I. TECHNICAL SPECIFICATION CHANGE REQUEST NO. 110

The Licensee requests the attached changed pages replace the following pages of the existing Technical Specifications:

Appendix A

Replace pages 3-62c, 4-55d

II. REASONS FOR CHANGE REQUEST

Recent air flow measurements taken at the discharge of Aux. & FHB exhaust fans (AH-E-14A through D) indicate a total exhaust flow of slightly more than 101,000 CFM. This reduced flow is below the Tech. Spec. limits of $\pm$ 10% of 118,000 CFM. The cause of the reduced flow is attributed to (1) the installation of fire dampers in Auxiliary Bldg. which increased the system static pressure and (2) installation of the environmental barriers and isolation dampers in FHB which cut off and reduced the exhaust air from FHB. Since the safety related areas in Aux. and FHB are serviced by two redundant recirculating cooling units, reducing exhaust flow to as low as 90,400 CFM will not either affect the safety function of the plant or degrade the original design basis of Auxiliary and Fuel Handling Bldg. ventilation system as defined in FSAR subsections 9.8.2.1 and 9.8.3.1.

III. SAFETY ANALYSIS JUSTIFYING CHANGE

The following evaluations or explanations together with Table I will describe our design basis for the change to the Aux. and Fuel Handling Bldg. ventilation system.

1. The original exhaust air in areas where potential source of radiation and heat generating equipment are located is not changed. This will assure that the original design basis of the ventilation system for these areas are maintained.

2. In enclosed areas where ventilation air is reduced, a minimum differential pressure of 1/8" of H_2O across the sealed closed door (1/8" neg. press. with respect to corridor/clean areas) is considered as the basis for determining the reduced bare minimum ventilation rate. This will assure that the airborne radioactive particulates inside the room are being prevented from migrating to the cleaner areas before being exhausted and filtered through HEPA and charcoal adsorber.

3. In some areas which are not totally enclosed and have open passageway, 20 feet per minute velocity of air movement through the passage opening is the basis for determining the bare minimum ventilation rate. The 20 feet per minute air velocity will assure a positive air movement through the opening and prevent airborne radioactive particulates from migrating to the clean areas.

Table I is the comparison between the original design flow and the proposed air flows. The amount of the reduced flow is proportioned between the Auxiliary Bldg. and the Fuel Handling Bldg.

The following are the evaluation of the reduced exhaust air flow for each building.

1. Auxiliary Bldg. - The reduced exhaust flow from the Aux. Bldg. is 10,350 CFM less than the original exhaust flow of 58,830 CFM. As mentioned above, the reduced air flow is due to the installation of fire dampers in various areas of Aux. Bldg. Since the safety related areas in this bldg. are serviced by two redundant recirculating units, the reduced ventilation rate of 48,480 CFM (58,830 less 10,350 CFM) does not affect the safety function of the plant. The design basis of Auxiliary Bldg. ventilation system as defined in FSAR 9.8.3.1 is still maintained even with a bare minimum reduced flow as indicated in Table I and items 1, 2, and 3 above with an exhaust flow of 48,480 CFM. The negative pressure in the bldg. is maintained by supplying 47,300 CFM to the building. This will preclude the release of airborne radioactive particulate to the atmosphere and thus safety to the general public is preserved.

2. Fuel Handling Building - The FHB operating floor ventilation rate is not changed. The exhaust flow from FHB is reduced by 6000 CFM as compared to the original design exhaust flow of 38,500 CFM. The reduced exhaust flow as mentioned above is due to the installation of isolation dampers and environmental barriers. The isolation dampers increased the system static pressure and the environmental barriers cut-off the supply air of 9000 CFM from the lower floors. As a result of lack of exhaust and to prevent pressurization of lower floors, the supply registers (equivalent to 9000 CFM) were blanked-off. The supply air to the operating floor at elev. 348'-0" is maintained the same at 29,500 CFM. This will assure that the original design basis and safety function of the spent fuel pool ventilation is maintained the same. Negative pressure in the building is being effected by exhausting 1000 CFM in the lower floor and by exhausting 31,500 CFM in the operating floor. Again maintaining a negative pressure in FHB will preclude the release of airborne radioactive particulates to the environs and thus safety to the general public is preserved.

The total bare minimum exhaust flow is 90,400 CFM as shown on Table I. The total recommended exhaust flow is approximately 101,000 CFM. Since it was established in Table I that the bare minimum exhaust flow can still maintain the design basis of Aux. and FHB ventilation system as defined in FSAR, a reduced ventilation rate of 101,000 CFM is recommended as the normal exhaust flow for Aux & FHB Ventilation System. A reduced ventilation rate of 90,400 CFM is recommended as the minimum exhaust flow for this Technical Specification change. The maximum exhaust flow will remain the same at 129,800 CFM (which is 118,000 CFM plus 10%).

TABLE I

Justification for Reduced Exhaust Flow in Aux. & FHB

Room I.D.	Net Volume (Cu Ft)	Original Design (19) Exh. Flow (CFM)	Original Design (19) Air Chn. Per Hr.	Bare Minimum Exh. Flow (CFM)	Bare Minimum Air Chn. Per Hr.	Recommended (20) Exh. Flow (CFM)	Recommended (20) Air Chn. Per Hr.	Remarks
* 1	43,781	2,000	2.7	2,000	2.7	2,000	2.7	(1)(2)
* 2	15,279	1,000	3.9	1,000	3.9	1,000	3.9	(1)(2)
3	7,182	2,200	18.4	1,000 (8)	8.4	1,780	14.9	(11)
4	35,649	2,100	3.5	1,700 (8)	2.8	1,700	2.8	(1)(2)(11)
5	6,314	800	7.6	500 (8)	4.8	650	6.2	(4)
6	5,518	500	5.4	240 (7)	2.6	420 (8)	4.5	(1)(2)(3)
7	5,518	500	5.4	240 (7)	2.6	420 (8)	4.5	(1)(2)(3)
8	5,518	500	5.4	240 (7)	2.6	420 (8)	4.5	(1)(2)(3)
9	3,014	260	5.2	100	2.0	150	3.0	(4)(7)(8)(9)
10	3,363	200	3.6	150	2.7	200 *	3.6	(4)(7)(8)(9)
11	3,115	675	13.0	150	2.9	400	7.7	(4)(7)(8)(9)
12	3,608	190	3.2	100	1.7	190 *	3.2	(4)(7)(8)(9)
13	60,516	1,500	1.5	-	-	500		(10)
14	76,552	3,900	3.1	2,590	2.1	2,590	2.1	(1)(11)
15	3,388	700	12.4	240 (7)	4.3	420 (8)	7.44	(4)
* 16	3,872	600	9.3	600	9.3	600	9.3	(5)
* 17	4,840	600	7.4	600	7.4	600	7.4	(1)(2)
* 18	5,104	700	8.2	700	8.2	700	8.2	(2)(5)
* 19	6,698	900	8.1	900	8.1	900	8.1	(2)(5)
* 20	6,698	900	8.1	900	8.1	900	8.1	(2)(5)
21	4,530	600	7.9	240 (7)	3.2	420 (8)	5.5	(4)
22	9,678	500	3.1	240 (7)	1.5	420 (8)	2.6	(2)(4)
23	70,895	5,000	4.2	420 (8)	0.4	4,000 (6)	3.4	(2)(5)
* 24	12,355	1,000	4.9	1,000	4.9	1,000	4.9	(1)(2)(12)
25	15,708	-	-	-	-	-		(11)
26	15,682	2550	9.7	420 (8)	1.6	1,300	4.9	(10)
27	3,872	500	7.7	240 (7)	3.7	420 (8)	6.5	(2)(4)
28	23,320	500	1.3	-	-	-		(10)
* 29	2,678	500	11.2	500	11.2	500	11.2	(2)(5)
* 30	2,678	500	11.2	500	11.2	500	11.2	(2)(5)
* 31	2,678	500	11.2	500	11.2	500	11.2	(1)(2)(5)
32	45,738	-		-	-	-	-	(10)
33	4,356	1,000	13.8	240 (7)	3.3	420 (8)	5.8	(2)(4)
* 34	12,355	800	3.9	800	3.9	800	3.9	(2)(5)
* 34 a	3,105	200	3.9	200	3.9	200	3.9	(2)(5)
35	21,364	3,800	10.7	1980 (8)	5.6	3,000 (17)	8.4	(4)(11)
36	82,688	3,000	2.2	480 (7)	0.4	1,260 (8)	0.92	(4)(13)
37	30,577	3,600	7.1	2,000 (8)	3.9	3,000 (17)	5.9	(1)(12)(4)
* 38	23,285	3,000	7.7	3,000	7.7	3,000	7.7	(1)(11)
* 39	358,093	37,500	6.3	31,500	5.3	31,500	5.3	(2)(4)(14)
* 40	41,392	6,200	9.0	6,200	9.0	6,200	9.0	(1)(5)
* 41	192,620	6,000	1.9	6,000	1.9	6,000	1.9	(4)
* 42		17,519		17,519		17,519		(15)
* 42 a		2,116		2,116		2,116		(15)
* 42 b		355		355		355		
		117,965 CFM		90,400 CFM		100,970 CFM		

NOTES FOR TABLE I

1. This area contains safety related equipment or 1E cable trays.

2. Potentially radioactive area.

3. 400 HP motor is water cooled.

4. The purpose of this ventilation is to move air from cleaner area to potentially radioactive area.

5. The purpose of the ventilation is to remove heat generated by the equipment.

6. Since there is no safety equipment in this room, there is no environmental impact if exhaust is reduced by 20%. Ambient temperature will go up by 3.5°F.

7. 1/8" H_2O negative pressure inside the room is maintained with respect to the corridor. Bare minimum exhaust flow can still maintain a differential pressure of 1/8" H_2O across the sealed closed door. This will assure that airborne radioactive particulates are prevented from migrating to the cleaner areas before being exhausted and filtered through HEPA and charcoal adsorber.

8. 20 feet per minute minimum velocity or air movement through door opening. This will prevent airborne radioactive particulates from migrating to cleaner areas when door is left open.

9. One door to the corridor is shared or common to room numbers 9 and 11 or 10 and 12.

10. This is considered a corridor. Supply air for this floor is introduced to this area before being drawn to different areas and to the exhaust registers. Exhaust air can be eliminated.

11. Open to corridor where supply air is introduced. Large quantity of air will pass through this area before it goes to the radioactive cubicles or enclosed areas. Exhaust air in this area can be reduced.

12. This area contains two redundant recirculating cooling units.

13. Large quantity of outside make-up air will pass through this room before exhausted through the exhaust fans.

NOTES FOR TABLE I (continued)

14. Original supply air to the operating floor of FHB is maintained at 29,500 CFM. Since supply from lower floor is cut off by the installation of the environmental barrier, exhaust must be reduced by 6,000 CFM. 2,000 CFM difference between supply and exhaust will maintain the operating floor at elev. 348'-0" under a negative pressure.

15. Separate exhaust fans are tied in to the Aux. and Fuel Handling Bldg. exhaust system.

16. * indicates that original ventilation rate will not be changed.

17. 30 feet per minute minimum velocity/air movement through an open passageway (20 fpm plus 50 percent safety factor).

18. Orientation and location of room ID number is similar to TDR-356. See attached room number/drawings cross reference and drawing.

19. Original design air flows are based on the flow diagrams and individual exhaust registers.

20. Recommended air flows are attainable as indicated in 1981 Balancing Report which was certified by Hershman in accordance with National Environmental Balancing Bureau (NEBB).

3.15.3 AUXILIARY AND FUEL HANDLING EXHAUST AIR TREATMENT SYSTEM

Applicability

Applies to the auxiliary and fuel handling exhaust air treatment system.

Objective

To specify the minimum availability and efficiency for the auxiliary and fuel handling exhaust air treatment system.

Specification

3.15.3.1 The auxiliary and fuel handling buildings exhaust air treatment system shall be operable at all times when fuel handling operations are in progress in the Fuel Handling Building and whenever irradiated fuel is in the storage pool. This applies to the exhaust filters AH-F2A, 2B, 2C, and 2D as well as the exhaust fans AH-E14A, 14B, 14C, and 14D.

From and after the date that the auxiliary and fuel handling exhaust air treatment system is made or found to be inoperable, that is the filters AH-F2A, 2B, 2C, and 2D and/or both sets of fans AH-E14A and 14C and AH-E14B and 14D, are inoperable, fuel handling operations shall be terminated immediately until the components are returned to service. Any fuel assembly movement in progress may be completed.

3.15.3.2* a. The results of the in-place DOP and halogenated hydrocarbon tests at design flows on HEPA filters and charcoal adsorber banks shall show less than 0.05% DOP penetration and less than 0.05% halogenated hydrocarbon penetration, except that the DOP test will be conducted with prefilters installed.

b. The results of laboratory carbon sample analysis shall show greater than or equal to 90% radioactive methyl iodide decontamination efficiency when tested at 125°F, 95% R.H.

c. Each set of fans AH-E14 A and C and AH-E14B and D shall each be shown to have the capacity of operating between 90,400 and 129,800 CFM flowrate.

3.15.3.3 With one auxiliary and fuel handling exhaust air treatment system inoperable, fuel movement within the storage pool may proceed provided the OPERABLE auxiliary and fuel handling exhaust air treatment system is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

* Not required until criticality for cycle 5 operation.

4.12.3 AUXILIARY AND FUEL HANDLING EXHAUST AIR TREATMENT SYSTEM

Applicability

Applies to the auxiliary and fuel handling building exhaust air treatment system and associated components.

Objective

To verify that this system and associated components will be able to perform its design functions.

Specification

4.12.3.1 At least once per refueling interval or once per 18 months, whichever comes first, it shall be demonstrated that the pressure drop across the combined HEPA filter and adsorber banks is less than 6 inches of water at system design flow rate (90,400 to 129,800 CFM).

4.12.3.2 a.* The tests and sample analysis required by Specification 3.15.3.2 shall be performed initially, once per refueling interval or 18 months, whichever comes first, or within 30 days prior to the movement of irradiated fuel and following significant painting, steam, fire, or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.

b. DOP testing shall be performed after each complete or partial replacement of a HEPA filter bank or after any structural maintenance on the system housing that could affect the HEPA filter bank bypass leakage.

c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of a charcoal adsorber bank or after any structural maintenance on the AH-F-2A, B, C, or D housing that could affect charcoal adsorber bank bypass leakage.

d. The fan combination AH-E-14A and C and AH-E-14B and D shall be operated at least 10 hours every month.

4.12.3.3* An air distribution test shall be performed on the HEPA filter bank initially and after any maintenance or testing that could affect the air distribution within the system. The air distribution across the HEPA filter bank shall be uniform within ±20%. The test shall be performed between 90,400 and 129,800 CFM flow rate.

Bases

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once every refueling interval to show system performance capability.

*Surveillance to be performed prior to Cycle 5 criticality in lieu of other criteria specified. This change is only applicable until Cycle 5 criticality.

ROOM #	DRAWING #	NAME
1	1E-154-02-002	Neutralizer Feed Tank, Neut. Waste Storage Tank, 1C ESG Valves & Heating Control Center, Spent Fuel Pit Room Sump.
2	"	Laundry Waste Storage Tank, Laundry Waste Pump, Make-Up & Waste Disposal Filters
3	"	Corridor & Entrance to Lubricant Storage Room
4	"	Seal Water Return Coolers & Borated Water Recirculation Pump
5	"	Valve Room
6	"	Make-Up & Purification Pump, MU-P-1A
7	"	Make-Up & Purification Pump, MU-P-1B
8	"	Make-Up & Purification Pump, MU-P-1C
9	"	Make-Up Tank
10	"	Spent Resin Storage Tank
11	"	Slurry Pump & Decant Pumps
12	"	Used Filter Precoat Tank
13	"	Waste Evaporator Condensate Pumps & Elevator Machine Room
14	"	Radiation Monitor Room
15	"	Waste Transfer Valve Room
16	"	Waste Transfer Pump Room
17	"	Waste Gas Compressor Room
18	"	Waste Gas Delay Tank
19	"	Reactor Coolant Waste Evaporator
20	"	Miscellaneous Waste Evaporator
21	"	Boric Acid Recycle Pumps
22	"	Concentrated Waste Storage Tanks & Reclaimed Boric Acid Tanks
23	"	Reactor Coolant Bleed Tanks
24	1E-154-02-003	Spent Fuel Cooling Pumps
25	"	Corridor & Entrance to Elevator
26	"	F. H. Bldg. Heating & Ventilation Control Center, Pre-Coat Filter Tank
27	"	Radwaste Precoat Filters
28	"	Corridor
29	"	Cation Tanks
30	"	Deborating Demineralizers
31	"	Make-Up & Purification Demineralizers
32	"	Aux. & F. H. Bldg. Ventilation Control Panels, Radwaste Disposal Center, Evaporator Panel & Liquid Gas Waste Panel

ROOM #	DRAWING #	NAME
33	IE-154-02-003	Waste Gas Valve Room
34	"	Waste Gas Decay Tanks
34A	"	Evap. Cond. Demin. Resin Trap & Evap. Cond. Demineralizers
35	"	Waste Drumming Area
36	"	Ventilating Equipment Room
37	"	Nuclear Service Closed Cooling Water Pumps & Decay Heat Closed Cooling Water Pumps
38	"	Aux. Bldg. Heating Control Center, 1A Eng. SFGD Valves & Heating Control Center, Radiation Waste Control Center
39	IE-154-02-005	Spent Fuel Pool
40	IE-154-02-001	Decay Heat Removal Pumps
41	"	Nuclear Service & Decay Heat Service Heat Exchangers
42	IE-155-02-001	Controlled Access Area
42A	IE-156-02-002	Penetration Cooling
42B	"	" "