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February 11, 1985

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Byron Generating Station Units 1 and 2
Interim Operation of HVAC Systems
NRC Docket Nos. 50-454 and 50-455

References (a): January 11, 1985 letter from T. R. Tramm to H. R. Denton.

(b): August 11, 1984 letter from T. R. Tramm to H. R. Denton.

Dear Mr. Denton:

This letter provides additional information regarding the interim operation of the Byron HVAC systems. Temporary leak limits are being imposed pending completion of testing on the auxiliary building ventilation system on or before July 1, 1985. The status of the control room intake damper replacement is also described.

As indicated in reference (a) conventional dose assessment calculations indicate that offsite doses could exceed the regulatory limits following a postulated LOCA if the auxiliary building ventilation system is not operable and there is significant leakage from ECCS systems carrying highly radioactive liquids outside the containment. There are sizeable conservatisms in these calculations and there is reason to believe that offsite doses would not reach those levels even if such an accident were to occur. To provide additional assurance that offsite doses would be acceptable during all postulated accidents, special interim limits will be established until testing of auxiliary building ventilation systems is complete.

The enclosed Figure 1 indicates the allowable power level at any given auxiliary building ECCS leakage rate without filtration of the auxiliary building air. The notes on the figure explain the basis for this limit. Prior to exceeding 30% power at Byron 1, the leak rate from ECCS systems in the auxiliary building will be determined as described in reference (b). Until testing of the auxiliary building ventilation system is complete, Byron 1 will not be operated at power levels exceeding 30% unless it can be shown that the auxiliary building ECCS leakage is below the corresponding limit shown in Figure 1. Once the Byron 1 auxiliary building ventilation equipment is declared operable, these limits will no longer apply. Because of the short duration of this limitation, no ongoing surveillance will be conducted once the leak rate has been found to be acceptable for a given power level.

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As indicated in reference (a), bubble-tight dampers are being installed on the outside air dampers for the control room ventilation system. Figure 2 shows the location of the control room intake and exhaust points with respect to the containment. The purge mode air intake and exhaust dampers will be installed at the first refueling on Byron 1. Those ducts will be blanked off until the new dampers can be installed. We expect to have the new dampers on the normal intakes installed and tested before exceeding 5% power. If this cannot be accomplished, those intakes will be blanked-off and either train A or B of the control room ventilation equipment will be operated continuously in the emergency mode (emergency makeup air filter in operation) until the bubble-tight dampers are installed and tested. Figure 3 shows the system lineup in the emergency operating mode as well as the dampers that are being replaced.

All of the new dampers will be installed by the end of the first refueling outage. These matters have been discussed with the NRC Staff. The actions described here will be implemented on the basis of our understanding that they are acceptable to the NRC. Please direct further comments or questions to this office.

One signed original and fifteen copies of this letter are provided for NRC review.

Very truly yours,

T. R. Tramm

T. R. Tramm
Nuclear Licensing Administrator

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cc: Resident Inspector Byron

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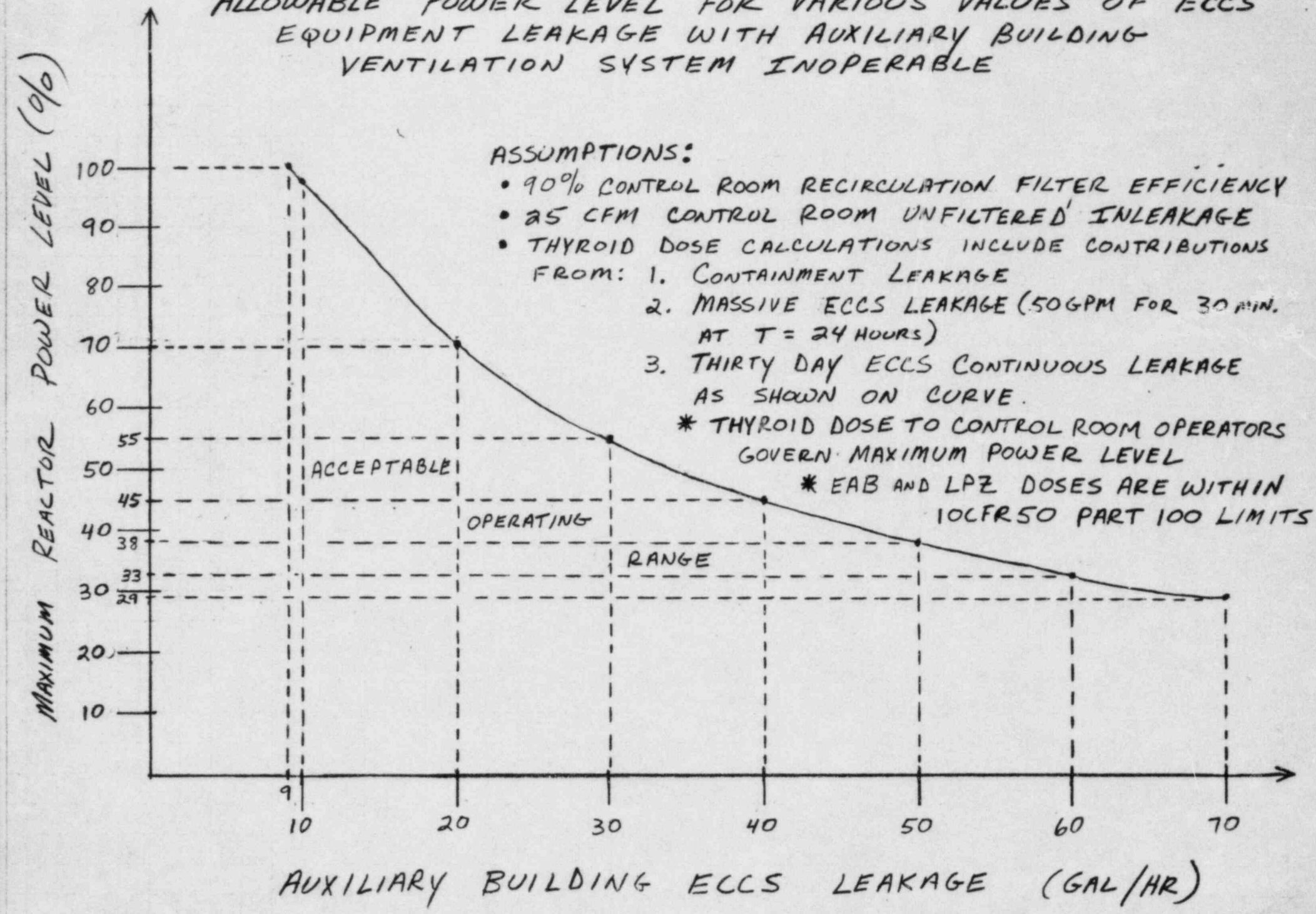
Figure 1

ALLOWABLE POWER LEVEL FOR VARIOUS VALUES OF ECCS EQUIPMENT LEAKAGE WITH AUXILIARY BUILDING VENTILATION SYSTEM INOPERABLE



ASSUMPTIONS:

- 90% CONTROL ROOM RECIRCULATION FILTER EFFICIENCY
- 25 CFM CONTROL ROOM UNFILTERED INLEAKAGE
- THYROID DOSE CALCULATIONS INCLUDE CONTRIBUTIONS FROM:
  1. CONTAINMENT LEAKAGE
  2. MASSIVE ECCS LEAKAGE (50 GPM FOR 30 MIN. AT T = 24 HOURS)
  3. THIRTY DAY ECCS CONTINUOUS LEAKAGE AS SHOWN ON CURVE.

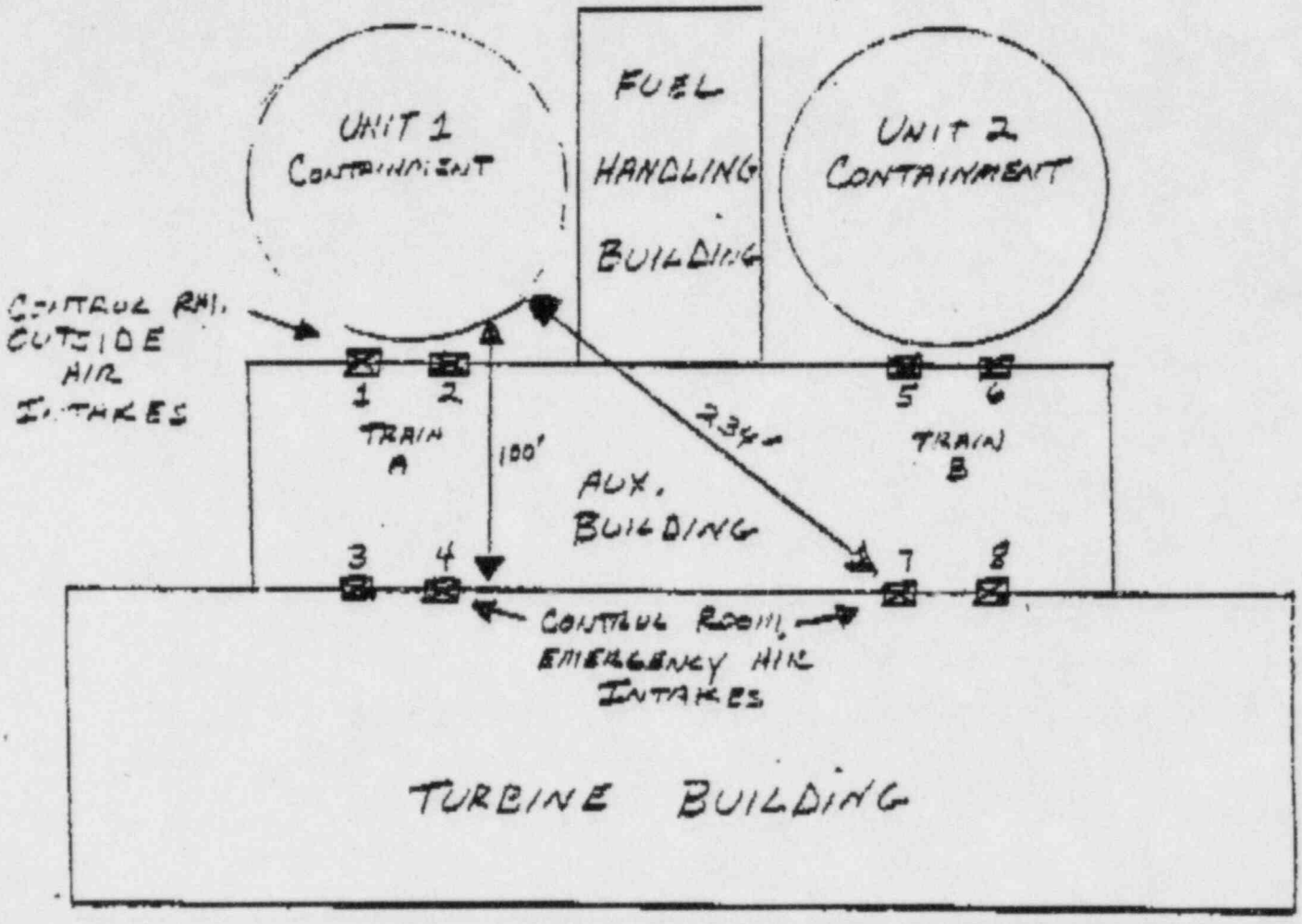
* THYROID DOSE TO CONTROL ROOM OPERATORS GOVERN MAXIMUM POWER LEVEL

* EAB AND LPZ DOSES ARE WITHIN 10CFR50 PART 100 LIMITS

FIGURE 2

LOCATION OF CONTROL ROOM AIR INTAKES

BYRON STATION



1. PURGE MODE AIR INTAKE
2. NORMAL MODE AIR INTAKE
3. PURGE MODE AIR EXHAUST
4. EMERGENCY MODE AIR INTAKE
5. NORMAL MODE AIR INTAKE
6. PURGE MODE AIR INTAKE
7. EMERGENCY MODE AIR INTAKE
8. PURGE MODE AIR EXHAUST

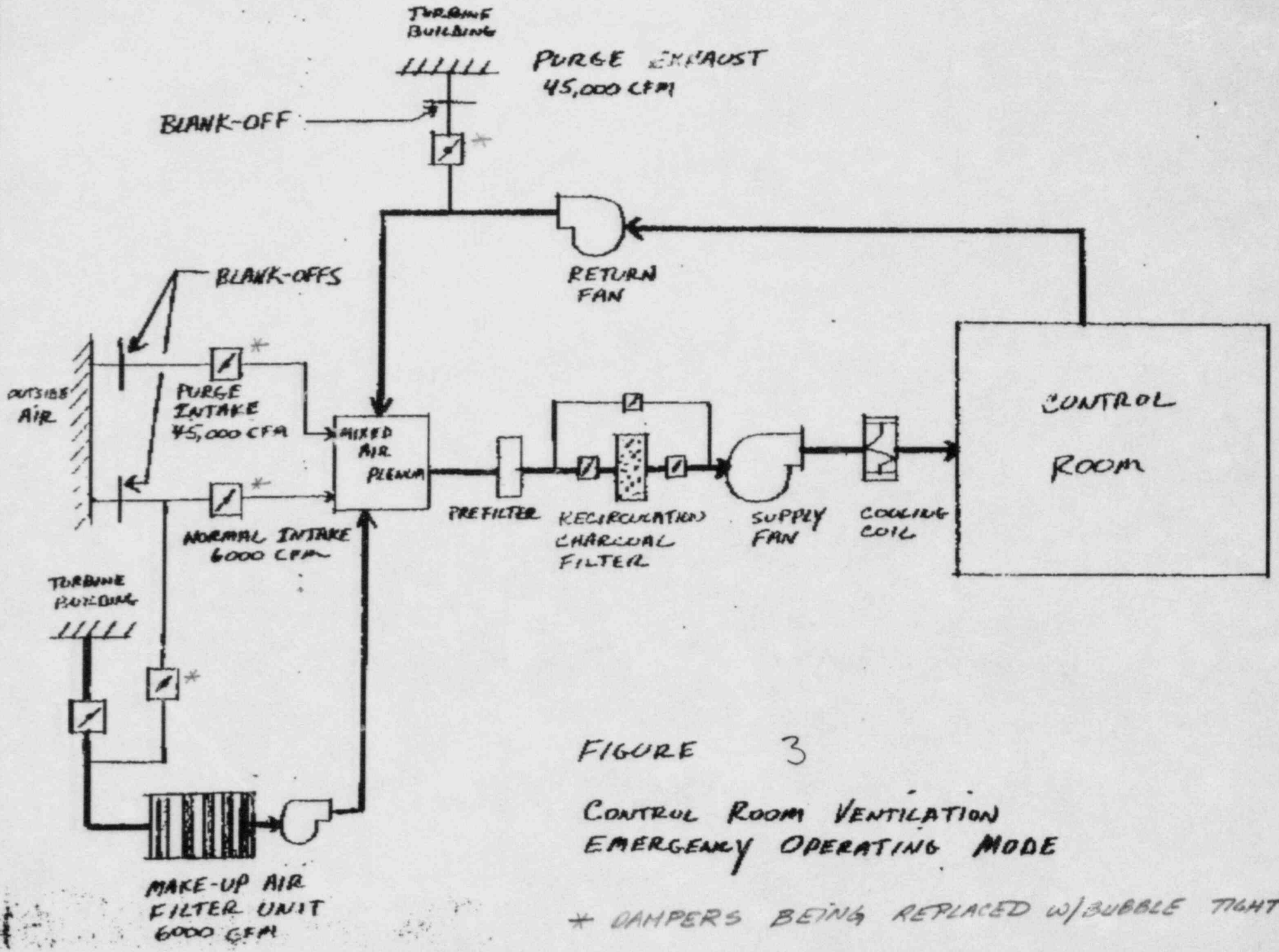


FIGURE 3

CONTROL ROOM VENTILATION
EMERGENCY OPERATING MODE

* DAMPERS BEING REPLACED W/BUBBLE TIGHT