DUKE POWER COMPANY
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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

October 30, 1985

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

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Proof and Review Technical Specifications

Dear Mr. Denton:

This letter is in response to your October 10, 1985 letter which transmitted the Proof and Review Technical Specifications for Catawba Units 1 and 2.

Attached are corrections to errors found by our review. At this time we have not identified any other statements which do not reflect the FSAR or the "as-built" facility. A review of the SER was conducted by Mr. Kimura of EG&G who is under contract by the NRC to conduct the review of the proposed Technical Specifications. During a meeting held in mid-July between Mr. Kimura, members of your staff and Duke Power personnel, Mr. Kimura's review of the SER vis-a-vis the proposed Technical Specifications was discussed. It is our opinion that all of the concerns in regard to the SER and the Technical Specifications were resolved.

If you have any questions regarding this response please contact Mr. Roger W. Ouellette at (704)373-7510.

Very truly yours,

Hal B. Tucker/jwm

Hal B. Tucker

RWO:slb

Attachment

B021
1/1

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NRC Resident Inspector
Catawba Nuclear Station

Robert Guild, Esq.
P. O. Box 12097
Charleston, South Carolina 29412

Palmetto Alliance
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Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
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TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
10. Pressurizer Pressure-High	4	2	3	1, 2	6#
11. Pressurizer Water Level-High	3	2	2	1	7#
12. Reactor Coolant Flow-Low					
a. Single Loop (Above P-8)	3/loop	2/loop in any operating loop	2/loop in each operating loop	1	7#
b. Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop each operating loop	1	7#
13. Steam Generator Water Level--Low-Low	4/stm gen	2/stm gen in any operating stm gen	3/stm gen each operating stm gen	1, 2	6#
14. Undervoltage-Reactor Coolant Pumps (Above P-7)	4-1/bus	2	3	1	6#
15. Underfrequency-Reactor Coolant Pumps (Above P-7)	4-1/bus	2	3	1	6#
16. Turbine Trip					
a. Low Control Valve EH Pressure (unit 1)	4	2	3	1####	7#
b. Turbine Stop Valve Closure	4	4	1	1####	11#
17. Safety Injection Input from ESF	2	1	2	1, 2	9

Low Stop Valve ~~EH~~ Pressure (Unit 2)

TABLE 3.3-2 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

FUNCTIONAL UNIT	RESPONSE TIME
12. Low Reactor Coolant Flow	
a. Single Loop (Above P-8)	≤ 1 second
b. Two Loops (Above P-7 and below P-8)	≤ 1 second
13. Steam Generator Water Level-Low-Low	≤ 2.0 seconds
14. Undervoltage-Reactor Coolant Pumps	≤ 1.5 seconds
15. Underfrequency-Reactor Coolant Pumps	≤ 0.6 second
16. Turbine Trip	
a. Low Control Valve EH Pressure (Unit 1)	N.A.
b. Turbine Stop Valve Closure	N.A.
17. Safety Injection Input from ESF	N.A.
18. Reactor Trip System Interlocks	N.A.
19. Reactor Trip Breakers	N.A.
20. Automatic Trip and Interlock Logic	N.A.

Low Stop Valve EH Pressure (Unit 2)

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
13. Steam Generator Water Level-Low-Low	S	R	M	N.A.	N.A.	1, 2
14. Undervoltage - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
15. Underfrequency - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
16. Turbine Trip						
a. Low Control Valve EH Pressure (Unit 1)	N.A.	R	N.A.	S/U(1, 10)	N.A.	1#
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1#
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
18. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	M	N.A.	N.A.	2##
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	M(8)	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4)	M(8)	N.A.	N.A.	1
d. Low Power Range Neutron Flux, P-9	N.A.	R(4)	M(8)	N.A.	N.A.	1

Low Stop Valve EH Pressure (Unit 2)

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Safety Injection (Reactor Trip, Phase "A" Isolation, Feedwater Isolation, Control Room Area Ventilation Operation, Auxiliary Feedwater-Motor-Driven Pump, Purge & Exhaust Isolation, Annulus Ventilation Operation, Auxiliary Building Filtered ~~Ventilation~~ Exhaust Operation, Emergency Diesel Generator Operation, Component Cooling Water, Turbine Trip, and Nuclear Service Water Operation)					
a. Manual Initiation	2	1	2	1, 2, 3, 4	18
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
c. Containment Pressure-High	3	2	2	1, 2, 3	15*
d. Pressurizer Pressure-Low	4	2	3	1, 2, 3#	19*
e. Steam Line Pressure-Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3#	15*

TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
15. In Core Thermocouples	4/core quadrant	2/core quadrant
16. Unit Vent - High-High Range Area Monitor (EMF-54)	N.A.	1
17. Steam Relief Valve Exhaust Radiation Monitor (1 EMF-26, 27, 28 or 29 and 2 EMF-10, 11, 12 or 13)	N.A.	1
18. Containment Area - High Range Radiation Monitor (EMF-53 A or B)	N.A.	1
19. Reactor Vessel Water Level	2	1
20. Reactor Coolant Radiation Level (EMF-48)	N.A.	1

TABLE NOTATIONS

* Not applicable if the associated block valve is in the closed position.

** Not applicable if the associated block valve is in the closed position and power is removed.

TABLE 3.4-1 (Continued)

REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

VALVE NUMBER	FUNCTION
ND1B*#	~~RHR~~ Residual Heat Removal
ND2A*#	~~RHR~~ Residual Heat Removal
ND36B*#	~~RHR~~ Residual Heat Removal
ND37A*#	~~RHR~~ Residual Heat Removal

*Testing per Specification 4.4.6.2.2d. not applicable due to positive indicatton of valve position in Control Room.

#1. Leakage rates less than or equal to 1.0 gpm are considered acceptable.

2. Leakage rates greater than 1.0 gpm but less than or equal to 5.0 gpm are considered acceptable if the latest measured rate has not exceeded the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate of 5.0 gpm by 50% or greater.

3. Leakage rates greater than 1.0 gpm but less than or equal to 5.0 gpm are considered unacceptable if the latest measured rate exceeded the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate of 5.0 gpm by 50% or greater.

4. Leakage rates greater than 5.0 gpm are considered unacceptable.

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SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 75 gallons by verifying the boron concentration of the accumulator solution;

c. At least once per 31 days when the Reactor Coolant System pressure is above 1000 psig by verifying that power is removed from the isolation valve operators on Valves NI54A, NI65B, NI76A, and NI88B and that the respective circuit breakers are padlocked~~; and~~.

4.5.1.1.2 Each cold leg injection accumulator water level and pressure channel shall be demonstrated OPERABLE:

a. At least once per 31 days by the performance of an ANALOG CHANNEL OPERATIONAL TEST, and

b. At least once per 18 months by the performance of a CHANNEL CALIBRATION.

PLANT SYSTEMS

3/4.7.5 STANDBY NUCLEAR SERVICE WATER POND

LIMITING CONDITION FOR OPERATION

3.7.5 The standby nuclear service water pond (SNSWP) shall be OPERABLE with:

a. A minimum water level at or above elevation 570 feet Mean Sea Level, USGS datum, and

b. An average water temperature of less than or equal to 86.5°F at elevation 540 feet in the SNSWP intake structure.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: (Units 1 and 2)

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.5 The SNSWP shall be determined OPERABLE:

a. At least once per 24 hours by verifying the water level to be within its limit,

b. At least once per 24 hours during the months of July, August, and September by verifying the water temperature to be within its limit, and

c. At least once per 12 months by visually inspecting the SNSWP dam and verifying no abnormal degradation, erosion, or excessive seepage.

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3/4.7.6 CONTROL ROOM AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Room Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

With one Control Room Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

a. With one Control Room Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Area Ventilation System with flow through the HEPA filters and carbon adsorbers.

b. With both Control Room Area Ventilation Systems inoperable or with the OPERABLE Control Room Area Ventilation System, required to be operating by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Room Area Ventilation System shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 90°F;

b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

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3/4.7.7 AUXILIARY BUILDING FILTERED EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 The Auxiliary Building Filtered Exhaust System shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the Auxiliary Building Filtered Exhaust System inoperable, restore the inoperable system to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.7 The Auxiliary Building Filtered Exhaust System shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months by:

1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d* of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 30,000 cfm ± 10% ~~per fan~~;

6

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%; and

*Purging of residual refrigerant is not mandatory.

3) Verifying a system flow rate of 30,000 cfm ±10% ~~per fan~~ during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of carbon adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%;

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, carbon adsorber banks, and moisture separators of less than 8 inches Water Gauge while operating the system at a flow rate of 30,000 cfm ± 10% per fan,

2) Verifying that the system starts on a Safety Injection test signal, and directs its exhaust flow through the HEPA filters and carbon adsorbers,

3) Verifying that the system maintains the ECCS pump room at a negative pressure relative to adjacent areas,

4) Verifying that the filter cooling bypass valves can be manually opened, and

5) Verifying that the heaters dissipate 40 ± 4 kW.

e. After any structural maintenance on the filter housing or, after each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 30,000 cfm ± 10% per fan;

f. After any structural maintenance on the filter housing or, after each complete or partial replacement of a carbon adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 30,000 cfm ± 10% per fan; and

g. After any structural maintenance on the filter housing or, following painting, fire or chemical release in any ventilation zone communicating with the system by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%.

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3/4.9.11 FUEL HANDLING VENTILATION EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.11 At least one train of the Fuel Handling Ventilation Exhaust System shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION:

a. With both trains of the Fuel Handling Ventilation Exhaust System inoperable, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until the Fuel Handling Ventilation Exhaust System is restored to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11.1 One train of the Fuel Handling Ventilation Exhaust System shall be determined to be operating and discharging through the HEPA filter and carbon adsorbers at least once per 12 hours whenever irradiated fuel is being moved in the storage pool and during crane operation with loads over the storage pool.

4.9.11.2 Both trains of the Fuel Handling Ventilation Exhaust System shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months by:

1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d* of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is ~~16,565~~ 33,130 cfm ±10% ~~per fan~~;

*Purging of residual refrigerant is not mandatory.

SURVEILLANCE REQUIREMENTS (Continued)

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Positions C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration o less than 1%; and

3) Verifying a system flow rate of ~~16,565~~ 33,130 cfm ±10% ~~per fan~~ during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of carbon adsorber operation in any train by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%.

d. At least once per 18 months for each train by:

1) Verifying that the pressure drop across the combined HEPA filters, carbon adsorber banks, and moisture separators is less than 8 inches Water Gauge while operating the system at a flow rate of 16,565 cfm ± 10% per fan.

2) Verifying that the system maintains the spent fuel storage pool area at a negative pressure of greater than or equal to ¼ inch Water Gauge relative to the outside amosphere during system operation,

3) Verifying that the filter cooling bypass valves can be manually opened, and

4) Verifying that the heaters dissipate 80 ± 8 kW.

e. After any structural maintenance on the filter housing or after each complete or partial replacement of a HEPA filter bank in any train, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 16,565 cfm ± 10% per fan,

f. After any structural maintenance on the filter housing, or after each complete or partial replacement of a carbon adsorber bank in any train, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 16,565 cfm ± 10% per fan; and

INSERT NEW
LPZ FIGURE

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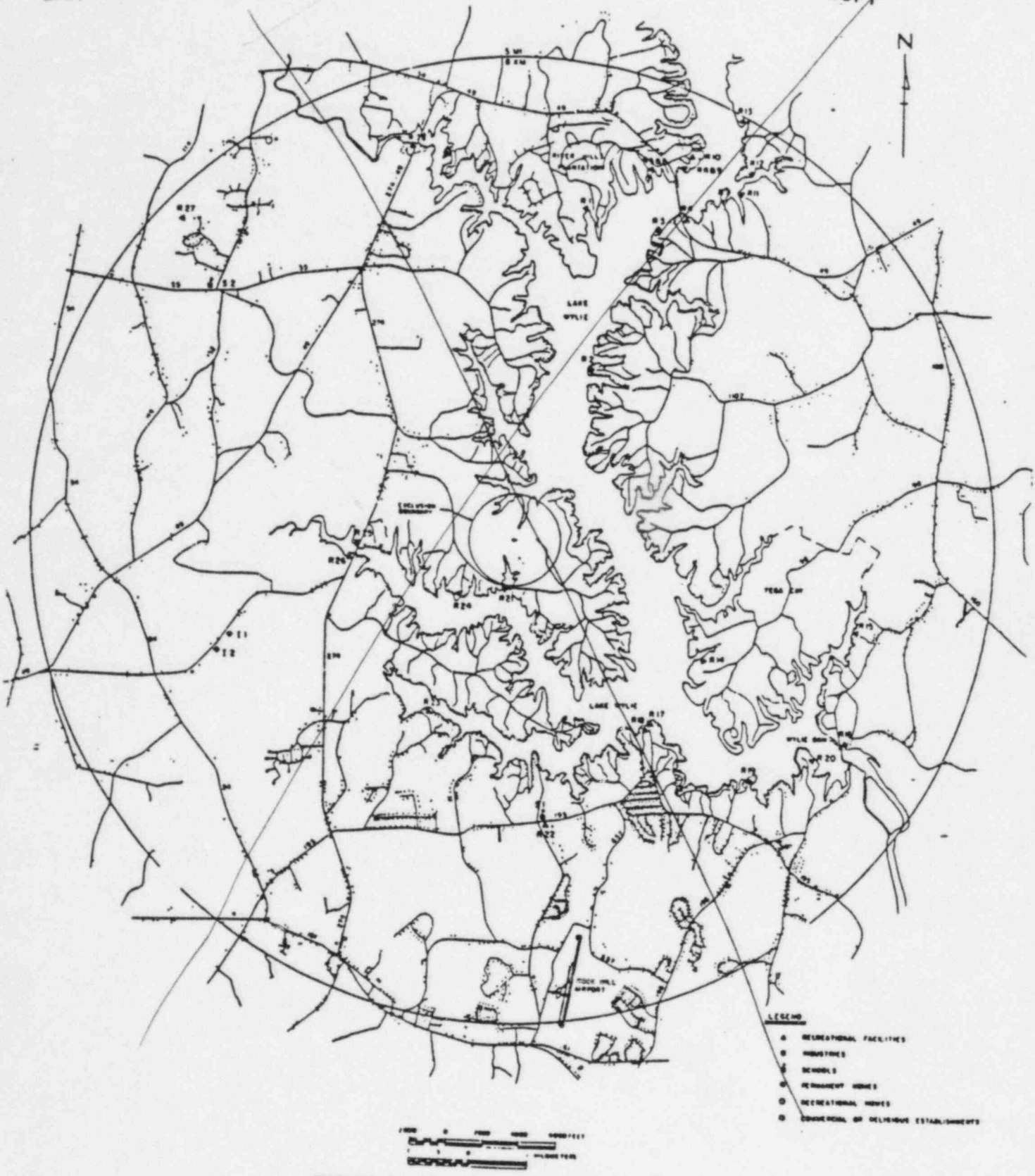

FIGURE 5.1-2 LOW POPULATION ZONE

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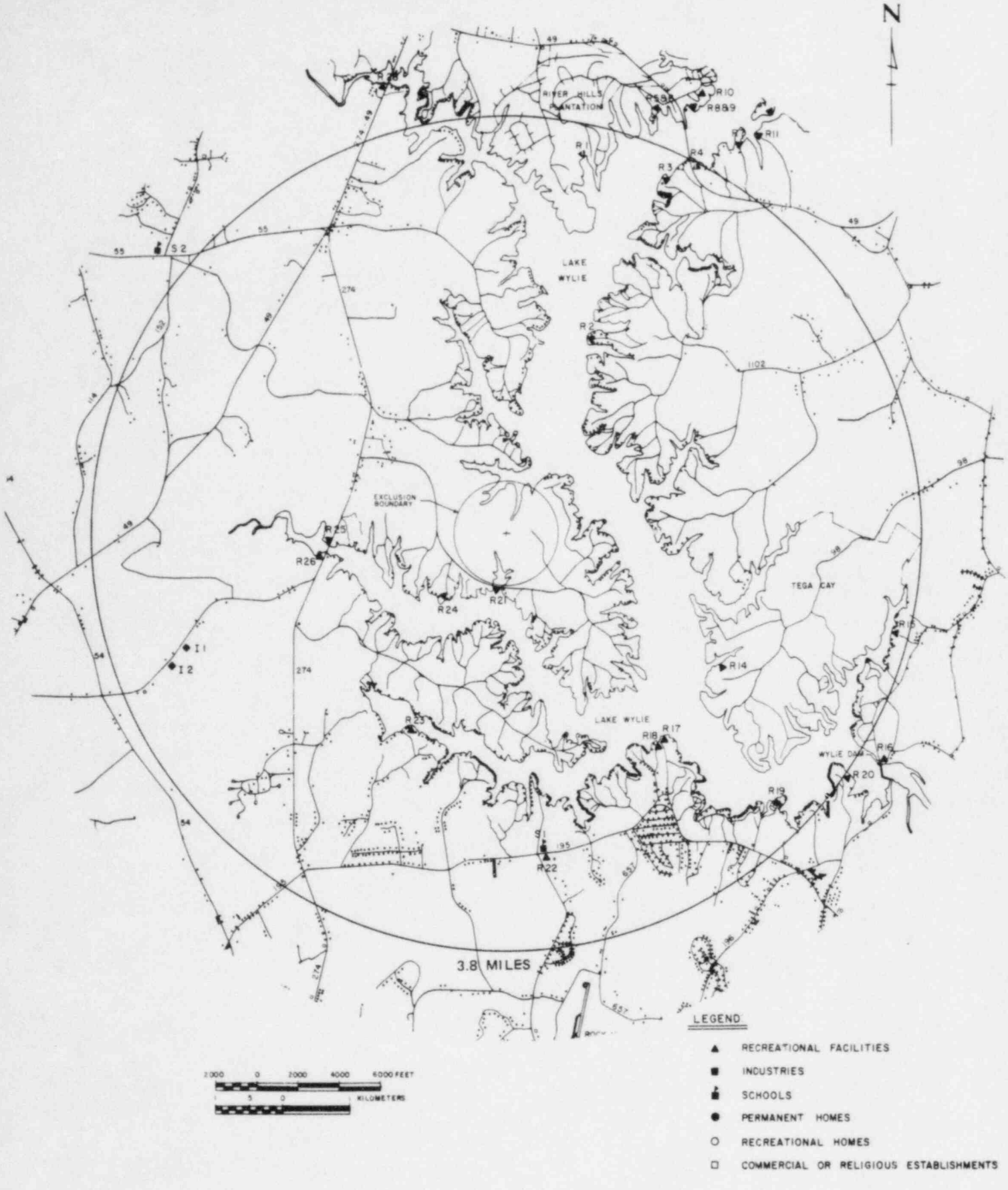


LOW POPULATION ZONE

INSERT NEW OFFSITE ORGANIZATION FIGURE

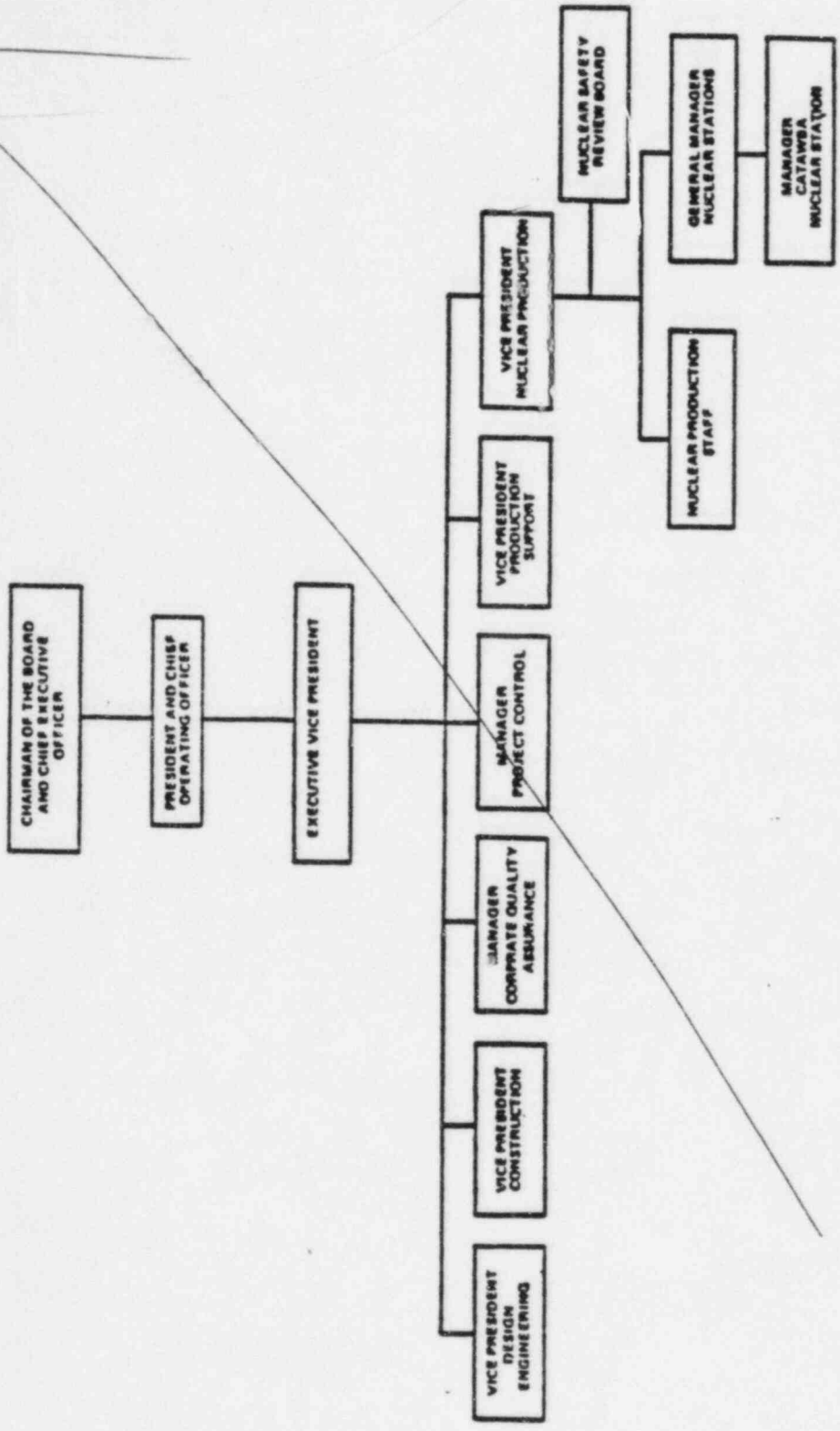
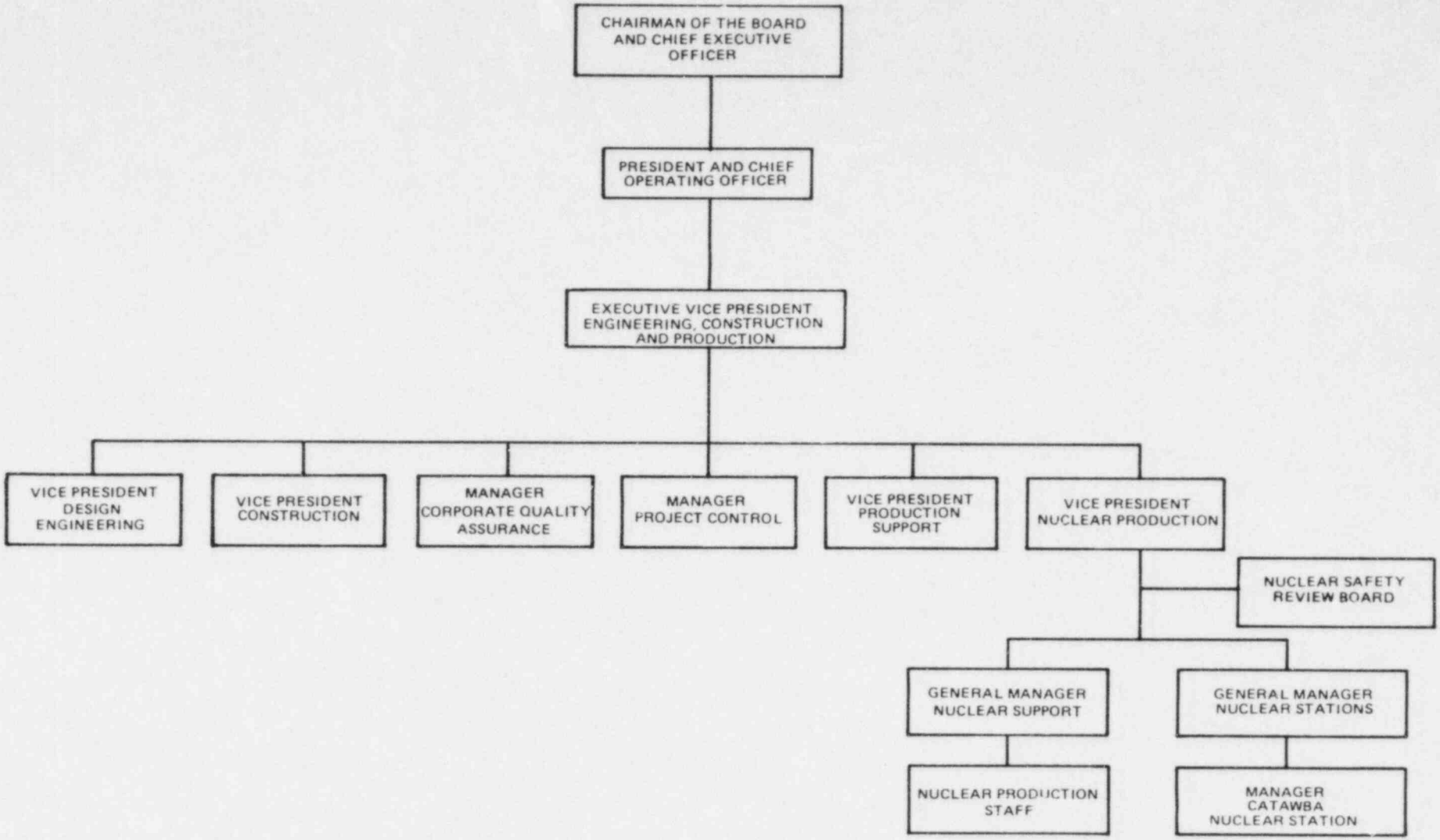


FIGURE 6.2-1

OFFSITE ORGANIZATION

JUL 18 1983 OCT Topical


CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER
PRESIDENT AND CHIEF OPERATING OFFICER
EXECUTIVE VICE PRESIDENT ENGINEERING, CONSTRUCTION AND PRODUCTION
VICE PRESIDENT DESIGN ENGINEERING
VICE PRESIDENT CONSTRUCTION
MANAGER CORPORATE QUALITY ASSURANCE
MANAGER PROJECT CONTROL
VICE PRESIDENT PRODUCTION SUPPORT
VICE PRESIDENT NUCLEAR PRODUCTION
NUCLEAR SAFETY REVIEW BOARD
GENERAL MANAGER NUCLEAR SUPPORT
GENERAL MANAGER NUCLEAR STATIONS
NUCLEAR PRODUCTION STAFF
MANAGER CATAWBA NUCLEAR STATION

INSERT NEW STATION ORGANIZATION FIGURE

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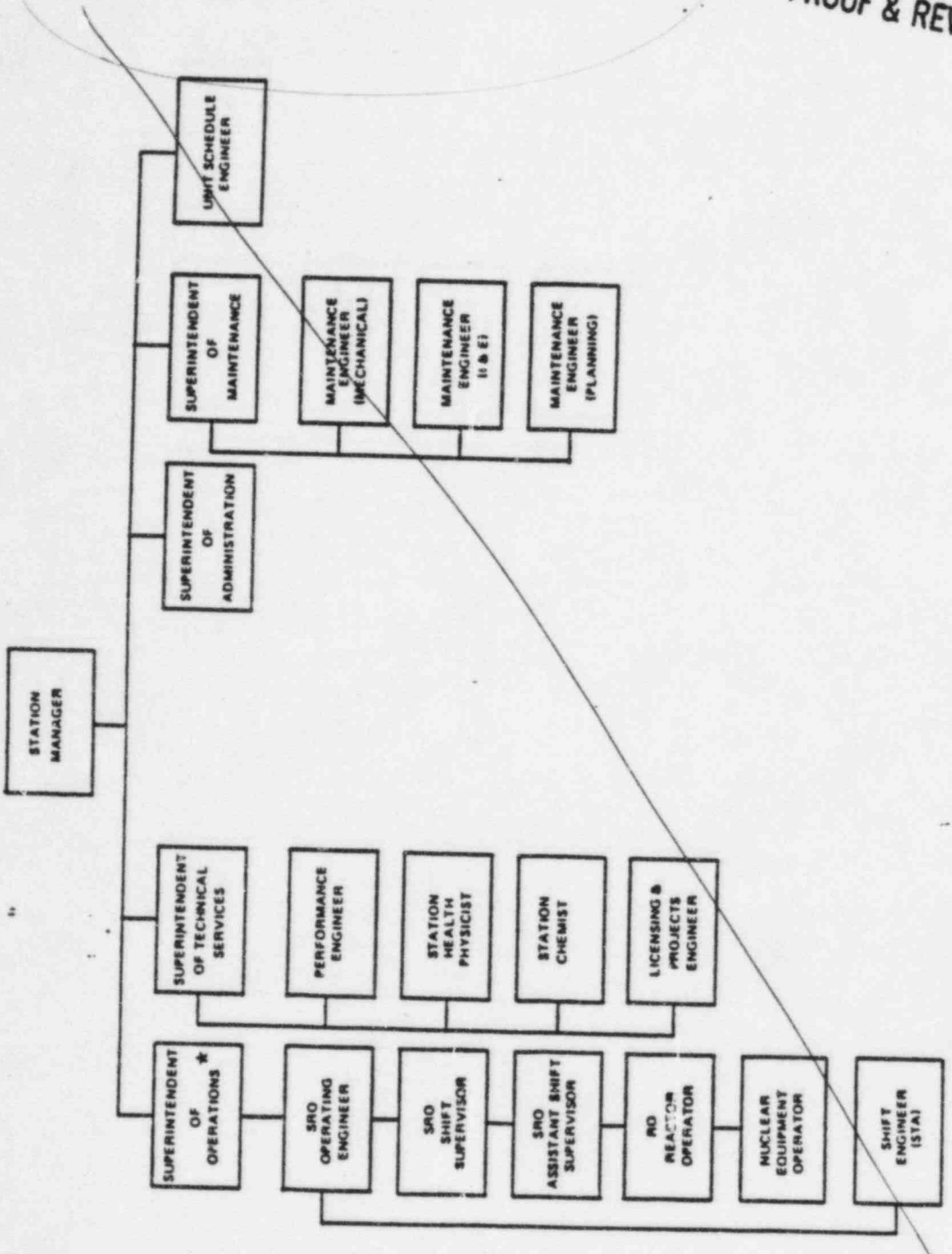

LEGEND
SRO – LICENSED SENIOR OPERATOR
RO – LICENSED OPERATOR
*Superintendent of Operations must hold or have held SRO License

FIGURE 6.2-2
UNIT ORGANIZATION
STATION

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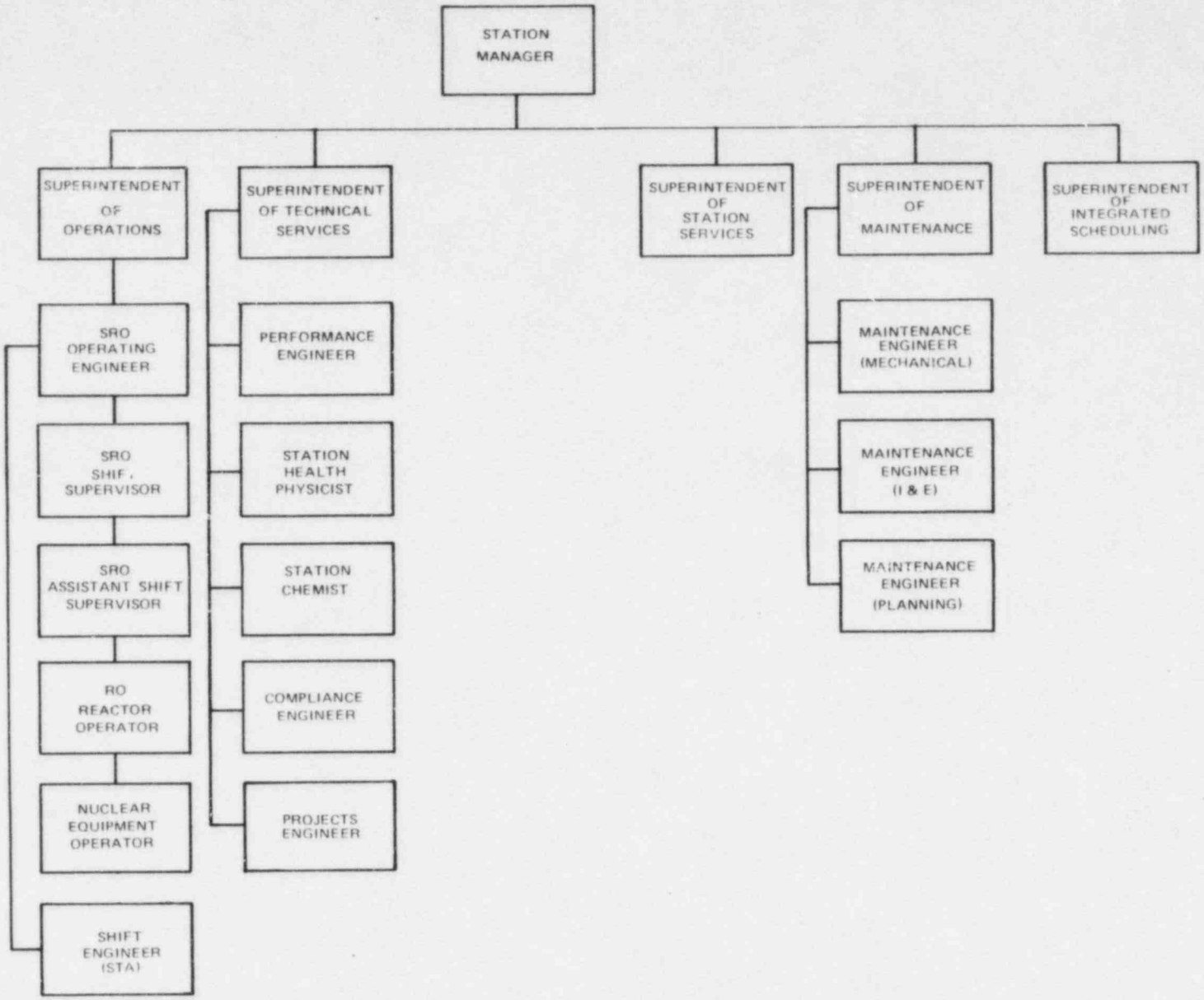

LEGEND
SRO– SENIOR REACTOR OPERATOR
RO– REACTOR OPERATOR
*Superintendent of Operations must hold or have held SRO License

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TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION		
	Both Units in Mode 1, 2, 3 or 4	Both Units in Mode 5 or 6 or Defueled	One Unit in Mode 1, 2, 3 or 4 and One Unit in Mode 5 or 6 or Defueled
SS	1	1	1
SRO	1	None##	1
RO	3#	2#	3#
NEO	3#	3#	3#
STA	1	None	1

SS - Shift Supervisor with a Senior Operator license ~~on Unit 1~~
SRO - Individual with a Senior Operator license ~~on Unit 1~~
RO - Individual with an Operator license ~~on Unit 1~~
NEO - Nuclear Equipment Operator
STA - Shift Technical Advisor

The Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the control room while the unit is in MODE 1, 2, 3, or 4, an individual (other than the Shift Technical Advisor*) with a valid Senior Operator license shall be designated to assume the control room command function. During any absence of the Shift Supervisor from the control room while the unit is in MODE 5 or 6, an individual with a valid Senior Operator license or Operator license shall be designated to assume the control room command function.

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*On occasion when there is a need for both the Shift Supervisor and the SRO to be absent from the control room, the STA shall be allowed to assume the control room command function and serve as the SRO in the control room provided that: (1) the Shift Supervisor is available to return to the control room within 10 minutes, (2) the assumption of SRO duties by the STA be limited to periods not in excess of 15 minutes duration and a total time not to exceed 1 hour during any ~~8-hour~~ shift, and (3) the STA has a Senior Operator license on the unit.

#At least one of the required individuals must be assigned to the designated position for each unit.

##At least one licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling must be present during CORE ALTERATIONS on either unit, who has no other concurrent responsibilities.