet above the top of the building. The HEPA filters will be tested to confirm 99.97% efficiency for the removal of 0.3 micron particles prior to installation. The filters will be tested in-place for 99.95% efficiency for the removal of 0.8 micron particles.

SPC will apply for permission from the Benton Franklin Counties Clean Air Authority to construct and operate the addition, including the stack, and will inform the NRC when such permission is received. SPC estimates the annual uranium release through the stack to be approximately one gram of uranium or approximately three microcuries.

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There are on additional liquid effluents associated with the addition. Cooling for the furnace is accomplished by a closed loop water system.

The environmental protection measures described in chapters 5 and 13 of SPC's license application will apply to operations in the addition.

Management System

The management system for the laboratory is the same as that for the other parts of the facility and is described in Chapters 2 and 11 of SPC's license application. These chapters describe the responsibilities and authorities of key personnel in the SPC organization, the education and experience requirements for personnel with direct safety responsibility, the makeup and function of the Health and Safety Council and ALARA Committee, operating procedures and standards, training, inspections, records retention, facility and process change management, and incident investigation.

SPC will analyze soil samples for gross alpha and beta from the area to be covered by the addition. The results of such analyses will be retained in a decommissioning file.

We expect to begin construction on the addition in early August, 1994 and begin beneficial use of the facility in June 1995. We will submit revised Part II license pages in early 1995.

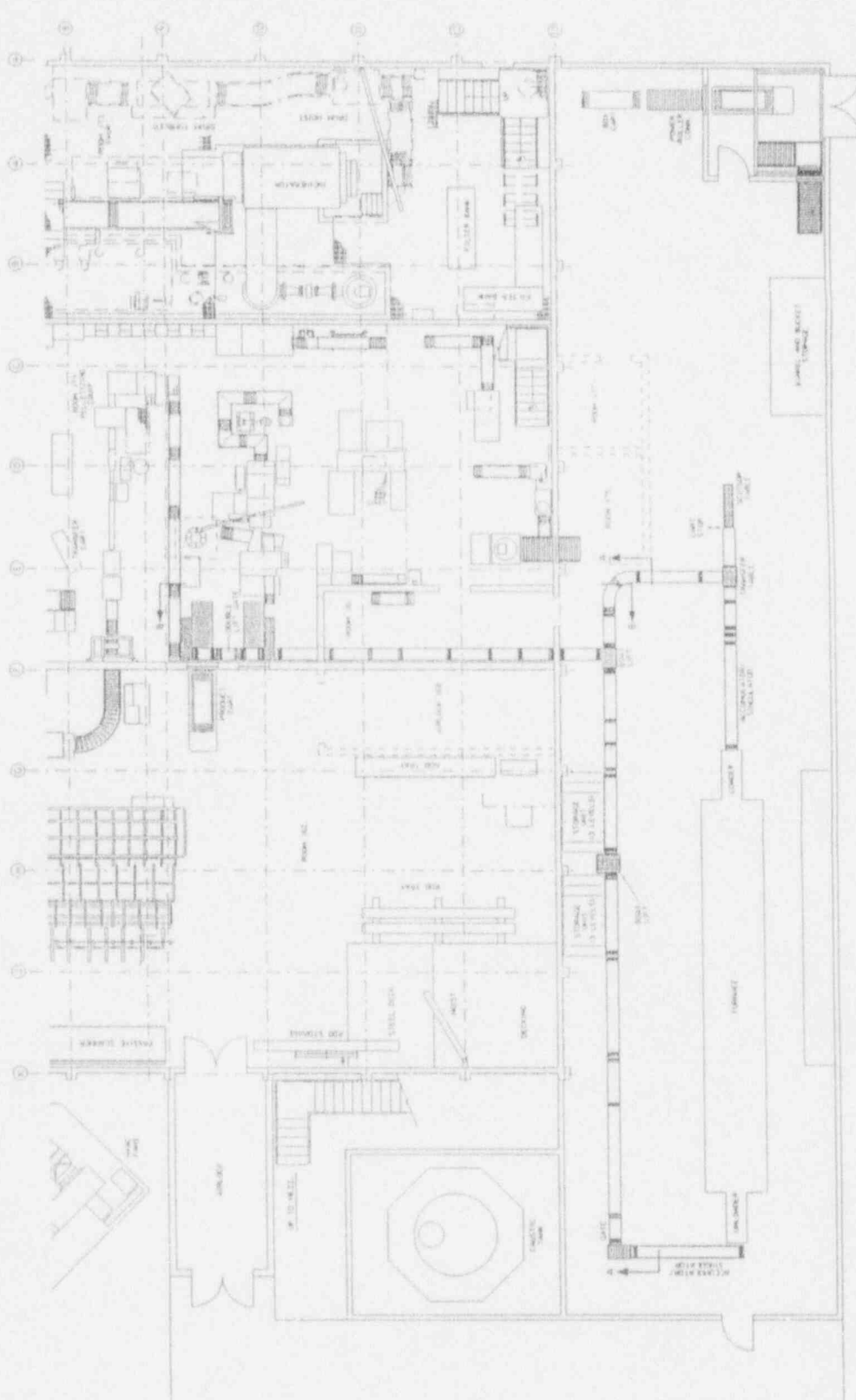
If you have questions or require further information, please call me on 509-375-8663.

Very truly yours,



James B. Edgar
Staff Engineer, Licensing

JBE:pm



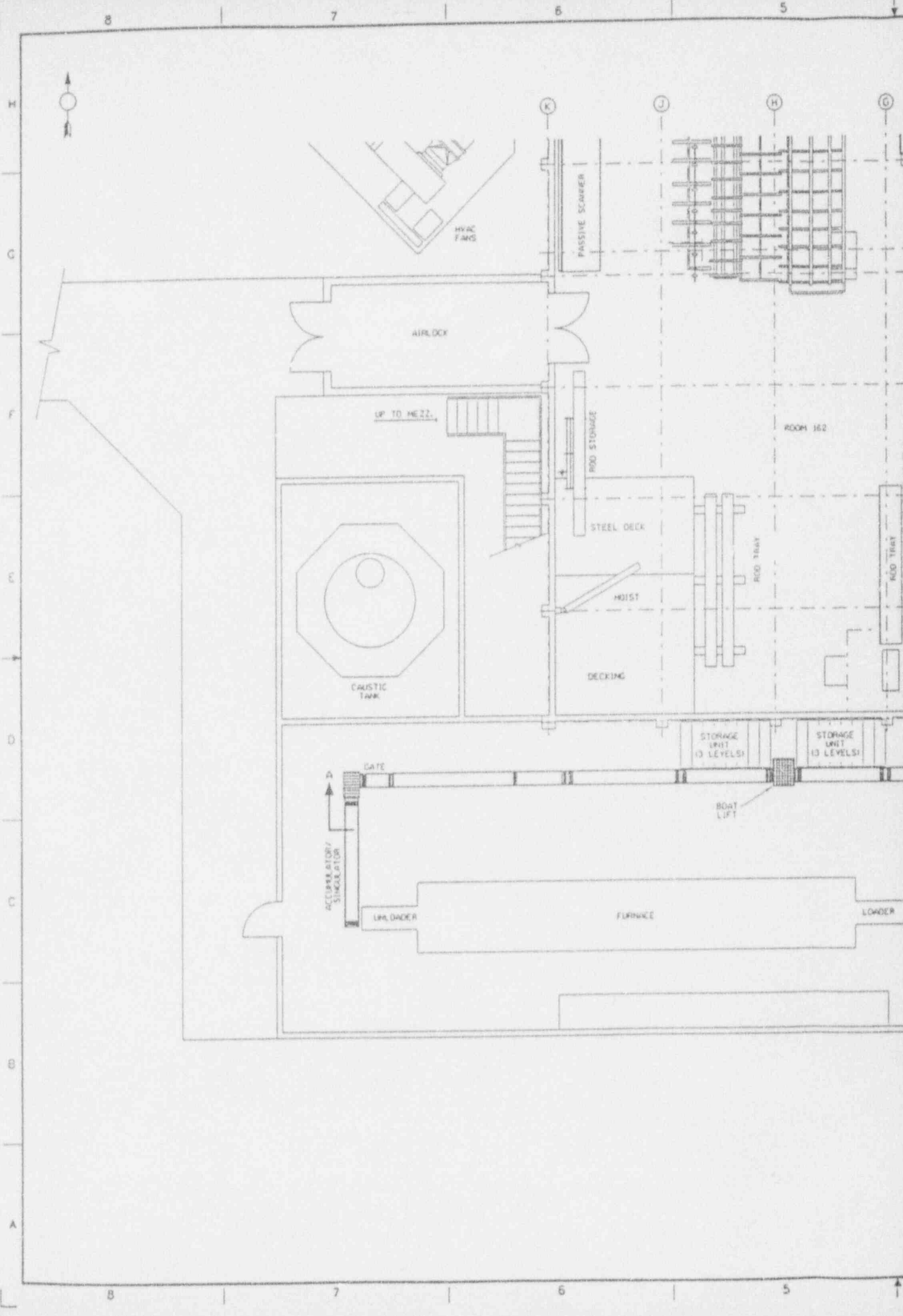
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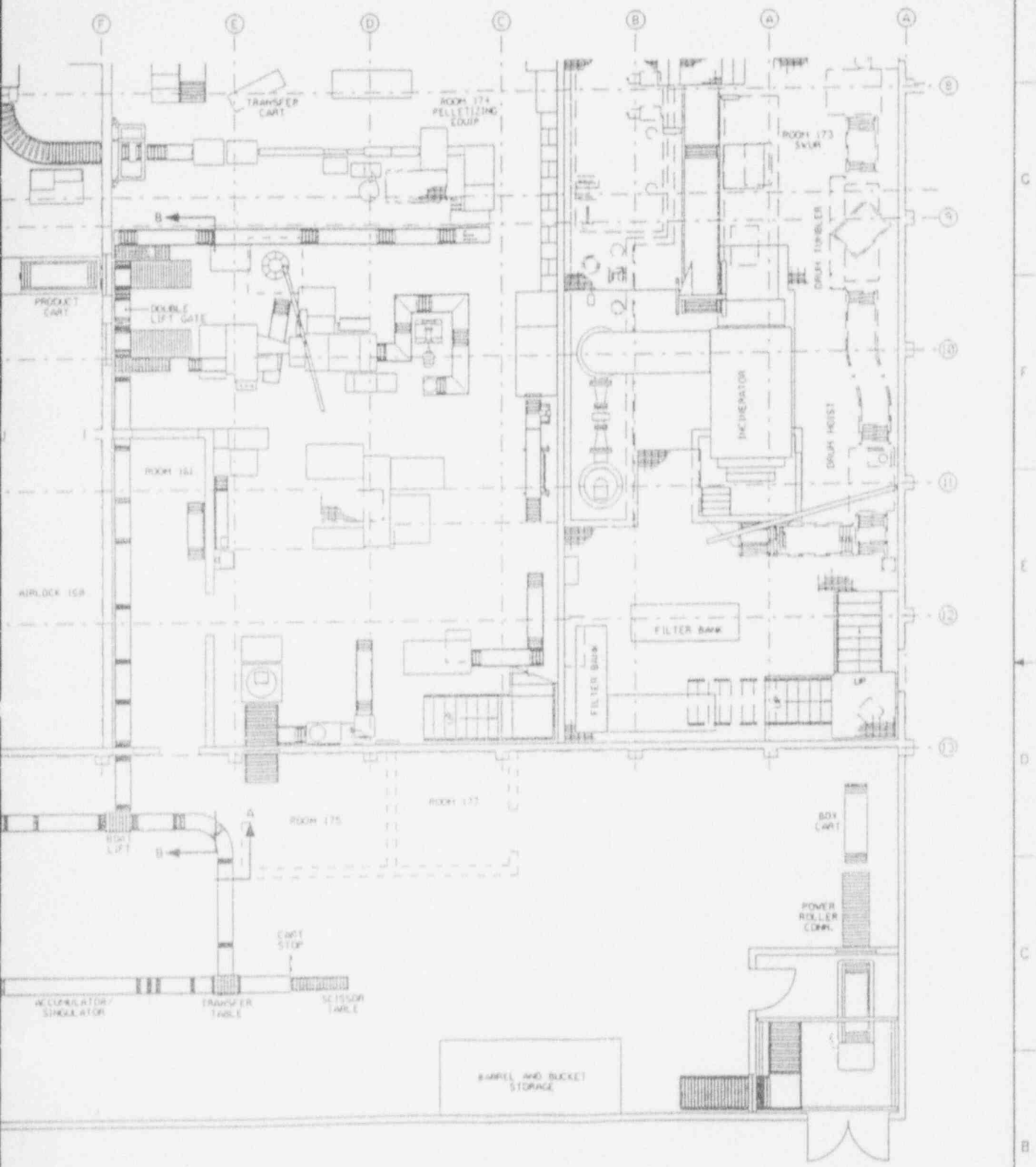
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