Regulatory Docket File

PSE&G

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March 15, 1976

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U.S. NUCLEAR REGULATORY COMMISSION
Mail Section

Director of Nuclear Reactor Regulation
ATTENTION: Mr. B. J. Youngblood, Chief
Environmental Projects
Branch No. 2
Division of Reactor Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

PROPOSED ENVIRONMENTAL TECHNICAL SPECIFICATION
SALEM NUCLEAR GENERATING STATION
DOCKET NOS. 50-272 AND 50-311

We have reviewed the "proof and review" copy of the Salem Environmental Technical Specification (ETS) transmitted to us on January 12, 1976. Attached are our comments and suggested changes to the proposed ETS. Many of these comments have been discussed verbally with your staff and we trust that our comments will be incorporated in the final version of the ETS.

We also wish to propose that implementation of the required impingement (Section 3.1.2.2) and entrainment (Section 3.1.2.3) studies take place only after the license application thermal rating of 3350 MWt (Unit No. 1) is achieved. We propose that specifications be changed to require that both studies be initiated within 10 days after full power operation of the Unit No. 1 license application thermal rating is reached. Limitation of the minimum one year required studies at low thermal power levels would not allow for factoring in the complete impact of the thermal plume on the impingement and entrainment studies. Futhermore, the last paragraph of the specification for impingement studies implies that data should be analyzed only after full power operation is achieved.

The concept of implementing the impingement and entrainment studies at a defined reactor power level has been discussed with your staff and we understand that this proposal is agreeable, in principle, to NRC.

We also propose that the following paragraph, similar to a paragraph in the specification for impingement studies, be added to the specification for entrainment studies.

> "After one year of full power operation of Unit 1, the entrainment data should be analyzed. Suggested changes in sampling frequency shall be submitted for review and approval by the staff prior to implementation".

The above change is recommended to provide for a consistent approach on the entrainment and impingement studies.

If you wish further clarification on the ETS or our comments, please contact Mr. R. P. Douglas of our staff.

Very truly yours,

R. L. Mittl
General Manager - Projects
Engineering and Construction
Department

CORRECTIONS AND COMMENTS
PROPOSED ENVIRONMENTAL TECHNICAL SPECIFICATIONS
SALEM NUCLEAR GENERATING STATION

Received Dated 3-15-76

PAGE NO.	COMMENT	REASON
iii	Delete Table No. 3.2-2	No longer referenced in the text.
iii	Re-number Table No. 3.2-3 to read Table No. 3.2-2	Re-numbering is necessary since Table 3.2-2 is deleted.
iii	Re-number page 3.2-10 to read 3.2-8	Re-numbering is necessary since Table 3.2-2 is deleted.
1.1-4	Delete Item 22 Radiological Review Point	No longer referenced in the text.
1.1-5	Re-number Item 24 to read Item 23	(ditto)
1.1-5	Re-number Item 25 to read Item 24	(ditto)
2.1-1	Delete the work shell in the fourth and sixth sentences under monitoring requirement	Each condenser shell has a single inlet or each condenser has two shells.
2.1-3	Delete the word shell in the fourth and sixth sentences under monitoring requirement	(ditto)
2.1-5	Delete the word shell in the fifth sentence under monitoring requirement	(ditto)
2.2-3	See attached suggested rewrite of page 2.2-3	The free clorine residual is not monitored at the location of the final heat exchanger.
2.3-22	See attached revised version of Table 2.3-4	As indicated in the Salem FSAR, a common radiation monitoring system for the plant vent and containment is used.

CORRECTIONS AND COMMENTS
PROPOSED ENVIRONMENTAL TECHNICAL SPECIFICATIONS
SALEM NUCLEAR GENERATING STATION

PAGE NO.	COMMENT	REASON
3.2-5	Delete silver zeolite and replace with TEDA impregnated charcoal Delete *** and footnote ***	We do not plan to use silver zeolite for the operational program.
3.2-8	Delete Table 3.2-2	No longer mentioned in text.
3.2-9	Delete Table 3.2-2	(ditto)
3.2-9a	Delete Table 3.2-2	(ditto)
3.2-10	Re-number page 3.2-10 to read 3.2-8	Necessary because of deletions above.
3.2-11	Re-number page 3.2-11 to read 3.2-9	(ditto)
Fig. 3.2-1	Add location 2S1 Delete location 1S1	Monitoring Station 1S1 has been relocated to 2S1.
5.6-5	Change 3.8 picocuries per liter to 4.8 picocuries per liter in Paragraph 2	Typographical error.
5.6-9	See attached revised version of Table 5.6-1	Lower Limit of Detection (LLD) should be changed to Minimum Detection Level (MDL) to be consistant with the text.

NCA/EAL/RPD:mj
3-12-76

however, to maintain the free chlorine residual discharged to the river at 0.1 mg/liter or less.

The circulating water will be chlorinated by controlled injection of sodium hypochlorite into the intake water to the condensers. Three of the twelve intakes are chlorinated at a time as a group. The period of chlorination will be no greater than 30 minutes and will be done 3 times per day. The rate of sodium hypochlorite addition is controlled to maintain a 1.0 mg/liter free chlorine residual or less at the condenser outlet. The discharge is diluted with unchlorinated water and the free chlorine residual of the discharge to the river will therefore be less than 0.1 mg/liter.

The service water system will be chlorinated at a frequency not to exceed 3 times a day for periods of no greater than 30 minutes, and not at the same time as the Circulating Water System. It will be determined that the free clorine residual will be 1.0mg/liter or less at the outlet of the final heat exchanger. Consequently the concentration at the discharge to the river will be less than 0.1mg/liter.

2.2.2 SUSPENDED SOLIDS

Objective: To insure that suspended solids released from Non-Radioactive Chemical Waste Disposal System are controlled and will not have an adverse effect on the natural aquatic environment of the receiving waters.

TABLE 2.3-4

SALEM STATION GASEOUS WASTE SYSTEM
LOCATION OF PROCESS AND EFFLUENT MONITORS AND SAMPLERS REQUIRED BY TECHNICAL SPECIFICATIONS

Process Stream or Release Point	Radiation Alarm	Auto Control to Isolation Valve	Continuous Monitor	Grab Sample Station	Measurement				
					Noble Gas	I	Particulate	H-3	Alpha
Waste Gas Decay Tanks				X	X	X	X	X	X
Condenser Air Removal System	X		X	X	X	X	X	X	X
Plant Vent	X		X[b]	X	X	X	X	X	X
Building Ventilation Systems									
Reactor Containment Building (whenever there is flow)	X	X	X[d]	X	X	X	X	X	X
Auxiliary Building and Radwaste Area[a]				X[c]	X	X	X	X	X
Fuel Handling & Storage Building[a]				X[c]	X	X	X	X	X
Turbine Gland Seal Condenser[a]				X[c]	X	X	X	X	
Waste Gas Discharge Line	X	X	X						

[a] Since these process streams or building ventilation systems are routed to the plant vent, the need for a continuous monitor at the individual discharge point to the main exhaust duct is eliminated. One continuous monitor at the final release point is sufficient.

[b] Continuously monitored. Also includes continuous iodine, noble gas and particulate monitors which are in service during waste gas decay tank releases and containment purging operations.

[c] Grab sample stations from which monthly gas samples (Table 2.3-2) are to be taken. Also, grab samples should be taken and measured to determine the process stream or building ventilation system source whenever an unexplained increase is indicated by the plant vent sampler-monitors.

[d] Includes continuous noble gas monitor which monitor this location at all times other than waste gas decay tank

TABLE 5.6-1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility _____ Docket No. _____

Location of Facility _____ Reporting Period _____
(County, State)

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analyses Performed		Minimum Detectable Level (MDL) a/	All Indicator Locations Mean b/ Range b/	Location with Highest Annual Mean Name Distance and Direction	Mean b/ Range b/	Control Locations Mean b/ Range b/	Number of Nonroutine Reported Measurements c/
Air Particulates (pCi/m^3)	β	416	0.003	0.08 (200/312) (0.05-2.0)	Middletown 5 miles 340°	0.10 (5/52) (0.08 - 2.0)	0.08 (8/104) (0.05-1.40)	1
	γ ^{137}Cs	32	0.003	0.05 (4/24) (0.03-0.13)	Smithville 2.5 miles 160°	0.08 (2/4) (0.03 - 0.13)	MDL	4
	^{140}Ba		0.003	0.03 (2/24) (0.01-0.08)	Podunk 4.0 miles 270°	0.05 (2/4) (0.01 - 0.08)	0.02 (1/8)	1
	^{89}Sr	40	0.002	MDL	-	-	MDL	0
	^{90}Sr	40	0.0003	MDL	-	-	MDL	0
Fish pCi/kg (dry weight)	γ ^{137}Cs	8	80	MDL	-	MDL	90 (1/4)	0
	^{134}Cs		80	MDL	-	MDL	MDL	0

a/ Minimum Detectable Level (MDL) is defined as $3\delta_b$ where δ_b is defined as the standard deviation of the background count.

b/ Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses.

c/ Nonroutine reported measurements are defined in Section 5.6.2b.

d/ Note: The example data are provided for illustrative purposes only.