



Northern States Power Company

414 Nicollet Mall  
Minneapolis, Minnesota 55401  
Telephone (612) 330-5500

September 15, 1983

Director  
Office of Nuclear Reactor Regulation  
U S Nuclear Regulatory Commission  
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
Docket Nos. 50-282 License Nos. DPR-42  
50-306 DPR-60

NUREG-0737 Supplement 1 - Generic Letter 82-33  
Regulatory Guide 1.97 - Application to Emergency Response Facilities

This letter is in response to Paragraph 6.2 of the subject Generic Letter.

Our submittal includes the following:

General Response Information  
Index of Variables (reference to Table I pages)  
Table I - Variable Details (58 pages)  
Table II - EOF Readout

Table I is a page by page listing of each variable including qualification information applying to Control Room displays.

The schedule for completing implementation of all of the Regulatory Guide 1.97 requirements was agreed to in a June 24, 1983 meeting with your Prairie Island Project Manager. We understand this schedule is to be incorporated in the forthcoming Confirmatory Order.

*David Musolf*

David Musolf  
Manager - Nuclear Support Services

DMM/dab

c: J G Keppler  
NRR Project Manager, NRC  
Resident Inspector, NRC  
G Charnoff  
NSS File

A003  
1/40

8309230358 830915  
PDR ADOCK 05000282  
F PDR

## GENERAL RESPONSE INFORMATION

### I. IMPLEMENTATION OF REGULATORY GUIDE 1.97 REVISION 2 IN THE TECHNICAL SUPPORT CENTER (TSC)

Information on the status of plant variables currently is supplied to the TSC by the following means:

- 1) Plant process computer
- 2) Recall computer
- 3) Voice communication with the control room.

Methods 1 and 2 above currently provide information for most R.G.1.97 variables. This is supplemented by dedicated voice communications for any other pertinent information. It should be noted that this voice communication does not involve a control room operator but supplemental staff personnel when the TSC is activated.

For TSC information the plant computer upgrade (which includes SPDS) will replace the present plant process computer, recall computer, and voice communications. A Radiation Dose Assessment System (RDAS) is being installed at the facility. A TSC terminal of this system will provide readout (as indicated in Table I) of other Reg Guide 1.97 variables important to the TSC function.

### II. IMPLEMENTATION OF REGULATORY GUIDE 1.97 REVISION 2 IN THE EMERGENCY OPERATIONS FACILITY (EOF)

Table II contains information on variables required for the EOF to perform its function.

### III. RESPONSE TO QUALIFICATION CATEGORY 2

The qualification level for those items listed as Qualification Category 2 by R.G.1.97, Rev. 2 is consistent with the qualification requirements of the system for the subject instrument. Where new instrumentation is procured such instrumentation will be purchased consistent with the requirements of R.G.1.97, Rev. 2, Qualification Category 2.

As suggested by paragraph 1.3.2.d of R.G.1.97, Rev. 2 it is expected that any differences between the guidance of R.G.1.97, Rev. 2 and installed equipment will be resolved by the resolution of the "Important to Safety" issue.

#### IV. AREA RADIATION MONITORS

Further study is underway to determine if additional monitoring points are necessary (see page 20 of Table I). If the findings of the study require an extended scope of work, additional time may be required.

#### V. INTEGRATION WITH CONTROL BOARD REVIEW AND PLANT COMPUTER UPGRADE PROJECT

The attached table lists the existing display (computer or indicator) capability for R.G.1.97, Rev. 2 variables. However, as stated in the April 15, 1983 response the implementation of R.G.1.97, Rev.2 will integrate with the Plant Computer Project and the Control Room Design Review. The Plant computer project is providing the SPDS and related displays. The primary display of certain R.G.1.97, Rev. 2 variables, such as status of containment isolation valves, will be provided by the Computer System. The Control Room design review will provide input into new or revised indications required by R.G.1.97, Rev. 2

The report that details the implementation plan for the SPDS will identify those R.G.1.97, Rev. 2 variables that will use a computer based display as the primary display.

All present control board indications are qualified to the level required by the plant design criteria. Upgrade of this instrumentation to R.G.1.97 criteria will be done after the Control Room Design Review has been completed. The Control Room Design Review Project will include the marking of displays in accordance with the requirements of R.G.1.97, Rev. 2.

#### VI. TYPE A VARIABLES

A set of Type A variables have been identified by reviewing the Emergency Operating Procedures (EOP's) These are: 1) RCS pressure - used as a criteria for RCS pump tripping, and 2) RWST Level - used as a criteria for shifting to the recirculation mode.

As stated in previous submittals the new EOP's are to be implemented shortly. It is possible that after review of these EOP's additional Type A variables will be identified. If this occurs a transmittal will be made indicating the variable, criteria for selection as Type A and schedule for upgrade (if required).

TABLE II  
R.G. 1.97 Rev. 2 VARIABLES - EOF READOUT

- A. Reg. Guide 1.97 variables important to the functioning of the EOF are currently available via voice communication from the Control Room (or TSC). The Radiation Dose Assessment System (RDAS) terminal to be operational in the EOF has readout to include the following variables:

<u>ITEM</u> (per index)	<u>Description</u>
C.3.4	Containment Effluent Activity Noble Gas
C.3.6	Areas in contact with containment Effluent Activity - Noble Gas
E.3.1.1	Containment or Purge Effluent
E.3.1.2	Reactor Shield Building Annulus
E.3.1.3	Auxiliary Building
E.3.1.4	Condenser Air Removal System Exhaust
E.3.1.5	Common Plant Vent
E.3.1.6	Vent From Steam Generator Safety Relief Valves or Atmospheric Dump Valves
E.3.1.7	All Other Identified Release Points
E.3.2.1	All Identified Release Points (except S/G Relief Valves, atmospheric dump valves and condenser air removal system exhaust).
E.5.1, E.5.2, E.5.3	Windspeed, Direction, Stability

- B. Containment condition variables such as pressure and radiation are currently available via voice communications from the Control Room (or TSC). As an upgrade these variables will have EOF readout via the RDAS.



## INDEX OF VARIABLES

PAGE NO.

A. TYPE A VARIABLES

A.1	RCS Pressure	1
A.2	RWST Level	2

B. TYPE B VARIABLES

B.1 Reactivity Control

B.1.1	Neutron Flux	3
B.1.2	Control Rod Position	4
B.1.3	RCS Soluble Boron Concentration	5
B.1.4	RCS Cold Leg Water Temperature	6

B.2 Core Cooling

B.2.1	RCS Hot Leg Water Temperature	7
B.2.2	RCS Cold Leg Water Temperature	6
B.2.3	RCS Pressure	1
B.2.4	Core Exit Temperature	8
B.2.5	Coolant Level in Reactor	9
B.2.6	Degrees of Subcooling	10

B.3 Maintaining Reactor Coolant System Integrity

B.3.1	RCS Pressure	1
B.3.2	Containment Sump Water Level	11
B.3.3	Containment Pressure	12

B.4	<u>Maintaining Containment Integrity</u>	
B.4.1	Containment Isolation Valve Position	13
B.4.2	Containment Pressure	12
C.	<u>TYPE C VARIABLES</u>	
C.1	<u>Fuel Cladding</u>	
C.1.1	Core Exit Temperature	8
C.1.2	Radioactivity Concentration or Radiation Level in Circulating Primary Coolant	14
C.1.3	Analysis of Primary Coolant	15
C.2	<u>Reactor Coolant Pressure Boundary</u>	
C.2.1	RCS Pressure	1
C.2.2	Containment Pressure	12
C.2.3	Containment Sump Water Level	11
C.2.4	Containment Area Radiation	16
C.2.5	Effluent Radioactivity-Noble Gas Effluent from Condenser Air Removal System	17
C.3	<u>Containment</u>	
C.3.1	RCS Pressure	1
C.3.2	Containment Hydrogen Concentration	18
C.3.3	Containment Pressure	12
C.3.4	Containment Effluent Radioactivity-Noble Gases from Identified Release Points	19
C.3.5	Radiation Exposure Rate Areas in Direct Contact with Containment	20
C.3.6	Effluent Radioactivity Areas in Direct Contact with Containment	21

D. TYPE D VARIABLESD.1 RHR System

D.1.1	RHR Sytem Flow	22
D.1.2	RHR Heat Exchanger Outlet Temperature	23

D.2 Safety Injection Systems

D.2.1	Accumulator Tank Level and Pressure	24,25
D.2.2	Accumulator Isolation Valve Position	26
D.2.3	Boric Acid Charging Flow	27
D.2.4	Flow in HPI System	28
D.2.5	Flow in LPI System (Note: Single SI System at Prairie Island)	28
D.2.6	Refueling Water Storage Tank Level	2

D.3 Primary Coolant System

D.3.1	Reactor Coolant Pump Status	29
D.3.2	Primary System Safety Relief Valve Positions (including PORV)	30
D.3.3	Pressurizer Level	31
D.3.4	Pressurizer Heater Status	32
D.3.5	Pressurizer Relief Tank Level	33
D.3.6	Pressurizer Relief Tank Temperature	33
D.3.7	Pressurizer Relief Tank Pressure	33

D.4 Secondary System

D.4.1	Steam Generator Level	34
D.4.2	Steam Generator Pressure	34
D.4.3	Safety/Relief Valve Position or Main Steam Flow	35
D.4.4	Main Feedwater Flow	36

D.5	<u>Auxiliary Feedwater System</u>	
D.5.1	Auxiliary Feedwater Flow	37
D.5.2	Condensate Storage Tank Level	38
D.6	<u>Containment Cooling Systems</u>	
D.6.1	Containment Spray Flow	39
D.6.2	Containment Fan Cooler Operation	40
D.6.3	Containment Atmosphere Temperature	41
D.6.4	Containment Sump Water Temperature	42
D.7	<u>Chemical And Volume Control System</u>	
D.7.1	Makeup Flow-In	43
D.7.2	Letdown Flow-Out	43
D.7.3	Volume Control Tank Level	43
D.8	<u>Cooling Water System</u>	
D.8.1	Component Cooling Water Temperature to ESF System	44
D.8.2	Component Cooling Water Flow to ESF System	45
D.9	<u>Radwaste Systems</u>	
D.9.1	High Level Liquid Radwaste Liquid Tank Level	46
D.9.2	Radioactive Gas Holdup Tank Pressure	47
D.10	<u>Ventilation Systems</u>	
D.10.1	Emergency Ventilation Damper Positions	48
D.11	<u>Power Supplies</u>	
D.11.1	Status of Standby Power and other Energy Sources	49

E. TYPE E VARIABLESE.1 Containment Radiation

E.1.1	Containment Area Radiation	16
-------	----------------------------	----

E.2 Area Radiation

E.2.1	Radiation Exposure Rate Areas Impertant to Safety	20
-------	--	----

E.3 Airborne Radioactive Materials Released From Plant

## E.3.1 Noble Gases and Vent Flow Rate

E.3.1.1	Containment or Purge Effluent	50
---------	-------------------------------	----

E.3.1.2	Reactor Shield Building Annulus	50
---------	---------------------------------	----

E.3.1.3	Auxiliary Building	50
---------	--------------------	----

E.3.1.4	Condenser Air Removal System Exhaust	17
---------	---	----

E.3.1.5	Common Plant Vent	50
---------	-------------------	----

E.3.1.6	Vent From Steam Generator Safety Relief Valves or Atmospheric Dump Valves	35
---------	---	----

E.3.1.7	All other Identified Release Points	50
---------	--	----

E.3.2 Particulates and Halogens

E.3.2.1	All Identified Release Points (except S/G Relief Valves, atmospheric dump valves and condenser air removal system exhaust).	51
---------	---	----

E.4 Environs Radiation

E.4.1	Radiation Exposure Meters	52
-------	---------------------------	----

E.4.2	Airborne Radiohalogens and Particulates	51
-------	---	----

E.4.3	Plant and Environs Radiation	53
-------	------------------------------	----

E.4.4	Plant and Environs Radioactivity	54
-------	----------------------------------	----



E.5 Meteorology

E.5.1	Wind Direction	55
E.5.2	Wind Speed	55
E.5.3	Estimation of Atmosphere Stability	56

E.6 Accident Sampling

E.6.1	Primary Coolant and Sump	57
E.6.2	Containment Air	58

## TABLE I VARIABLE DETAILS

LIST OF EFFECTIVE PAGESFOR R.G. 1.97, REV. 2 TABLE

PAGE NO.	REV.	PAGE NO.	REV.	PAGE NO.	REV.
i	0	17	0	39	0
ii	0	18	0	40	0
iii	0	19	0	41	0
iv	0	20	0	42	0
v	0	21	0	43	0
vi	0	22	0	44	0
1	0	23	0	45	0
2	0	24	0	46	0
3	0	25	0	47	0
4	0	26	0	48	0
5	0	27	0	49	0
6	0	28	0	50	0
7	0	29	0	51	0
8	0	30	0	52	0
9	0	31	0	53	0
10	0	32	0	54	0
11	0	33	0	55	0
12	0	34	0	56	0
13	0	35	0	57	0
14	0	36	0	58	0
15	0	37	0		
16	0	38	0		

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RCS PRESSURE	A/1 B	0-3000 PSIG	1E	NONE (SEE COMMENTS)	RECALL COMPUTER	TWO CHANNELS 1 PER LOOP	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G.1.100	COMPLIES
PT709 & PT710									

COMMENTS: 1) RCS pressure transmitters installed for input to subcooling margin monitors (See Item B.2.6).

- 2) A temporary QA III, not seismically qualified display by recorder is being added for RCS pressure. Final qualified display's will be installed with location and type to be determined by detailed control board review.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RWST LEVEL	A, D/1	0-100% TOP TO BOTTOM	INVERTER BATTERY BACKED	INDICATOR	PLANT COMPUTER (ONE CHANNEL ONLY)	TWO CHANNELS PER RWST	WILL COMPLY WITH 10CFR50.49	WILL COMPLY	COMPLIES
L920, L921									

COMMENTS: Two Channels of RWST Level Indication Exist. The Transmitters will be upgraded to meet the Requirements of 10CFR50.49.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
NEUTRON FLUX	B/1	$10^{-11}$ -120%	1E	ANALOG METERS/ RECORDERS COMPUTER LOG	PLANT PROCESS COMPUTER	4 POWER RANGE 2 INTERMED RANGE 2 SOURCE RANGE	REACTOR TRIP ONLY	PER PLANT SEISMIC DESIGN	COMPLIES
	B	$10^{-8}$ -200%	1E	SEE COMMENTS	SEE COMMENTS	2 CHANNELS	WILL COMPLY WITH 10CFR50.49	WILL COMPLY WITH R.G.1.100	COMPLIES

COMMENTS: 1) Existing System not qualified for monitoring after all Design Basis Events.

2) New system consisting of fission chamber detectors and associated electronics is qualified per IEEE 323-1974 and IEEE 344-1975. New system for monitoring only. Old system will retain trip functions.

3) New System to Display initially on NIS racks in control room and replace existing signals for NIS readout on recall computer in TSC. Final control room readout and recording will be determined as apart of the control board review.

4) Logging of new system will be by computer when new process computer installed.

5) Installation of new system to be complete on or before completion of 1985 outages.



R.G. 197, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTROL ROD POSITION	B/3	FULL IN OR NOT FULL IN	DIESEL BACKED INSTRU- MENT POWER	ROD BOTTOM LIGHTS AND POSITION INDICAT- ION METERS	PLANT PROCESS COMPUTER	NO	NO	NO	COMPLIES

COMMENTS:

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RCS SOLUBLE BORON CONCENTRATION	B/3	0-3000 ppm	INSTRU- MENT POWER DIESEL BACKED	PLANT PROCESS COMPUTER	PLANT PROCESS COMPUTER	NO	NO	NO	COMPLIES

COMMENTS: 1) 3000 ppm maximum considered adequate. Normal cold shutdown concentration of 2000 ppm.

2) BCMS inlet is from normal letdown and will not be available with letdown isolation.

3) Manual sample capability exists for accident conditions. See letter, D. Musolf to director NRR, "Information related to NUREG 0737, Item II.B.3, Post Accident Sampling System", dated December 3, 1982.

TABLE I  
Item B.14, B.2.2  
Rev. 0  
Page 6

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RCS COLD LEG WATER TEMPERATURE	B/1	50°F- 650°F (SEE COMMENTS)	1E	RECORDER (SEE COMMENTS)	RECALL COMPUTER	TWO CHANNELS 1 PER LOOP	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G.1.100 EXCEPT FOR DISPLAY (SEE COMMENTS)	COMPLIES EXCEPT FOR DISPLAY (SEE COMMENTS)
T450B, T451B									

COMMENTS: 1) Existing wide range RTD's have calibration to 700°F only. Equipment has been installed in response to NUREG 0737 to extend the display range to 700°F.

- 2) Control Room display presently not seismically qualified and QA III. Display will be upgraded to qualified per R.G. 1.100 and QAI based upon results of control board review. New indication and recording will extend range to 700°F. In accordance with Westinghouse information 700°F maximum is adequate, and consistent with Revision 3 to R.G.1.97 issued May 1983.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RCS HOT LEG WATER TEMPERATURE	B/1	50°F- 650°F	1E	RECORDER (SEE COMMENTS)	RECALL COMPUTER	TWO CHANNELS ONE PER LOOP	COMPLIES WITH 10CFR50.49	COMPLIES EXCEPT DISPLAY FOR QUALIFIED (SEE COMMENTS)	COMPLIES EXCEPT FOR C.R. DISPLAY (SEE COMMENTS)
T450A, T451A									

COMMENTS: See Comments For Item B.4, RCS Cold Leg Water Temperature.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CORE EXIT TEMPERATURE	B,C/1	200°F TO 2300°F	1E	SEE COMMENT AND PLANT PROCESS COMPUTER	RECALL COMPUTER AND PLANT PROCESS COMPUTER	SEE COMMENT	COMPLIES WITH 10CFR50.49 FOR INPUTS TO SUBCOOLING MARGIN MONITOR	COMPLIES WITH R.G.1.100 FOR INPUT TO SUBCOOLING MARGIN MONITOR	COMPLIES FOR INPUTS TO SUBCOOLING MARGIN MONITOR

COMMENTS: The present system has a readout on the Incore Instrumentation Panel, which is not in the normally occupied section of the Control Room. This readout system is not a qualified installation. Eight thermocouples may be readout on the Subcooling Margin Monitor (Four on each monitor), which is a qualified installation.

The non qualified system will be replaced with qualified inputs to the plant Process Computer. Display will be via the plant process computer. This installation will be complete by the SPDS completion date.



R.G. 1.97, Rev. 2

[illegible]

COMMENTS: 1) Installation to be complete by SPDS completion date.

2) Control Board indication to be determined by detailed control board review.

3) Will be Available in TSC on ERF Computer.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
DEGREES OF SUBCOOLING	B/2	999°F SUBCOOLED TO 200°F SUPERHEAT	1E	PANEL METER AND PLANT PROCESS COMPUTER	PLANT PROCESS COMPUTER	TWO CHANNELS EACH USING ONE RCS PRESSURE AND INCORE THERMO- COUPLES	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G. 1.100	COMPLIES

COMMENTS: 1) Calculation made independently by Plant Process Computer.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT SUMP WATER LEVEL	B, C/2	0-100% OF RHR SUMP	1E	INDICATOR ON CONTROL BOARD	RECALL COMPUTER	2 CHANNELS FOR EACH RANGE	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G.1.100	COMPLIES
L725, L726 L727, L728	B, C/1	0-12 FT LVL FROM FLOOR ABOVE SUMP							

COMMENTS:

TABLE 1  
 Item B.3.3, B.4.2  
 C.2.2, C.3.3  
 Rev. 0  
 Page 12

R.G. 1.97, Rev. 2.

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT PRESSURE	B, C/1	-5 PSIG TO 200 PSIG	1E	RECORDER	RECALL COMPUTER	TWO CHANNELS	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G.1.100	COMPLIES
P717, P718									

COMMENTS:

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT ISOLATION VALVE POSITION	B/1	CLOSED, NOT CLOSED	INVERTER DIESEL BACKED	STATUS PANEL  ERF DISPLAY	NO   YES	INDICATION FOR REDUNDANT VALVES  INDICATION FOR REDUNDANT VALVES	NO FOR EXISTING SYSTEM  WILL COMPLY WITH 10CFR50.49 WHEN COMPLETE	NO FOR EXISTING SYSTEM  WILL COMPLY WITH R.G.1.100 WHEN COMPLETE	NO FOR EXISTING SYSTEM  WILL COMPLY WHEN COMPLETE

COMMENTS: 1) Schedule for installation of upgraded system which will be computer based will be consistent with SPDS Installation Schedule.



R.G. 1.97, Rev. 2

[illegible]

COMMENTS: 1) Do not plan to install.

2) An adequate, qualified system, is not available.

3) RCS Sampling Capability considered adequate for detection of Fuel Cladding break. Other indications, such as letdown radiation, provide adequate warning.

R.G. 1.97, Rev. 2

[illegible]

COMMENTS: Have Capability.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT AREA RADIATION	C, E/1	1 R/HR TO 10 <sup>7</sup> R/HR	1E	METER ON RAD MONITOR PANEL	RECALL COMPUTER	TWO CHANNELS	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G.1.100	COMPLIES
R48, R49									

COMMENTS:

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
EFFLUENT RADIOACTIVITY NOBLE GAS EFFLUENT FROM CONDENSOR AIR EJECTOR EXHAUST	C, E/2	10 <sup>-4</sup> TO 100 µCi/CC	1E	ON RAD MONITOR PANEL	RDAS AND PLANT PROCESS COMPUTER	NONE	NO SEE COMMENTS	NO	COMPLIES
K15									

- COMMENTS: 1) Air ejector exhaust routed to Shield Building Exhaust.
- 2) Not in Harsh environment.
- 3) See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT HYDROGEN MONITOR	C/1	0-10%	1E	RECORDER	RECALL COMPUTER	TWO CHANNELS (EACH HAVING TWO SENSORS)	COMPLIES WITH 10CFR50.49	COMPLIES WITH R.G. 1.100	COMPLIES
X719,X720,X721,X722									

COMMENTS: 1) Sensor has not been tested to -5 psig.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT EFFLUENT RADIOACTIVITY- NOBLE GASES FROM IDENTIFIED RELEASE POINTS	C/2	$10^{-4}$ TO $10^{+4}$ $\mu\text{Ci/CC}$	1E	RDAS	RDAS	ONE PER STACK	MILD ENVIRONMENT	COMPLIES	COMPLIES
R12, R22, R50									

COMMENTS:



R.G. 1.97, Rev. 2

[illegible]

COMMENTS: A study is being performed to determine the requirements (Range & Location) for exposure monitors. This study is expected to be complete by 7/1/84. Monitors will be installed based upon the results of this study. See Generic Responses.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
EFFLUENT RADIOACTIVITY- NOBLE GASES, AREA <sup>c</sup> IN DIRECT CONTACT WITH CONTAINMENT	C/2	10 <sup>-4</sup> µCi/cc TO 10 <sup>4</sup> µCi/cc	1E	RAD MONITOR RACKS	RDAS AND PLANT PROCESS COMPUTER	NO	MILD ENVIRONMENT	COMPLIES (R50)	COMPLIES
R30, R37, R50, R22									

COMMENTS: 1) Range per existing Technical Specifications.

2) See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RHR SYSTEM FLOW	D/2	0-6000 gpm	INVERTER POWER, BATTERY BACKED	METER ON CONTROL BOARD	PLANT COMPUTER	NO	NO	NO	COMMERCIAL GRADE
		0-150% DESIGN FLOW							
F626									

COMMENTS: See Generic Response III Per Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RHR SYSTEM TEMPERATURE	D/2	100°F TO 400°F	INVERTER, BATTERY BACKED	METER ON CONTROL BOARD	PLANT COMPUTER	NO	NO	NO	COMMERCIAL GRADE
T627, T630									

COMMENTS: 1) Do not intend to Re-range down to 32°F. Temperature differences across coolers to ultimate heat sink make rearranging unnecessary. The minimum cooling water temperature is approximately 55°F. Also Temperature elements and associated piping in enclosed building.

2) See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
ACCUMULATOR TANK PRESSURE P936, P937 P940, P941	D/2	0-800 PSIG	INVERTER, BATTERY BACKED	CONTROL BOARD METERS	NO	TWO CHANNELS PER ACCUMULATOR	COMPLIES WITH 10CFR50.49	COMPLIES WITH PLANT SEISMIC DESIGN CRITERIA	COMPLIES

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
ACCUMULATOR TANK LEVEL L934, L935, L938, L939,	D/2	0-100% (SEE COMMENT)	INVERTER, BATTERY BACKED	CONTROL BOARD METERS	NO	TWO CHANNELS PER ACCUMULATOR	NO	COMPLIES WITH PLANT SEISMIC DESIGN CRITERIA	COMPLIES

COMMENTS: 1) Accumulator level referenced to discharge volume requirements. 0% on indicator equals 56% level.



R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
ACCUMULATOR ISOLATION VALVE POSITION	D/2	CLOSED OR OPEN	INVERTER, BATTERY BACKED	STATUS LIGHTS	NO	ONE LIGHT FOR EACH VALVE	VALVES EXEMPT LOCKED OPEN (PER 10CFR50.49 RESPONSE)	VALVES QUALIFIED PER PLANT SEISMIC DESIGN PRESENT	VALVE COMPLIES STATUS LIGHT NO
8800A, 8800B (32071, 32072 32174, 32175)									

COMMENTS: 1) Valves open with MCC off during operation. Status light provide valve open indication.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
BORIC ACID CHARGING FLOW FT 110	D/2	0-15 GPM	SAFEGUARD DIESEL BACKED	CONTROL BOARD METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMMERICAL GRADE
FT 113	D/2	0-200 GPM	SAFEGUARD DIESEL BACKED	CONTROL BOARD METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMMERCIAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2 Category Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
FLOW IN SI SYSTEM	D/2	0-1000 GPM TO LOOP 0-500 GPM TO VESSEL	INVERTER, BATTERY BACKED	CONTROL BOARD METERS	RECALL COMPUTER	NONE	WILL COMPLY WITH 50.49	WILL COMPLY	WILL COMPLY FOR TRANS- MITTER
F924, F925									

COMMENTS: 1) Transmitters to be replaced or relocated schedule per 79-01B response.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RCP STATUS BREAKER	D/3	BREAKER STATUS ON-OFF	DC CONTROL POWER	INDICATOR LIGHTS PLANT PROCESS COMPUTER	PLANT PROCESS COMPUTER	NONE	NONE	NONE	COMPLIES (COMMERCIAL GRADE)
KILOWATTS	D/3	0-6000KW	RCP BUS	PLANT PROCESS COMPUTER	PLANT PROCESS COMPUTER	NONE	NONE	NONE	COMPLIES (COMMERCIAL GRADE)

COMMENTS: Do not have amperes. KW Readings considered adequate to meet function.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PRIMARY SYSTEM SAFETY RELIEF VALVE STATUS (INCL. PORV)	D/2	ACCOUSTIC MONITOR FOR PORV AND SAFETIES  POSITION INDICATOR FOR PORV	SAFE- GUARDS POWER DIESEL BACKED  STATION BATTERY	ALARM AND INDICATOR ON CONTROL BOARD	NO	TWO TYPES FOR PORV TEMP MTR IS DIVERSE INDICATION	NO	NO	COMMERICAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PRESSURIZER LEVEL	D/1	BOTTOM TO TOP (EXCLUDING HEMISPHERI- CAL SHELL)	1E	CONTROL BOARD METERS PLUS ONE CHANNEL RECORDED	RECALL COMPUTER 2 CHANNELS	3 CHANNELS	WILL COMPLY WITH 50.49  (SEE COMMENTS)	COMPLIES WITH PLANT SEISMIC DESIGN CRITERIA	COMPLIES
L426, L427, L428									

COMMENTS: 1) Transmitters to be replaced. See Letter D.M. Musolf to Director, NRR, "Response to 10CFR50.49, Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants," dated May 19, 1983.



R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PRESSURIZER HEATER STATUS	D/2	ON/OFF	DC CONTROL POWER FOR BANK (STATION BATTERY)	INDICA- TING LIGHTS	NO	NO	NO	NO	B COMMERICAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PRT LEVEL (L442)	D/3	TOP-BOTTOM	INVERTER, BATTERY BACKED	METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMPLIES
PRT TEMPERATURE (T439)	D/3	0-300°F		METER		NO	NO	NO	COMPLIES
PRT PRESSURE (P440)	D/3	0-100 PSIG UNIT 1 0-50 PSIG UNIT 2		METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMPLIES

COMMENTS: 1) Disagree with required temperature range of 50-750°F. Maximum containment temperature on LOCA temperature on LOCA consistent with 300°F Range. PRT Blowout at plug relieves to containment.

2) Pressure Range to be changed to 0-100 psig for both units.

R.G. 1,97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
S/G LEVEL	D/1	TUBE	1E	CONTROL	RECALL	ONE	COMPLIES	COMPLIES	COMPLIES
LT 487, 488		SHEETS TO SEPARATORS		BOARD METER	COMPUTER	CHANNEL PER S/G	WITH 10CFR 50.49	WITH R.G.1.100	
S/G PRESSURE	D/2	0-1400 PSIG	1E	CONTROL	RECALL	THREE	COMPLIES	COMPLIES	COMPLIES
P468, P469, P482, P478, P479, P483		(0-134% OF 1005 PSIG HOT STANDBY PRESSURE)		BOARD METERS	COMPUTER (SEE COMMENT)	CHANNELS PER STEAM GENERATOR	WITH 10CFR 50.49	WITH R.G.1.100	

COMMENTS: 1) One Steam Generator Pressure Channel per loop on TSC recall computer.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
SAFETY/RELIEF VALVE POSITION OR MS FLOW 1. SAFETY/RELIEF VALVE STATUS	D/2	CLOSED/NOT CLOSED	INVERTER DIESEL BACKED	SEE COMMENTS RDAS	SEE COMMENTS RDAS	ONE SENSOR FOR EACH PORV AND RELIEF	NO	NO	COMMERCIAL GRADE  COMMERCIAL GRADE
2. STEAM FLOW		$0-4.47 \times 10^6$ LBM/HR	1E	PANEL METER	PANEL PROCESS COMPUTER	2 CHANNELS PER LOOP	COMPLIES WITH 10CFR50.49	PER PLANT SEISMIC DESIGN	COMPLIES
3. RADIATION MONITORS R-51, R-52		$1-10^5$ mR/hr	INVERTER DIESEL BACKED	SEE COMMENTS RDAS	SEE COMMENTS RDAS	ONE MONITOR FOR EACH MS LINE	NO	NO	COMMERCIAL GRADE

COMMENTS: 1) Steam Release inputs to RDAS includes sensors at each steam generator PORV, sensors for steam generator safety valves, and steam line radiation levels.

2) For Item 1 and 3 above See Generic Response III for Reg. Guide 1.97, Rev. 2 Category 2 Items.

3) Sensitivity immediately after trip is  $3.5 \times 10^{-2}$   $\mu\text{Ci/cc}$  to  $3.5 \times 10^3$   $\mu\text{Ci/cc}$ . The minimum detectable level increases to 0.1  $\mu\text{Ci/cc}$  after about three hours.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT		POWER	CONTROL ROOM	TSC		ENVIRONMENTAL	SEISMIC	QA
MAIN FEEDWATER FLOW F466, F467 F476, F477	D/3	0-4.47X10 <sup>6</sup> LBM/HR (0-128%)	1E	CONTROL BOARD METER 1 CHANNEL RECORDED	PLANT PROCESS COMPUTER	TWO CHANNELS PER LOOP	COMPLIES WITH 10CFR50.49	COMPLIES WITH PLANT SEISMIC DESIGN	COMPLIES

COMMENTS: Category 1 for Reactor Protection.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
AUXILIARY FEEDWATER FLOW	D/2	0-200 GPM	INVERTER BATTERY BACKED	CONTROL BOARD METER	RECALL COMPUTER	1 CHANNEL PER STEAM GENERATOR	NO	NO	COMMERICAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2 Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONDENSATE STORAGE TANK LEVEL	D/1	0-100%	INVERTER BATTERY BACKED	CONTROL BOARD METER, LOW LEVEL ALARM	PLANT PROCESS COMPUTER	ONE CHANNEL PER TANK (TWO TANKS)	MILD ENVIRONMENT	NO	COMPLIES

COMMENTS: 1) Per previous commitments, an additional indication for each tank will be added so that each unit has indication for either tank. Implementation following completion of Detailed Control Board Review.



R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT SPRAY FLOW	D/2	DO NOT HAVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A

COMMENTS: Do not plan to install. Containment parameters are  
considered adequate indications of spray effectiveness.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
HEAT REMOVAL BY THE CONTAINMENT FAN HEAT REMOVAL SYSTEM	D/2								
FCU WTR OUTLET TEMP		0-300°F	INVERTER	METER	PLANT	ONE PER FAN	NO	NO	COMMERCIAL
FCU AIR OUTLET TEMP		0-300°F	POWER	METER	PROCESS COMPUTER	COIL UNIT ONE PER FAN COIL UNIT			GRADE

COMMENTS: See Generic Response III per Reg. Guide 1.97, Rev. 2 Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT ATMOSPHERE TEMPERATURE	D/2	0-400°F	COMPUTER INVERTER	PLANT COMPUTER	PLANT COMPUTER	THREE SENSORS PER CONTAINMENT	NO	NO	COMMERCIAL GRADE

COMMENTS: See Generic Response III per Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

[illegible]

COMMENTS: Function provided by RHR temperatures.

R.G. 1.97, Rev. 2

	VARIABLE	TYPE/CAT	RANGE	POWER	CONTROL	TSC	REDUNDANCY	ENVIRONMENTAL	SEISMIC	QA
				SUPPLY	ROOM DISPLAY	READOUT		QUALIFICATION	QUALIFICATION	CATEGORY
1	CVCS FLOW IN F128	D/2	0-100 GPM	INVERTER	METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMMERCIAL GRADE
2	CVCS FLOW OUT F134	D/2	0-100 GPM	INVERTER	METER	PLANT PROCESS COMPUTER	NO	NO	NO	COMMERCIAL GRADE
3	VCT LEVEL L141, L112	D/2	0-100%	INVERTER	METER	PLANT PROCESS COMPUTER	TWO CHANNELS	NO	NO	COMMERCIAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

## R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTRL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
COMPONENT COOLING WATER TEMPERATURE CC OUTLET TEMPERATURE TO ESF SYSTEM	D/2	0-200°F	INVERTER	METER	PLANT PROCESS COMPUTER	ONE PER COOLER	MILD ENVIRONMENT	NO	COMPLIES

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
COMPONENT COOLING WATER FLOW TO ESF SYSTEM	D/2	0-5000 GPM	INVERTER	METER	PLANT PROCESS COMPUTER	ONE PER COOLER	NO	NO	COMMERCIAL GRADE

COMMENTS: 1) Total Flow from each cooler provided in Control Room. Each ESF component provided with local flow indication and Control Room low flow alarm.

2) See Generic Response III for Reg Guide 1.97, Rev. 2, Category 2 items.



R.G. 1.97, Rev. 2

[illegible]

COMMENTS: 1) Indication not provided in control room since waste processing done locally.

## R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RADIOACTIVE GAS HOLDUP TANK PRESSURE	D/3	N/A	N/A	NOT IN CONTROL ROOM SEE COMMENTS	NO	ONE PER TANK	NO	NO	COMMERCIAL GRADE COMPLIES

COMMENTS: 1) Waste gas holdup tanks are controlled locally in Aux. Building. Indications are local and not required in control room.

R.G. 1.97, Rev. 2

[illegible]

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
STATUS OF STANDBY POWER AND OTHER ENERG SOURCES IMPORTANT TO SAFETY	D/2	SAFE GUARDS BUS VOLTAGE 0-5200 VAC DIESEL GEN CURRENT 0 TO 600 AMP AIR HEADER PRESSURE 0-160 PSIG	SELF- (VOLTAGE TAPS) SELF (CURRENT XFMER)	INDICATOR  INDICATOR  INDICATOR	PLANT PROCESS COMPUTER NO NO	ONE FOR EACH BUS ONE FOR EACH DIESEL ONE FOR EACH EACH MAJOR HEADER	MILD ENVIRONMENT MILD ENVIRONMENT NO	COMPLIES WITH PLANT SEISMIC DESIGN COMPLIES WITH PLANT SEISMIC DESIGN NO	COMPLIES  COMPLIES  COMMERCIAL GRADE

COMMENTS: See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2, Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
REACTOR SHIELD BUILDING ANNULUS NOBLE GAS RADIATION LEVEL (R50, R22)	E/2	$10^{-1}$ $\mu$ Ci/CC TO $10^7$ $\mu$ Ci/CC	1E	RAD MONITOR PANEL INDICATOR AND	RDAS	ONE	MILD ENVIRONMENT	COMPLIES WITH PLANT SEISMIC DESIGN CRITERIA	COMPLIES
VENT FLOW RATE	E/2		INVERTER BATTERY BACKED	VIA DOSE ASSESS- MENT COMPUTER	RDAS	NO	MILD ENVIRONMENT	NO	COMMERCIAL GRADE

COMMENTS: 1) Vent flow rate being added. Will be input To RDAS. Scheduled to be completed by January 1, 1985.

2) See Generic Response III for Reg. Guide 1.97, Rev. 2, Category 2 Items.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
AIRBORNE RADIO HALOGEN AND PARTICULATES SAMPLING WITH ON SITE ANALYSIS	E/3	10 <sup>-9</sup> µCi/CC TO 10 <sup>-3</sup> µCi/CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A

COMMENTS: 1) Have Capability.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
RADIATION EXPOSURE METERS	E/NA	DO NOT HAVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A

COMMENTS: No Requirement exists. This item was deleted by Revision 3 to Reg. Guide 1.97 dated May, 1983.



R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PLANT AND ENVIRONS RADIATION PORTABLE INSTRUMENTS	E/3	SEE COMMENTS	N/A	N/A	N/A	N/A	NO	NO	COMPLIES

COMMENTS: Have capability, instruments have varying ranges, but cover ranges listed in R.G. 1.97, Rev. 2.  
The only exception is that Beta meters read to 50 rads/hr.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PLANT AND ENVIRONS RADIOACTIVITY	E/3	MULTI CHANNEL GAMMA SPECTROMETER	STATION POWER	N/A	N/A	N/A	NO	NO	COMMERCIAL GRADE COMPLIES

COMMENTS: 1) Have Capability.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
WIND DIRECTION	E/3	0-360° (± 1°)	TWO SOURCES ONE FROM OFFSITE POWER AND	DOSE ASSESS- MENT COMPUTER	DOSE ASSESS- MENT COMPUTER	TWO SENSORS AT 10 METERS AND TWO SENSORS AT 60 METERS	NONE	NONE	COMMERCIAL GRADE - COMPLIES
WIND SPEED	E/3	0-100 MPH (± 0.1 MPH)	ONE FROM RURAL COOP.	DOSE ASSESS- MENT COMPUTER	DOSE ASSESS- MENT COMPUTER		NONE	NONE	COMMERCIAL GRADE - COMPLIES

COMMENTS: 1) Have provision to receive and display Regional National Weather Service meteorological data.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
ESTIMATION OF ATMOSPHERE STABILITY	E/3	SEE COMMENTS	TWO SOURCES, OFFSITE POWER AND RURAL COOP-	RADIATION DOSE ASSESS- MENT COMPUTER	YES	NO	NO	NO	COMMERCIAL GRADE COMPLIES

COMMENTS: 1) Have temperature sensors at 10 and 60 meters.

2) Have "SODAR" acoustic atmosphere stability assessment system to evaluate terrain effects.

3) Have provision to receive and display Regional National Weather Service meteorological data.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
PRIMARY COOLANT AND SUMP GROSS ACTIVITY GAMMA SPECTRUM BORON CL DISSOLVED H2 O2 PH	E/3	SEE COMMENTS		N/A	N/A	N/A	N/A	N/A	N/A

COMMENTS: 1) See letter D. Musolf to Director NRR, "Information Related to NUREG 0737, Item II.B.3, Post Accident Sampling System," dated December 3, 1982.

R.G. 1.97, Rev. 2

VARIABLE	TYPE/CAT	RANGE	POWER SUPPLY	CONTROL ROOM DISPLAY	TSC READOUT	REDUNDANCY	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	QA CATEGORY
CONTAINMENT	E/3	HAVE	1E FOR	N/A	N/A	N/A	N/A	N/A	N/A
AIR-GRABSAMPLE		CAPABILITY	SAMPLE						
H2		0-10%	VALVES						
07		0-30%							
GAMMA SPECTRUM		ISOTOPIC							
		ANALYSIS							

COMMENTS: Via Post Loca Sample Valves.