

**TURKEY POINT PLANT  
UNIT NO. 4  
ENGINEERING EVALUATION  
OF INSTRUMENTATION SYSTEM  
FOR  
REGULATORY GUIDE 1.97, REV. 3**

**Revision 1  
DATE: April 1985**

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## TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
I.	Regulatory Guide 1.97, Rev. 3 Requirements	1, 2
II.	Evaluation Criteria	3-5
III.	Methodology of Equipment Evaluation	6, 7
IV.	Type A Variable List of Parameters	8, 9
V.	List of Systems Requiring Additions, Modifications or Analysis	10-12
VI.	References	13
VII.	Conclusions	14
VIII	Parameter Listing Summary Sheets	
	Notes	1, 2
	Summary Sheets	1-46



**SECTION 1**  
**REGULATORY GUIDE 1.97, REV. 3 REQUIREMENTS**



Regulatory Guide 1.97, Rev. 3, titled "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident", divides all instrumentation used for Post Accident Monitoring into five functional types as shown below:

**Type A Variables:** those variables to be monitored that provide the primary information required to permit the control room operator to take specific manually controlled actions for which no automatic control is provided and that are required for safety systems to accomplish their safety function for design basis accident events. Primary information is information that is essential for the direct accomplishment of the specified safety functions; it does not include those variables that are associated with contingency actions that may also be identified in written procedures.

**Type B Variables:** those variables that provide information to indicate whether plant safety functions are being accomplished. Plant safety functions are (1) reactivity control, (2) core cooling, (3) maintaining reactor coolant system integrity, and (4) maintaining containment integrity (including radioactive effluent control).

**Type C Variables:** those variables that provide information to indicate the potential for being breached or the actual breach of the barriers to fission product releases. The barriers are (1) fuel cladding, (2) primary coolant pressure boundary, and (3) containment.

**Type D Variables:** those variables that provide information to indicate the operation of individual safety systems and other systems important to safety. These variables are to help the operator make appropriate decisions in using the individual systems important to safety in mitigating the consequences of an accident.

**Type E Variables:** those variables to be monitored as required for use in determining the magnitude of the release of radioactive materials and continually assessing such releases.

Post Accident Monitoring Instrumentation is divided into three categories based on the degree of equipment qualification requirements, redundancy, power sources, channel availability, quality assurance, and display and recording requirements.

In general, Category 1 provides for full qualification, redundancy, and continuous real-time display and requires on-site (standby) power. Category 2 provides for qualification but is less stringent in that it does not (of itself) include seismic qualification, redundancy, or continuous display and requires only a high-reliability power source (not necessarily standby power). Category 3 is the least stringent. It provides for high-quality commercial grade equipment that requires only offsite power.





**SECTION II**  
**EVALUATION CRITERIA**



Our review of RG 1.97, Rev. 3 requirements applicable to operating plants shows that the requirements of this guide cover the requirements of 10 CFR 50.49 and NUREG 0737 and its subsequent clarification and generic letter 82-33.

The following is the evaluation criteria used in this report for the three different categories as defined in the Regulatory Guide 1.97, Rev. 3, Table 1.

1. ENVIRONMENTAL QUALIFICATION CRITERIA

a. Category 1 Instrumentation

- (a). Instrumentation located in harsh environment should comply with 10 CFR 50.49 requirements and NUREG 0588 Category 1 (IEEE-323, 1974).
- (b). Instrumentation located in mild environments do not have to be up-graded if they withstand their service location conditions under normal and emergency conditions.

b. Category 2 Instrumentation

- (a). For safety related instrumentation, follow the same criteria used for category 1 instrumentation.
- (b). Non-nuclear safety related instrumentation located in harsh environment has to be qualified per NUREG 0588 category 1.
- (c). Instrumentation located in mild environment should follow the same criteria used for category 1 instrumentation.

c. Category 3 Instrumentation

Non-nuclear safety related instrumentation has to withstand its service location conditions.



2. SEISMIC QUALIFICATION CRITERIA

Category 1 and Safety Related Category 2 instrumentation:

The equipment shall comply with IEEE-344, 1975. (Reg. Guide 1.100)

Category 3 and non safety related category 2 instrumentation:

No specific provision required.

3. REDUNDANCE

Only category 1 instrumentation should be provided with redundant or diverse channels, electrically independent, and physically separated from each other, and from non-safety equipment, in accordance with Reg. Guide 1.75 "Physical independence of electric systems", up to and including any isolation device. Category 2 and 3 instrumentation do not require redundancy.

4. POWER SOURCES

a. Category 1

Instrumentation to be supplied from 120 VAC uninterruptible power source, or from 120 VAC Offsite Power supply, backed up by an Emergency Diesel Generator if momentary interruption of power is acceptable.

b. Category 2

Instrumentation to be supplied from high reliability power source which can be either from:

1. 120 VAC uninterruptible, or
2. 120 VAC Offsite Power backed by an Emergency Diesel Generator, or
3. 125 VDC safety-related battery, or
4. 125 VDC non-safety related battery



c. Category 3

No specific provisions required.

5. QUALITY ASSURANCE - Qualified equipment (category 1 and safety related category 2) should comply with the Regulatory Guides listed in Table 1 of Reg. Guide 1.97 Rev. 3.

6. DISPLAY AND RECORDING

Category 1 Instrumentation should be displayed on a real-time display. The indicator may be on a dial, digital display, CRT or strip chart recorder.

Recording of instrumentation readout should be provided for at least one redundant channel. Where dedicated strip chart recorder is not provided, recording should be updated and stored in computer memory and displayed on demand.

Category 2 Instrumentation should be displayed on an individual instrument or it may be processed for display on demand. Signal from effluent radioactivity and area monitors should be recorded.

Category 3 Instrumentation (Same as Category 2).

Signal from effluent radioactivity area and meteorology monitors should be recorded.





Turkey Point  
Unit 4  
Revision 1

### SECTION III

## METHODOLOGY OF EQUIPMENT EVALUATION



1. ORIGINAL SAFETY RELATED INSTRUMENTATION

The original, safety related instruments located in harsh environment has been or will be replaced by qualified instruments per our commitment in response to bulletin 79-01B, 10 CFR 50.49 or by this report. The instruments located in mild environment do not require specific qualification until revision of the Regulatory Guide 1.89 is published.

The original safety related instrumentation generally comply with the seismic qualification program which was the basis for plant licensing.

2. ADDED OR REPLACED SAFETY RELATED INSTRUMENTATION

The added or replaced safety related instrumentation generally comply with the requirements of 10 CFR 50.49 or the latest IEEE standards.

3. NON SAFETY INSTRUMENTATION

These instruments are high quality commercial grade equipment that require no specific qualification, however, if the instrument is category 2 located in harsh environment, should be environmentally qualified.

Once the evaluation of all the instrumentation has been completed, a schedule for the implementation of the required modification to comply with the Reg. Guide requirements has been included.

Section VIII of this report is the Parameter Listing Summary Sheets which includes all the plant instrumentation by tag numbers, grouped in the same order as the Reg. Guide 1.97, by type and categories.

The listing summarizes all the required information to perform the evaluation and the results of the evaluation are shown on the column justification/schedule. If this



column is blank, it means that the instrument complies with the requirements of the Reg. Guide 1.97.

The Parameter Listing Summary Sheets provide the following information: Item, tag number, variable description, type and category, instrument existing and required ranges, QA requirements, environmental and seismic qualification, redundancy, power supply, display location, schedule for implementation or justifications.

Variable description column, described the variable as listed in the Reg. Guide 1.97, Rev. 3.

The tag number column, lists all the sensors, indicators, displays and recorders associated with variable described.

In the column "Display Locations, Control Room C.R.", Yes, means that the indicator is located in the control room; SAS means that the data is available in SASA; SPDS means that the data is used for SPDS.

In the Column "Display Location TSC and EOF", Yes, means that the data is available on the computer display in the TSC and EOF.

Finally, Section V lists all systems requiring modification, additions or analysis to comply with the Regulatory requirements.



Turkey Point  
Unit 4  
Revision 1

SECTION IV  
TYPE A VARIABLE LIST OF PARAMETERS





The type A variable list of parameters, the basis for which is given in Reg. 1.97, Rev. 3, was established. The following Emergency Operational Procedures (EOPS) were reviewed:

- a. Immediate Action and Diagnostics (E-1)
- b. Loss of Reactor Coolant (E-1)
- c. Loss of Secondary Coolant (E-2)
- d. Steam Generator Tube Rupture (E-3)

As a result of these reviews, the following parameters were designated as Type A variables:

- 1. Pressurizer Pressure
- 2. RCS Hot Leg Temperature
- 3. RCS Cold Leg Temperature
- 4. Steam Generator Level Narrow Range
- 5. Refueling Water Storage Tank Level

Pressurizer Pressure and RCS Hot and Cold leg temperatures were designed type A variables due to their use as inputs for calculating margin to subcooling.

The Subcooling margin will be displayed in the two channels "Inadequate Core Cooling System" (ICCS) displays in the Control Room.

Specifically the operator actions pertinent to subcooled margin concern are the following:

- a) Maintain the RCS hot leg temperature and pressurizer pressure stable, using Auxiliary Feedwater, steam dump, or initiating Safety Injection as indicated in the Emergency Operating Procedures, when the pressurizer pressure drops below 1723 psig or the subcooling margin drops below 30°F.



- b. If voiding in the RCS should occur, subcooled margin no longer exists, the operator must ensure that the R. C. pumps are shut off.

The Steam Generator Narrow Range Level is designed type A variable due to its use to determine the Auxiliary Feedwater initiation to maintain the Steam Generator Level above 15% in the narrow range span during loss of Secondary Coolant and for Steam Generator Tube Rupture Events.

The RWST Level is designed for type A variable due to its use in determining the cold leg recirculation mode switchover or R. C. pump stop during Loss of Reactor Coolant Accident (LOCA).

Turkey Point  
Unit 4  
Revision 1

**SECTION V**  
**LIST OF SYSTEMS REQUIRING ADDITIONS,**  
**MODIFICATIONS OR ANALYSIS**

The following is the actual status of Turkey Point Unit #4 instrumentation which, as a result of the evaluation, requires addition, modification or analysis.

1. Item B-1 Neutron Flux

Two redundant safety grade channels for full range neutron flux indication in the control room and one in the hot shutdown panel will be installed. The control room instruments will be installed prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986. The hot shutdown panel instrument will be installed prior to start up for Turkey Point -4 Cycle 11 scheduled for March 1986.

2. Item B-15 Containment Isolation Valve Position Indication

Safety grade limit switches will be installed prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986. Wiring to SAS will be installed consistent with the schedule on item 11.

CV-4658 A & B

CV-4668 A & B

CV-4659 A & B

CV-2903

CV-2904

CV-2905

CV-2906

CV-2907

CV-2908

CV-2810

CV-2812

CV-2814

FCV-478

FCV-479

FCV-488

FCV-489

FCV-498

FCV-499



3. Item B-15 Containment Isolation Valve Position Indication

Safety grade limit switches were installed for the following valves prior to startup for Turkey Point-4 Cycle 10 to meet R.G. 1.97 requirements.

POV-2601

POV-2603

POV-2604

POV-2605

POV-2606

CV-200 A

CV-200 B

CV-200 C

4. Item B-15 Containment Isolation Postion Indication

The following motor operators were replaced prior to startup for Turkey Point-4 Cycle 10:

MOV-866 A & B

5. Item D-13 Pressurizer Heater Status

Indication will be provided by SAS in the CR, TSC and EOF for pressurizer heater status prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.

6. Item D-3 Accumulator Tank Level

The following transmitters will be replaced by qualified Rosemount transmitters prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986:

LT-920

LT-922

LT-924

LT-926

LT-928

LT-930





32



See additional justification for using narrow range indication (attachment 1 to cover letter).

7. Item A-4 RWST Level

Two new safety grade redundant level indication channels have been installed to meet R.G. 1.97 requirements.

8. Item D-11 Pressurizer PORV's Position Indication

Safety grade limit switches have been provided for the PORV's prior to startup for Turkey Point-4 Cycle 10.

PCV-455 C      PCV-456

9. ICCS Qualification Report has been completed.

Connector modification to comply with this report will be completed prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.

10. All SPDS signals (see Section VII of this report) will be available prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.

11. The scope and installation schedule for the SAFETY ASSESSMENT SYSTEM (SAS) is currently under review by FPL and will be provided at a later date.

12. Item D-18 Steam Generator Pressure - Conax Seal Connectors were installed for the following transmitters prior to startup for Turkey Point-4 Cycle 10:

PT-474	PT-486	PT-475	PT-494	PT-476	PT-495
PT-484	PT-496	PT-485			

13. Item D-25 Containment Atmos. Temperature. Safety Grade RTD's will be installed prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.



Turkey Point  
Unit 4  
Revision 1

**SECTION VI**  
**REFERENCES**

REFERENCES

Regulatory Guide 1.97, Rev. 3

10 CFR 50.49

Regulatory Guide 1.89

Regulatory Guide 1.100

NUREG 0737, Supplement 1

NUREG 0588

IEEE-323, 1974

IEEE-344, 1975

### CONCLUSIONS

1. Based on the information presented in this report, Turkey Point Plant Unit #4 will conform with the requirements of Reg. Guide 1.97, Rev. 3 prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.
2. For some instrumentation which does not fully comply with the requirement of Reg. Guide 1.97, Rev. 3, a justification has been provided (Section VIII).
3. Information available through SAS supplements the R. G. 1.97 requirements and will be provided at the Control Room, TSC, and EOF on Computer Display consistent with the SAS implementation schedule provided in Section V.



Turkey Point  
Unit 4  
Revision 1

**SECTION VIII**  
**PARAMETER LISTING SUMMARY SHEETS**





UNIT #4

NOTES

For Tag No:

(LS) = Limit switch associated with valve

For Environmental Column:

1. Comply with 10 CFR 50-49 and NUREG 0588 Category I.
2. Will comply with 10 CFR 50-49 and NUREG 0588 Category I.
3. Comply with 10 CFR 50-49 and NUREG 0588 Category II.
4. Will comply with 10 CFR 50-49 and NUREG 0588 Category II.
5. Original equipment environmentally qualified per 79-01B Report.
6. Non-Safety-Related Category 2 instruments located in harsh environment "comply with 10 CFR 50-49 and NUREG 0588".
7. Non-Safety-Related Category 2 instruments located in harsh environment "will comply with 10 CFR 50-49 and NUREG 0588".
8. Instruments located in mild environment (all categories) "No specific qualification required".

For Seismic Qualification Column:

9. "Original Equipment": Comply with the seismic qualification program which was the basis for plant licensing.
10. New and Replaced Equipment: Comply with Reg. Guide 1.100.
11. New and Replaced Equipment: Will comply with Reg. Guide 1.100.

For Power Supply Column: Power source is identified as:

- 12: Class 1E, 120 VAC uninterruptible power supply (inverters). (ICCS is temporarily powered from a safety grade but interruptible power supply).
- 12A. Radiation detectors are powered from invertors but sample pumps are powered from lighting panels or space heater panels.



13. Class 1E, 120 VAC offsite power backed up by the Emergency Diesel Generator.
14. Class 1E, 125 DC safety related battery.
15. Non-Class 1E, 120 VAC offsite power (interruptible).
16. Class 1E, 4.160 kV AC offsite power with no back up.
17. Class 1E, 480 Volt AC offsite power with no back up.
17. No electrical connection.

For Schedule/Justification Column

19. The ICCS will be fully qualified according to the schedule provided in Section V item 9.
20. The SMM is displayed in the two-channel ICCS display units. (See note 19).
21. Has been replaced prior to startup for Turkey Point-4 Cycle 10.
22. To be replaced prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.
23. A non-safety related steam generator feedwater level "Wide Range" instrument loop with readout in the main control boards also available.
24. Category 1 redundancy does not apply because a secondary containment isolation valve is generally available from each line penetrating the containment.
25. To be replaced prior to startup for Turkey Point-4 Cycle 11 scheduled for March 1986.

GENERAL NOTES:

26. Recording will be stored and displayed continually on demand in SAS.
27. All SAS signals will be connected consistent with schedule provided in Section V. Exceptions are items 4A, D13 which will be connected in accordance with the schedule provided in Section V.
28. See Attachment 1 to Cover Letter for Justification.
29. All SPDS signals will be connected according to the schedule provided in Section V item 10.



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 1 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
A1		<u>PLANT SPECIFIC</u>													
		<u>RCS PRESSURE</u>													
	PT-404	RCS Pressure	A	1	0-3250 PSIG	Plant Specific	Comply	Note 1	Note 10	PT-406	Note 12	SPDS	Yes	Yes	
	PT-406	RCS Pressure	↓	↓	0-3250 PSIG	↓	Comply	Note 1	Note 10	PT-404	↓	SPDS	Yes	Yes	
	ICCS A	Display A	↓	↓	0-3250 PSIG	↓	Will Comply	Note 2	Note 10	ICCS B	↓	Yes	-	-	Note 19
	ICCS B	Display B	↓	↓	0-3250 PSIG	↓	Will Comply	Note 2	Note 10	ICCS A	↓	Yes	-	-	Note 19
A2		<u>RCS HOT LEG WTR TEMPERATURE</u>													
	TE-413A	RCS Hot Leg Wtr. Temp. Loop A	A	1	0-750 F	Plant Specific	Comply	Note 1	Note 10	TE-413B	Note 12	SPDS	Yes	Yes	
	TE-413B	RCS Hot Leg Wtr. Temp. Loop A	↓	↓	↓	↓	↓	↓	↓	TE-413A	↓	↓	↓	↓	
	TE-423A	RCS Hot Leg Wtr. Temp. Loop B	↓	↓	↓	↓	↓	↓	↓	TE-423B	↓	↓	↓	↓	
	TE-423B	RCS Hot Leg Wtr. Temp. Loop B	↓	↓	↓	↓	↓	↓	↓	TE-423A	↓	↓	↓	↓	
	TE-433A	RCS Hot Leg Wtr. Temp. Loop C	↓	↓	↓	↓	↓	↓	↓	TE-433B	↓	↓	↓	↓	
	TE-433B	RCS Hot Leg Wtr. Temp. Loop C	↓	↓	↓	↓	↓	↓	↓	TE-433A	↓	↓	↓	↓	
	TR-413	RCS Hot Leg Wtr. Temp. Recorder Loop A, B, C	↓	↓	↓	↓	Comply	Note 8	Note 10	N/A	↓	Yes	-	-	
	ICCS A	Display A	↓	↓	↓	↓	Will Comply	Note 2	Note 10	ICCS B	↓	Yes	-	-	Note 19
	ICCS B	Display B	↓	↓	↓	↓	Will Comply	Note 2	Note 10	ICCS A	↓	Yes	-	-	Note 19



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 2 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
A3		<u>PLANT SPECIFIC (Continued)</u>													
		<u>RCS COLD LEG WTR TEMPERATURE</u>													
	TE-410A	RCS Cold Leg Wtr. Temp. Loop A	A	1	0-750 F	Plant Specific	Comply	Note 1	Note 10	TE-410B	Note 12	SPDS	Yes	Yes	
	TE-410B	RCS Cold Leg Wtr. Temp. Loop A								TE-410A					
	TE-420A	RCS Cold Leg Wtr. Temp. Loop B								TE-420B					
	TE-420B	RCS Cold Leg Wtr. Temp. Loop B								TE-420A					
	TE-430A	RCS Cold Leg Wtr. Temp. Loop C								TE-430B					
	TE-430B	RCS Cold Leg Wtr. Temp. Loop C								TE-430A					
	TR-410	RCS Cold Leg Wtr. Temp. Recorder Loop A, B, C					Comply	Note 8	Note 10	N/A		Yes	-	-	
A4	ICCS A	Display A					Will Comply	Note 2	Note 10	ICCS B		Yes	-	-	Note 19
	ICCS B	Display B					Will Comply	Note 2	Note 10	ICCS A		Yes	-	-	Note 19
		<u>EWST LEVEL</u>													
	LT-6583A	EWST Ch. A Level	A	1	0-330,000 Gal.	Plant Specific	Comply	Note 1	Note 10	LT-6583B	Note 12	SAS	Yes	Yes	
	LI-6583A	EWST Ch. A Level Ind.			0-330,000 Gal.			Note 8		LI-6583B		Yes	-	-	
	LT-6583B	EWST Ch. B Level			0-330,000 Gal.			Note 1		LT-6583A		Yes	-	Yes	
	LI-6583B	EWST Ch. B Level Ind			0-330,000 Gal.			Note 8		LI-6583A		Yes	-	-	



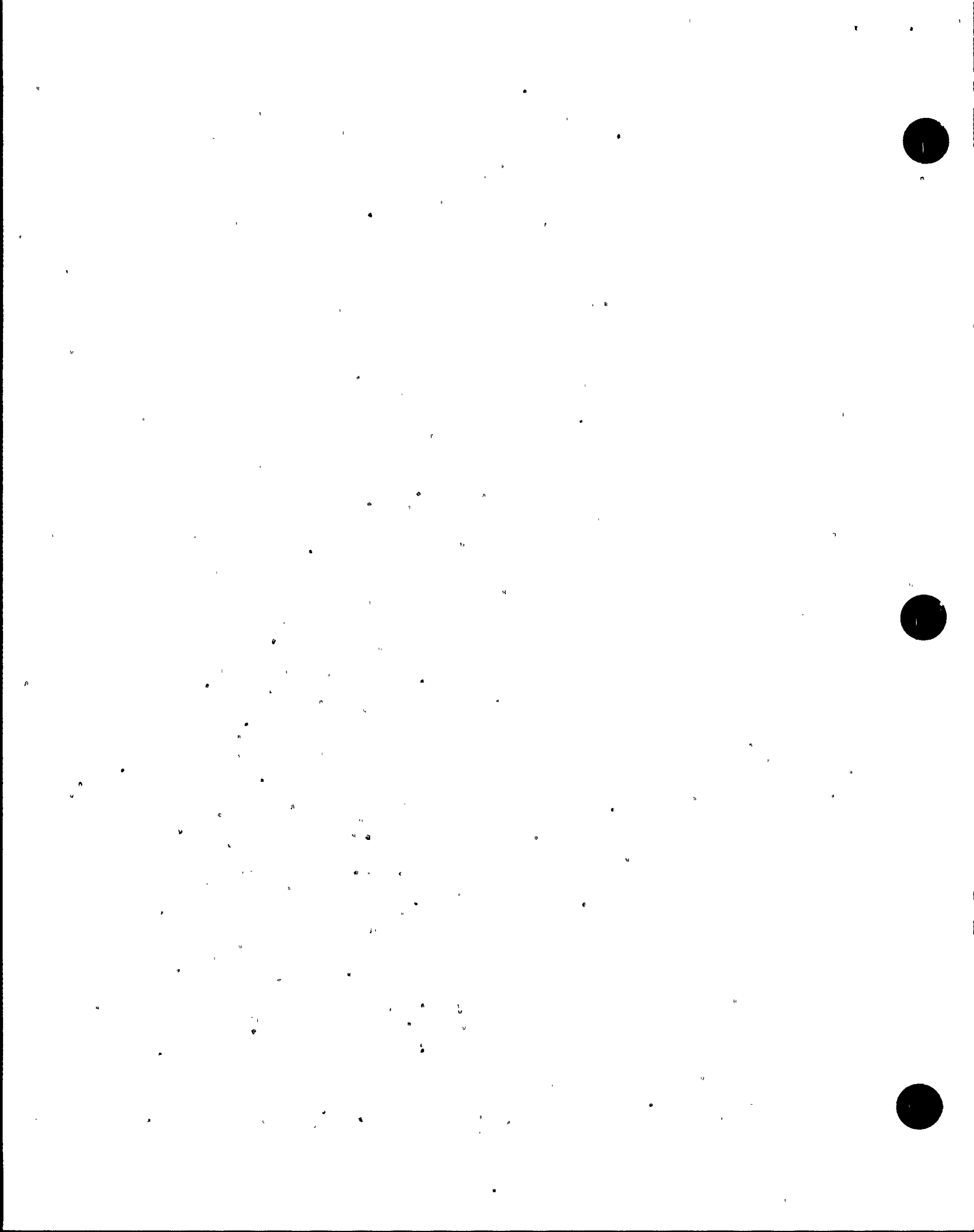


PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 3 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
A5		PLANT SPECIFIC (Continued)													
		S.G. LEVEL NARROW RANGE													
	LT-474	S.G. 'A' Lvl. Ch. I Narrow Range	A	1	30.1" to 138.22"	Plant Specific	Comply	Note 1	Note 10	LT-475 LT-476	Note 12	SPDS	Yes	Yes	
	LI-474	S.G. 'A' Lvl. Ch. I Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-475 LI-476		Yes	-	-	
	LT-475	S.G. 'A' Lvl. Ch. II Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-474 LT-476		SPDS	Yes	Yes	
	LI-475	S.G. 'A' Lvl. Ch. II Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-474 LI-476		Yes	-	-	
	LT-476	S.G. 'A' Lvl. Ch. III Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-474 LT-475		SPDS	Yes	Yes	
	LI-476	S.G. 'A' Lvl. Ch. III Narrow Range Ind.			0 - 100%			Note 8	Note 10	LI-474 LI-475		Yes	-	-	
	LR-478	S.G. 'A' Lvl. Ch. I, II, III Narrow Range Recorder			0 - 100%			Note 8	Note 10	N/A		Yes	-	-	
	LT-484	S.G. 'B' Lvl. Ch. I Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-485 LT-486		SPDS	Yes	Yes	
	LI-484	S.G. 'B' Lvl. Ch. I Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-485 LI-486		Yes	-	-	
	LT-485	S.G. 'B' Lvl. Ch. II Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-484 LT-486		SPDS	Yes	Yes	
	LI-485	S.G. 'B' Lvl. Ch. II Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-484 LI-486		Yes	-	-	
	LT-486	S.G. 'B' Lvl. Ch. III Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-484 LT-485		SPDS	Yes	Yes	
	LI-486	S.G. 'B' Lvl. Ch. III Narrow Range Ind.			0 - 100%			Note 8	Note 10	LI-484 LI-485		Yes	-	-	
	LR-488	S.G. 'B' Lvl. Ch. I, II, III Narrow Range Recorder			0 - 100%			Note 8	Note 10	N/A		Yes	-	-	



4/85

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 4 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
		<u>S.G. LEVEL NARROW RANGE</u> (Continued)													
	LT-494	S.G. 'C' Lvl. Ch. I Narrow Range	A	1	30.1" to 138.22"	Plant Specific	Comply	Note 1	Note 10	LT-495 LT-496	Note 12	SPDS	Yes	Yes	
	LI-494	S.G. 'C' Lvl. Ch. I Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-495 LI-496		Yes	-	-	
	LT-495	S.G. 'C' Lvl. Ch. II Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-494 LT-496		SPDS	Yes	Yes	
	LI-495	S.G. 'C' Lvl. Ch. II Narrow Range Ind.			0 - 100%			Note 8	Note 9	LI-494 LI-496		Yes	-	-	
	LT-496	S.G. 'C' Lvl. Ch. III Narrow Range			30.1" to 138.22"			Note 1	Note 10	LT-494 LT-495		SPDS	Yes	Yes	
	LI-496	S.G. 'C' Lvl. Ch. III Narrow Range Ind.			0 - 100%			Note 8	Note 10	LI-494 LI-495		Yes	-	-	
	LR-498	S.G. 'C' Lvl. Ch. I, II, III Narrow Range Recorder			0 - 100%			Note 8	Note 10	N/A		Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 5 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
B1		<u>REACTIVITY CONTROL - NEUTRON FLUX</u>													
	N-35	Neutron Flux (Intermediate Range)	B	1	$10^{-11}$ to $10^{-3}$ AMP	$10^{-6}$ to 100% Full Power	Will Comply	Note 2	Note 11	N-36	Note 12	SPDS	Yes	Yes	Note 22
	NI-35-B	Neutron Flux (Intermediate Range) Indicator	↓	↓	↓	↓	↓	Note 8	↓	NI-36B	↓	Yes	-	-	↓
	N-36	Neutron Flux (Intermediate Range)	↓	↓	↓	↓	↓	Note 2	↓	N-35	↓	SPDS	Yes	Yes	↓
	NI-36-B	Neutron Flux (Intermediate Range) Indicator	↓	↓	↓	↓	↓	Note 8	↓	NI-35B	↓	Yes	-	-	↓
B2		<u>REACTIVITY CONTROL CONTROL ROD POSITION</u>													
	70CR	Control Rod Bank 'A' Rod Bottom Switch	B	3	Full In Or Not Full In	Full In Or Not Full In	N/A	N/A	N/A	N/A	Note 14	SAS	Yes	Yes	
	71CR	Control Rod Bank 'B' Rod Bottom Switch	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
	72CR	Control Rod Bank 'C' Rod Bottom Switch	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
	73CR	Control Rod Bank 'D' Rod Bottom Switch	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
	74CR	Control Rod Bank 'A' Rod Bottom Switch	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
	75CR	Control Rod Bank 'B' Rod Bottom Switch	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
B3		<u>REACTIVITY CONTROL - RCS SOLUBLE BORON CONCENTRATION</u>													
	AE-6424	Boron Analyzer RCS Soluble Boron Concentration	B	3	0-6000 PPM	0-6000 PPM	N/A	N/A	N/A	N/A	Note 15	SAS	Yes	Yes	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 6 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
B4		<u>REACTIVITY CONTROL</u> <u>RCS COLD LEG WTR. TEMP.</u>													
	TE-410A	RCS Cold Leg Wtr. Temp. Loop 'A'	B	3	0 - 750 F	50 - 400 F		SEE ITEM A3							
	TE-410B	RCS Cold Leg Wtr. Temp. Loop 'A'													
	TE-420A	RCS Cold Leg Wtr. Temp. Loop 'B'													
	TE-420B	RCS Cold Leg Wtr. Temp. Loop 'B'													
	TE-430A	RCS Cold Leg Wtr. Temp. Loop 'C'													
	TE-430B	RCS Cold Leg Wtr. Temp. Loop 'C'													
	TR-410	RCS Cold Leg Wtr. Temp. Recorder Loop A, B, C													
	ICCS A	Display 'A'													
	ICCS B	Display 'B'													
B5		<u>CORE COOLING - RCS HOT LEG WTR. TEMP.</u>													
	TE-413A	RCS Hot Leg Wtr. Temp. Loop 'A'	B	1	0 - 750 F	50 - 700 F		SEE ITEM A2							
	TE-413B	RCS Hot Leg Wtr. Temp. Loop 'A'													
	TE-423A	RCS Hot Leg Wtr. Temp. Loop 'B'													
	TE-423B	RCS Hot Leg Wtr. Temp. Loop 'B'													



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 7 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
B5		<u>CORE COOLING - RCS HOT LEG</u> <u>WTR. TEMP.</u> (Continued)													
	TE-433A	RCS Hot Leg Wtr. Temp. Loop 'C'	B	1	0 - 750 F	50 - 700 F		SEE ITEM A2							
	TE-433B	RCS Hot Leg Wtr. Temp. Loop 'C'													
	TR-413	Recorder Loop A, B, C													
	ICCS A	Display 'A'													
	ICCS B	Display 'B'													
B6		<u>CORE COOLING</u> <u>RCS COLD LEG WTR. TEMP.</u>													
	TE-410A	RCS Cold Leg Wtr. Temp. Loop 'A'	B	1	0 - 750 F	50 - 700 F		SEE ITEM A3							
	TE-410B	RCS Cold Leg Wtr. Temp. Loop 'A'													
	TE-420A	RCS Cold Leg Wtr. Temp. Loop 'B'													
	TE-420B	RCS Cold Leg Wtr. Temp. Loop 'B'													
	TE-430A	RCS Cold Leg Wtr. Temp. Loop 'C'													
	TE-430B	RCS Cold Leg Wtr. Temp. Loop 'C'													
	TR-410	Recorder Loop A, B, C													
	ICCS A	Display 'A'													
	ICCS B	Display 'B'													

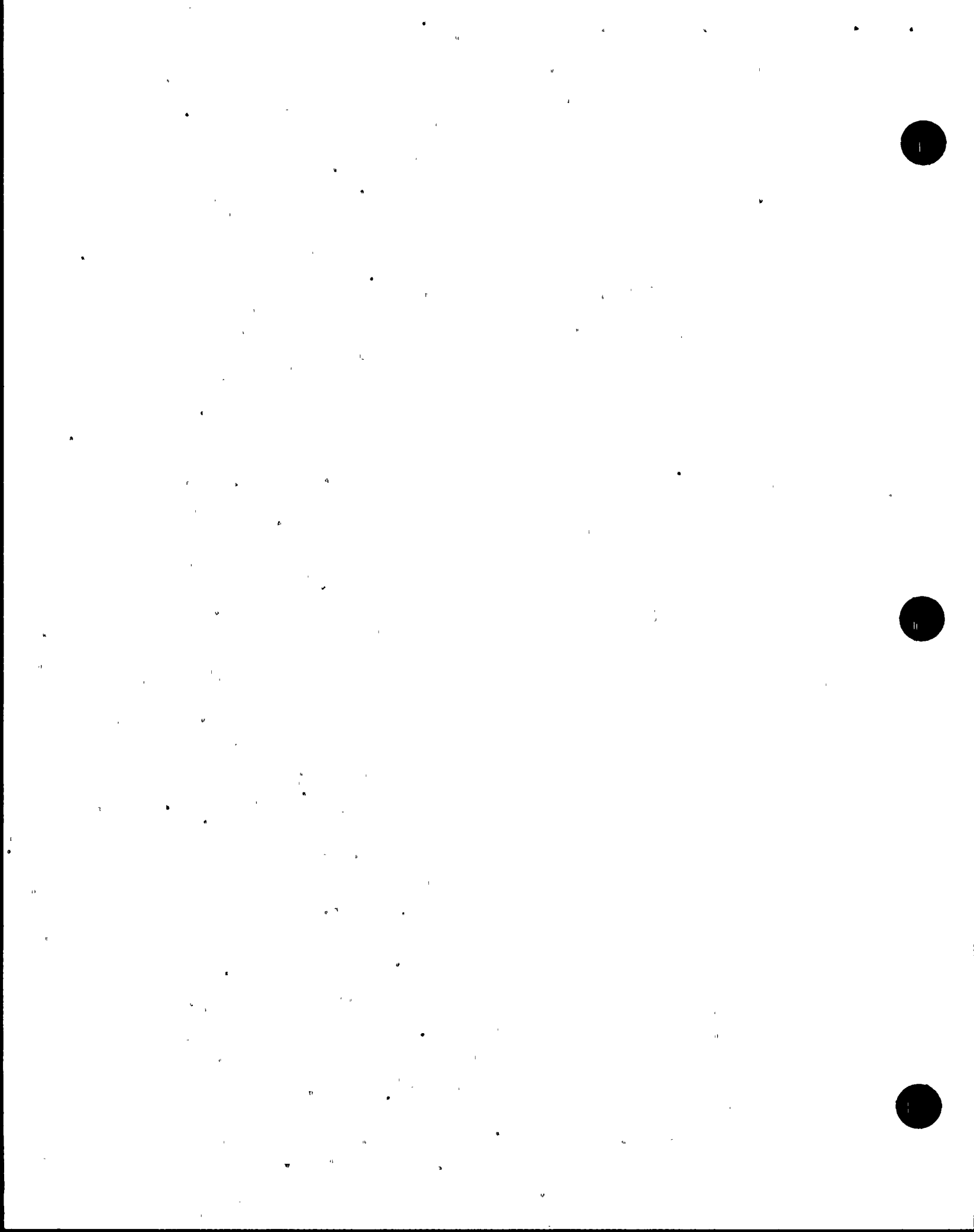


PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 8 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
B7		<u>CORE COOLING</u> <u>RCS PRESSURE</u>													
	PT-404	RCS Pressure	B	1	0 - 3250 PSIG	0 - 3000 PSIG		SEE ITEM A1							
	PT-406	RCS Pressure	↓	↓	↓	↓		↓							
	ICCS A	Display 'A'	↓	↓	↓	↓		↓							
	ICCS B	Display 'B'	↓	↓											
B8		<u>CORE COOLING</u> <u>CORE EXIT TEMP.</u>													
	TE-1E Thru TE-51E	Core Exit Temperature	B	3	200 - 2300 F	200 - 2300 F	N/A	N/A	N/A	N/A	Note 12	SPDS	Yes	Yes	
	ICCS A	Display 'A'	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	
	ICCS B	Display 'B'	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	
B9		<u>CORE COOLING - COOLANT</u> <u>INVENTORY</u>													
	ICCS RVL-A (HJTC)	Reactor Vessel Wtr. Lvl. Ch. 'A'	B	1	Top of Core to Top of Vessel	Bottom of Hot Leg to Top of Vessel	Comply	Note 2	Note 10	RVL-B	Note 12	SPDS	Yes	Yes	Note 19
	ICCS RVL-B (HJTC)	Reactor Vessel Wtr. Lvl. Ch. 'B'	↓	↓	↓	↓	Comply	↓	↓	RVL-A	↓	SPDS	Yes	Yes	Note 19
	ICCS A	Display 'A'	↓	↓	↓	↓	Will Comply	↓	↓	ICCS B	↓	Yes	-	-	Note 19
	ICCS B	Display 'B'	↓	↓			Will Comply	↓	↓	ICCS A	↓	Yes	-	-	Note 19



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 9 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
B10		<u>CORE COOLING DEGREES OF SUBCOOLING</u>													
	SMT-A	RCS Temp. Saturation Margin Ch. 'A'	B	2	-2100 to 700 F	200 F Subcooling to 35 F Superheat	Comply	Note 1	Note 10	SMT-B	Note 12	ICCS SPDS	Yes	Yes	Note 20
	SMT-B	RCS Temp. Saturation Margin Ch. 'B'	↓	↓	↓	↓	Comply	Note 1	Note 10	SMT-A	Note 12	ICCS SPDS	Yes	Yes	Note 20
B11		<u>MAINTAINING Rx COOLANT SYS. INTEGRITY - RCS PRESSURE</u>													
	PT-404	RCS Pressure	B	1	0 - 3250 PSIG	0 - 3000 PSIG		SEE ITEM A1 ↓							
	PT-406	RCS Pressure	↓	↓	↓	↓									
	ICCS A	Display 'A'	↓	↓	↓	↓									
	ICCS B	Display 'B'	↓	↓	↓	↓									
B12		<u>MAINTAINING Rx COOLANT SYS. INTEGRITY-CRMT SUMP WTR. LVL.</u>													
	LT-6308A	Crmt. Sump Wtr. Lvl.	B	2	-18'Ft. El. to El. 14'-0"	Narrow Range (Sump)	Comply	Note 1	Note 10	LT-6308B	Note 12	SPDS	Yes	Yes	
	LI-6308A	Crmt. Sump Wtr. Lvl. Ind.	↓	↓	0 - 369"	↓		Note 8		LI-6308B		Yes	-	-	
	LR-6308A	Crmt. Sump Wtr. Lvl.	↓	↓	0 - 369"	↓		Note 8		LR-6308B		Yes	-	-	
	LT-6308B	Crmt. Sump Wtr. Lvl.	↓	↓	-18'Ft. El. to El. 14'-0"	↓		Note 1		LT-6308A		SPDS	Yes	Yes	
	LI-6308B	Crmt. Sump Wtr. Lvl. Ind.	↓	↓	0 - 369"	↓		Note 8		LI-6308A		Yes	-	-	
	LR-6308B	Crmt. Sump Wtr. Lvl.	↓	↓	0 - 369"	↓		Note 8		LR-6308A		Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 10 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
B13		<u>MAINTAINING R<sub>x</sub> COOLANT SYS. INTEGRITY-CTMT. SURP WTR. LVL.</u>													
	LI-6309A	Ctmt. Wtr. Lvl.	B	1	El. 14'-0" to El. 22'-0"	Wide Range (Plant Specific)	Comply	Note 1	Note 10	LI-6309B	Note 12	SPDS	Yes	Yes	
	LI-6309A	Ctmt. Wtr. Lvl. Ind.	↓	↓	397" to 487"	↓	↓	Note 8	↓	LI-6309B	↓	Yes	-	-	
	LR-6309A	Ctmt. Wtr. Lvl.	↓	↓	397" to 487"	↓	↓	Note 8	↓	LR-6309B	↓	Yes	-	-	
	LI-6309B	Ctmt. Wtr. Lvl.	↓	↓	El. 14'-0" to El. 22'-0"	↓	↓	Note 1	↓	LI-6309A	↓	SPDS	Yes	Yes	
	LI-6309B	Ctmt. Wtr. Lvl. Ind.	↓	↓	397" to 487"	↓	↓	Note 8	↓	LI-6309A	↓	Yes	-	-	
	LR-6309B	Ctmt. Wtr. Lvl.	↓	↓	397" to 487"	↓	↓	Note 8	↓	LR-6309A	↓	Yes	-	-	
B14		<u>MAINTAINING R<sub>x</sub> COOLANT SYS. INTEGRITY-CTMT. PRESSURE</u>													
	PT-6306A	CTMT. Press. Wide Range	B	1	0 - 180 PSIG	0 PSIG to Design Pressure	Comply	Note 1	Note 10	PT-6306B	Note 12	SPDS	Yes	Yes	
	PI-6306A	Ctmt. Press. Wide Range Ind.	↓	↓	↓	↓	↓	Note 8	↓	PI-6306B	↓	Yes	-	-	
	PR-6306A	Ctmt. Press. Wide Range	↓	↓	↓	↓	↓	Note 8	↓	PR-6306B	↓	Yes	-	-	
	PT-6306B	Ctmt. Press. Wide Range	↓	↓	↓	↓	↓	Note 1	↓	PT-6306A	↓	SPDS	Yes	Yes	
	PI-6306B	Ctmt. Press. Wide Range Ind.	↓	↓	↓	↓	↓	Note 8	↓	PI-6306A	↓	Yes	-	-	
	PR-6306B	Ctmt. Press. Wide Range	↓	↓	↓	↓	↓	Note 8	↓	PR-6306A	↓	Yes	-	-	
B15		<u>MAINTAINING CTMT. INTEGRITY CTMT. ISOLATION VALVE POSITION</u>													
	MOV-744A	RHR to Cold Leg I.C.	B	1	Open Closed	Closed Not Closed	Comply	Note 5	Note 9	N/A	Note 13	SAS	Yes	Yes	Note 24
	HS-744A	With Ind. Lights	↓	↓	↓	↓	↓	Note 8	↓	N/A	↓	Yes	-	-	
	MOV-744B	RHR to Cold Leg I.C.	↓	↓	↓	↓	↓	Note 5	↓	N/A	↓	SAS	Yes	Yes	Note 24
	HS-744B	With Ind. Lights	↓	↓	↓	↓	↓	Note 8	↓	N/A	↓	Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 11 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
	MOV-716A	RCP Thermal Barrier CCW	B	1	Open Closed	Closed Not Closed	Comply	Note 8	Note 9	N/A	Note 13	SAS	Yes	Yes	Note 24
	HS-716A	With Ind. Lights										Yes	-	-	
	MOV-716B	RCP Thermal Barrier CCW										SAS	Yes	Yes	Note 24
	HS-716B	With Ind. Lights										Yes	-	-	
	MOV-626	RCP A, B, C Thermal Barrier Cooling Wtr.										SAS	Yes	Yes	Note 24
	HS-626	With Ind. Lights										Yes	-	-	
	MOV-730	CCW from RCP A, B, C Cooler Bearing										SAS	Yes	Yes	Note 24
	HS-730	With Ind. Lights										Yes	-	-	
	CV-739 (LS)	Excess Letdown Heat Exchanger									Note 14	SAS	Yes	Yes	Note 24
	HS-739	With Ind. Lights									Note 14	Yes	-	-	
	MOV-1417	CCW to Normal CTMT. Cooling						Note 5			Note 13	SAS	Yes	Yes	Note 24
	HS-1417	With Ind. Lights						Note 8				Yes	-	-	
	MOV-1418	CCW from Normal Cmt. Cooling						Note 5				SAS	Yes	Yes	Note 24
	HS-1418	With Ind. Lights						Note 8				Yes	-	-	
	CV-200A (LS)	Letdown Line					Will Comply	Note 2	Note 11		Note 14	SAS	Yes	Yes	Note 21
	HS-200A	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-200B (LS)	Letdown Line					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 21
	HS-200B	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-200C (LS)	Letdown Line					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 21
	HS-200C	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 12 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
	CV-204 (LS)	Latdown Line Low Press.	B	1	Open Closed	Closed ^ Not Closed	Comply	Note 8	Note 9	N/A	Note 14	SAS	Yes	Yes	Note 24
	HS-204	With Ind. Lights					Comply	Note 8	Note 9		Note 14	Yes	-	-	
	MOV-381	RCP Seal Wtr. Return Vlv.					Comply	Note 8	Note 9		Note 13	SAS	Yes	Yes	Note 24
	HS-381	With Ind. Lights					Comply	Note 8	Note 9		Note 13	Yes	-	-	
	CV-4658A (LS)	RCDT Vent Vlv.					Will Comply	Note 2	Note 11		Note 14	SAS	Yes	Yes	Note 22
	HS-4658A	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	CV-4658B (LS)	RCDT Vent Vlv.					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-4658B	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	CV-4668A (LS)	RCDT Disch. to Hold-Up Tank					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-4668A	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	CV-4668B (LS)	RCDT Disch. to Hold-Up Tank					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-4668B	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	CV-4659A (LS)	RCDT Line to H <sub>2</sub> Anal.					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-4659A	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	CV-4659B (LS)	RCDT Line to H <sub>2</sub> Anal.					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-4659B	With Ind. Lights					Comply	Note 8	Note 10			Yes	-	-	
	MOV-866A	H1 Head Safety Inj. Line					Comply	Note 1	Note 10		Note 13	SAS	Yes	Yes	
	HS-866A	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-866B	H1 Head Safety Inj. Line					Comply	Note 1	Note 10			SAS	Yes	Yes	
	HS-866B	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 13 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
	MOV-869	Hi Head Safety Inj. Line	B	1	Open Closed	Closed Not Closed	Comply	Note 5	Note 9	N/A	Note 13	SAS	Yes	Yes	
	HS-869	With Ind. Lights						Note 8				Yes	-	-	
	MOV-880A	Ctmt. Spray Pump A Disch. Vlv.						Note 5				SAS	Yes	Yes	
	HS-880A	With Ind. Lights						Note 8				Yes	-	-	
	MOV-880B	Ctmt. Spray Pump B Disch. Vlv.						Note 5				SAS	Yes	Yes	
	HS-880B	With Ind. Lights						Note 8				Yes	-	-	
	CV-956A (LS)	PRZR Stm. Space Sample						Note 8			Note 14	SAS	Yes	Yes	
	HS-956A	With Ind. Lights						Note 8				Yes	-	-	
	CV-956B (LS)	PRZR Liquid Space Sample						Note 8				SAS	Yes	Yes	
	HS-956B	With Ind. Lights						Note 8				Yes	-	-	
	SV-6427A	Hot Leg RCS Sample						Note 1	Note 10			SAS	Yes	Yes	
	HS-6427A	With Ind. Lights						Note 8				Yes	-	-	
	SV-6427B	Hot Leg RCS Sample						Note 1				SAS	Yes	Yes	
	HS-6427B	With Ind. Lights						Note 8				Yes	-	-	
	SV-6428	Hot Leg RCS Sample						Note 1				SAS	Yes	Yes	
	HS-6428	With Ind. Lights						Note 8				Yes	-	-	
	SV-2912	Ctmt. Air Sample						Note 1			Note 12	SAS	Yes	Yes	
	HS-2912	With Ind. Lights						Note 8	Note 9			Yes	-	-	
	SV-2911	Ctmt. Air Sample						Note 1	Note 10			SAS	Yes	Yes	
	HS-2911	With Ind. Lights						Note 8	Note 9			Yes	-	-	
	SV-2913	Ctmt. Air Sample						Note 1	Note 10			SAS	Yes	Yes	
	HS-2913	With Ind. Lights						Note 8	Note 9			Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 14 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
	CV-519A (LS)	PRZR Relief Tnk. Demin. Wtr.	B	1	Open Closed	Closed Not Closed	Comply	Note 8	Note 9	N/A	Note 14	SAS	Yes	Yes	
	HS-519A	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2600 (LS)	Ctmt. Purge					Comply	Note 8	Note 9			SAS	Yes	Yes	
	HS-2600	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2601 (LS)	Ctmt. Purge					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 21
	HS-2601	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2602 (LS)	Ctmt. Purge					Comply	Note 8	Note 9			SAS	Yes	Yes	
	HS-2602	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2603 (LS)	Ctmt. Purge					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 21
	HS-2603	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2604 (LS)	Main Stm. MSIV S.G. 'A'					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 21
	HS-2604	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-1400	Main Stm. Line 'A'					Comply	Note 8	Note 9		Note 13	SAS	Yes	Yes	
	HS-1400	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-1403	Main Stm. Line 'A'					Comply	Note 1	Note 10			SAS	Yes	Yes	
	HS-1403	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	POV-2605 (LS)	Main Stm. MSIV S.G. 'B'					Will Comply	Note 2	Note 11		Note 14	SAS	Yes	Yes	Note 21
	HS-2605	With Ind. Lights					Comply	Note 8	Note 9		Note 14	Yes	-	-	
	MOV-1404	Main Stm. Line 'B'						Note 5			Note 13	SAS	Yes	Yes	
	HS-1404	With Ind. Lights						Note 8				Yes	-	-	
	MOV-1401	Main Stm. Line 'B'						Note 8				SAS	Yes	Yes	
	HS-1401	With Ind. Lights						Note 8				Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 15 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
	POV-2606 (LS)	Main Stm. MSIV S.G. 'C'	B	1	Open Closed	Closed Not Closed	Will Comply	Note 2	Note 11	N/A	Note 14	SAS	Yes	Yes	Note 21
	HS-2606	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-1405	Main Stm. Line 'C'					Comply	Note 1	Note 10			SAS	Yes	Yes	
	HS-1405	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-1402	Main Stm. Line 'C'					Comply	Note 8	Note 9			SAS	Yes	Yes	
	HS-1402	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	FCV-478	S.G. 'A' Feedwater No Indication					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	FCV-479	S.G. 'A' Feedwater No Indication										SAS	Yes	Yes	
	FCV-488	S.G. 'B' Feedwater No Indication										SAS	Yes	Yes	
	FCV-489	S.G. 'B' Feedwater No Indication										SAS	Yes	Yes	
	FCV-498	S.G. 'C' Feedwater No Indication										SAS	Yes	Yes	
	FCV-499	S.G. 'C' Feedwater No Indication										SAS	Yes	Yes	
	CV-2816 (LS)	Aux. Feedwater to S.G. 'A'					Comply	Note 1	Note 10		Note 14	SAS	Yes	Yes	
	HIC-1401A	Hand Indicating Controller									Note 12	Yes	-	-	
	CV-2831 (LS)	Aux. Feedwater to S.G. 'A'									Note 14	SAS	Yes	Yes	
	HIC-1401B	Hand Indicating Controller									Note 12	Yes	-	-	
	CV-2817 (LS)	Aux. Feedwater to S.G. 'B'									Note 14	SAS	Yes	Yes	
	HIC-1457A	Hand Indicating Controller									Note 12	Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 16 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION		
		DESCRIPTION	TYPE	CATE- GORY	EXISTING						REQUIRED	CR	TSC		EOF	
	CV-2832 (LS)	Aux. Feedwater to S.G. 'B'	B	1	Open Closed	Closed Not Closed	Comply	Note 1	Note 10	N/A	Note 14	SAS	Yes	Yes		
	HIC-1457B	Hand Indicating Controller									Note 12	Yes	-	-		
	CV-2818 (LS)	Aux. Feedwater to S.G. 'C'									Note 14	SAS	Yes	Yes		
	HIC-1458A	Hand Indicating Controller									Note 12	Yes	-	-		
	CV-2833 (LS)	Aux. Feedwater to S.G. 'C'									Note 14	SAS	Yes	Yes		
	HIC-1458B	Hand Indicating Controller									Note 12	Yes	-	-		
	CV-6275A (LS)	S.G. 'A' Blowdown						Note 1			Note 14	SAS	Yes	Yes		
	HS-6275A	With Ind. Lights						Note 8				Yes	-	-		
	CV-6275B (LS)	S.G. 'B' Blowdown						Note 1				SAS	Yes	Yes		
	HS-6275B	With Ind. Lights						Note 8				Yes	-	-		
	CV-6275C (LS)	S.G. 'C' Blowdown						Note 1				SAS	Yes	Yes		
	HS-6275C	With Ind. Lights						Note 8				Yes	-	-		
	MOV-1427	S.G. 'A' Blowdown Sample						Note 5	Note 9		Note 13	SAS	Yes	Yes		
	HS-1427	With Ind. Lights						Note 8				Yes	-	-		
	MOV-1426	S.G. 'B' Blowdown Sample						Note 5				SAS	Yes	Yes		
	HS-1426	With Ind. Lights						Note 8				Yes	-	-		
	MOV-1425	S.G. 'C' Blowdown Sample						Note 5				SAS	Yes	Yes		
	HS-1425	With Ind. Lights						Note 8				Yes	-	-		
	CV-2903 (LS)	CCW to Emergency Cmt. Cooler B					Will Comply	Note 2	Note 11			SAS	Yes	Yes		Note 22
	HS-2903	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-		
	CV-2904 (LS)	CCW to Emergency Cmt . Cooler C					Will Comply	Note 2	Note 11			SAS	Yes	Yes		Note 22
	HS-2904	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-		



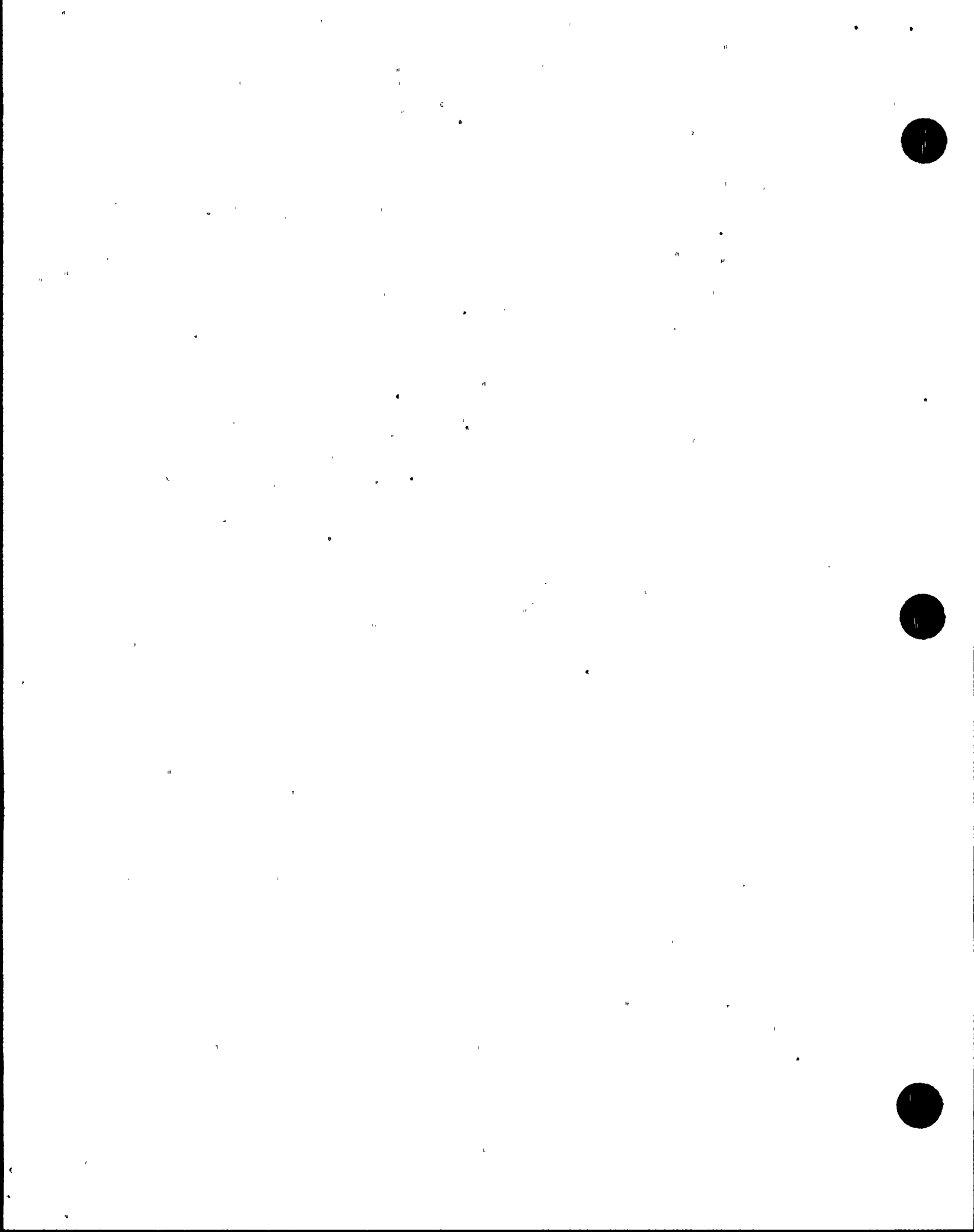


PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 17 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
	CV-2905 (LS)	CCW to Emergency Cmt. Cooler A	B	1	Open Closed	Closed Not Closed	Will Comply	Note 2	Note 11	R/A	Note 13	SAS	Yes	Yes	Note 22
	HS-2905	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2810 (LS)	CCW from Emergency Cmt. Cooler B					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2810	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2906 (LS)	CCW from Emergency Cmt. Cooler B					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2906	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2812 (LS)	CCW from Emergency Cmt. Cooler C					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2812	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2907 (LS)	CCW from Emergency Cmt. Cooler C					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2907	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2814 (LS)	CCW from Emergency Cmt. Cooler A					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2814	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	CV-2908 (LS)	CCW from Emergency Cmt. Cooler A					Will Comply	Note 2	Note 11			SAS	Yes	Yes	Note 22
	HS-2908	With Ind. Lights					Comply	Note 8	Note 9			Yes	-	-	
	MOV-872	Low Head Safety Inject.						Note 5				SAS	Yes	Yes	
	HS-872	With Ind. Lights						Note 8				Yes	-	-	
	CV-855 (LS)	N <sub>2</sub> Supply to Accumulators									Note 14	SAS	Yes	Yes	
	HS-855	With Ind. Lights									Note 14	Yes	-	-	
	CV-956D (LS)	Accumulator Sample Line									Note 14	SAS	Yes	Yes	
	HS-956D	With Ind. Lights									Note 14	Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 18 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
	MOV-843A	Boron Inj. Tank Out Stop Valve	B	1	Open Closed	Closed Not Closed	Comply	Note 5	Note 9	N/A	Note 13	SAS	Yes	Yes	
	HS-843A	With Ind. Lights	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	
	MOV-843B	Boron Inj. Tk. Out Stop Vlv.	↓	↓	↓	↓	↓	Note 5	↓	↓	↓	SAS	Yes	Yes	
	HS-843B	With Ind. Lights	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	
	CV-2821 (LS)	Ctmt. Sump Disch.	↓	↓	↓	↓	↓	↓	↓	↓	Note 14	SAS	Yes	Yes	
	HS-2821	With Ind. Lights	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	
	CV-2822 (LS)	Ctmt. Sump Disch.	↓	↓	↓	↓	↓	↓	↓	↓	↓	SAS	Yes	Yes	
	HS-2822	With Ind. Lights	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	
	CV-2819 (LS)	Inst. Air Bleed	↓	↓	↓	↓	↓	Note 1	Note 10	↓	↓	SAS	Yes	Yes	
	CV-2826 (LS)	Inst. Air Bleed	↓	↓	↓	↓	↓	Note 8	Note 9	↓	↓	SAS	Yes	Yes	
	MOV-6386	RCP Seal	↓	↓	↓	↓	↓	Note 1	Note 10	↓	Note 13	SAS	Yes	Yes	
	HS-6386	With Ind. Lights	↓	↓	↓	↓	↓	Note 8	Note 10	↓	Note 13	Yes	-	-	
	CV-516 (LS)	Gas Analyzer Sample Vlv.	↓	↓	↓	↓	↓	↓	Note 9	↓	Note 14	SAS	Yes	Yes	
	HS-516	With Ind. Lights	↓	↓	↓	↓	↓	↓	Note 9	↓	↓	Yes	-	-	
	SV-6385	Gas Analyzer Sample Vlv.	↓	↓	↓	↓	↓	↓	Note 9	↓	↓	SAS	Yes	Yes	
	HS-6385	With Indicating Lights	↓	↓	↓	↓	↓	↓	Note 10	↓	↓	Yes	-	-	
B16		<u>MAINTAINING CONTAINMENT INTEGRITY - CONTAINMENT PRESSURE</u>													
	PT-6306A	Ctmt. Wide Range Press.	B	1	0 - 180 PSIG	-5 PSIG to Design Pressure		SEE ITEM B14							
	PI-6306A	Ctmt. Wide Range Press. Ind.	↓	↓	↓	↓		↓							
	PR-6306A	Ctmt. Wide Range Press.	↓	↓	↓	↓		↓							



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 19 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
		<u>MAINTAINING CONTAINMENT INTEGRITY - CONTAINMENT PRESSURE (Continued)</u>													
	PT-6306B	Ctmt. Wide Range Press.	B	1	0 - 180 PSIG	-5 PSIG to Design Pressure		<div>SEE ITEM B14</div>							
	PI-6306B	Ctmt. Wide Range Press. Ind.	↓	↓	↓	↓		↓							
	PR-6306B	Ctmt. Wide Range Press.			↓	↓		↓							
	PT-6425A	Ctmt. Narrow Range Press.			-6 to +18 PSIG	-5 PSIG to Design Pressure	Comply	Note 1	Note 10	PT-6425B	Note 12	SPDS	Yes	Yes	
	PI-6425A	Ctmt. Narrow Range Press. Ind.			↓	↓	↓	Note 8		PI-6425B		Yes	-	-	
	PR-6306A	Ctmt. Narrow Range Press.			↓	↓	↓	Note 8		PR-6306B		Yes	-	-	
	PT-6425B	Ctmt. Narrow Range Press.			↓	↓	↓	Note 1		PT-6425A		SPDS	Yes	Yes	
	PI-6425B	Ctmt. Narrow Range Press. Ind.			↓	↓	↓	Note 8		PI-6425A		Yes	-	-	
	PR-6306B	Ctmt. Narrow Range Press.	↓	↓	↓	↓	↓	Note 8		PR-6306A	↓	Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 20 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
C1		<u>FUEL CLADDING - CORE EXIT TEMPERATURE</u>													
	TE-1E Thru TE-51E	Core Exit Temperature	C	1	200 F - 2300 F	200 F - 2300 F	Will Comply	Note 2	Note 10	2 Channel Per Quadrant	Note 12	SPDS	Yes	Yes	Note 19
	ICCS A	Display 'A'	↓	↓	↓	↓	Will Comply	Note 2	Note 10	ICCS B	Note 12	Yes	-	-	Note 19
	ICCS B	Display 'B'	↓	↓	↓	↓	Will Comply	Note 2	Note 10	ICCS A	Note 12	Yes	-	-	Note 19
C2		<u>FUEL CLADDING - RADIOACTIVITY CONCENTRATION OR RADIATION LVL. IN CIRCULATING PRIMARY COOLANT</u>													
	None	Radioactivity Concentration or Radiation Level in Primary Coolant	C	1	Grab Sample	1/2 Tech. Spec. Limit to 100 x Tech. Spec. Limit	-	-	-	-	-	-	-	-	No Inst. Exists In The Market
C3		<u>FUEL CLADDING ANALYSIS OF PRIMARY COOLANT</u>													
	AE-6372	Rx Cool. Wtr. Radioactivity Analysis	C	3	10 <sup>-1</sup> μ Ci/cc to 10 Ci/cc	10 μ Ci/ml to 10 Ci/ml	N/A	N/A	N/A	N/A	Note 15	SAS	Yes	Yes	
C4		<u>Rx COOLANT PRESSURE BOUNDARY RCS PRESSURE</u>													
	PT-404	RCS Press.	C	1	0 - 3250 PSIG	0 - 3000 PSIG		SEE ITEM A1 ↓							
	PT-406	RCS Press.	↓	↓	↓	↓									
	ICCS A	Display 'A'	↓	↓	↓	↓									
	ICCS B	Display 'B'	↓	↓	↓	↓									



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4, TURKEY POINT

4/85

Sheet 21 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
C5		<u>Rx COOLANT PRESSURE BOUNDARY CONTAINMENT PRESSURE</u>													
	PT-6306A	Ctmt. Wide Range Press.	C	1	0 - 180 PSIG	-5 PSIG to Design Pressure		SEE ITEM B14							
	PI-6306A	Ctmt. Wide Range Press. Ind.													
	PR-6306A	Ctmt. Wide Range Press.													
	PT-6306B	Ctmt. Wide Range Press.													
	PI-6306B	Ctmt. Wide Range Press. Ind.													
	PR-6306B	Ctmt. Wide Range Press.													
C6		<u>Rx COOLANT PRESSURE BOUNDARY CONTAINMENT PRESSURE</u>													
	PT-6425A	Ctmt. Narrow Range Press.	C	1	-6 to +18 PSIG	-5 PSIG to Design Pressure		SEE ITEM B16							
	PI-6425A	Ctmt. Narrow Range Press. Ind.													
	PR-6306A	Ctmt. Narrow Range Press.													
	PT-6425B	Ctmt. Narrow Range Press.													
	PI-6425B	Ctmt. Narrow Range Press. Ind.													
	PR-6306B	Ctmt. Narrow Range Press.													
C7		<u>Rx COOLANT PRESSURE BOUNDARY CONTAINMENT SUMP WATER LEVEL</u>													
	LT-6308A	Ctmt. Sump Water Level	C	2	-18 Ft. Elev. to El. 14'-0"	Narrow Range (Sump)		SEE ITEM B12							
	LI-6308A	Ctmt. Sump Water Level Ind.			0 - 369"										
	LR-6308A	Ctmt. Sump Water Level			0 - 369"										
	LT-6308B	Ctmt. Sump Water Level			-18 Ft. Elev. to El. 14'-0"										
	LI-6308B	Ctmt. Sump Water Level Ind.			0 - 369"										
	LR-6308B	Ctmt. Sump Water Level			0 - 369"										





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 22 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED					CR	TSC	EOF	
C8		<u>Rx COOLANT PRESSURE BOUNDARY CONTAINMENT SUMP WATER LEVEL</u>												
	LT-6309A	Ctmt. Water Level	C	1	El. 14'-0" to El. 22'-0"	Wide Range Plant Specific	SEE ITEM B13 ↓							
	LI-6309A	Ctmt. Water Level Ind.	↓	↓	397" to 487"	↓								
	LR-6309A	Ctmt. Water Level	↓	↓	397" to 487"	↓								
	LT-6309B	Ctmt. Water Level	↓	↓	El. 14'-0" to El. 22'-0"	↓								
	LI-6309B	Ctmt. Water Level Ind.	↓	↓	397" to 487"	↓								
	LR-6309B	Ctmt. Water Level	↓	↓	397" to 487"	↓								
C9		<u>Rx COOLANT PRESSURE BOUNDARY CONTAINMENT AREA RADIATION</u>												
	RAD-6311A	Ctmt. Hi Range Rad. Monitor 'A'	C	3	$10^0 - 10^8$ R/HR.	1R/HR. - $10^4$ R/HR.	N/A	N/A	N/A	N/A	Note 12	SPDS	Yes	Yes
	RR-6311A	Ctmt. Hi Range Rad. Monitor 'A'	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	
	RAD-6311B	Ctmt. Hi Range Rad. Monitor 'B'	↓	↓	↓	↓	↓	↓	↓	↓	SPDS	Yes	Yes	
C10		<u>Rx COOLANT PRESSURE BOUNDARY EFFLUENT RADIOACTIVITY-NOBLE GAS EFFLUENT FROM CONDENSER AIR REMOVAL SYSTEM EXHAUST</u>												
	RAD-6417	Air Ejector Condenser Exhaust	C	3	$10^{-7}$ to $10^5$ $\mu$ CI/CC	$10^{-6}$ to $10^2$ $\mu$ CI/CC	N/A	N/A	N/A	N/A	Note 12	SAS	Yes	Yes

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 23 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED					CR	TSC	EOF	
C11		<u>CONTAINMENT - RCS PRESSURE</u>												
	PT-404	RCS Press.	C	1	0 - 3250 PSIG	0 - 3000 PSIG								
	PT-406	RCS Press.	↓	↓	↓	↓								
	ICCS A ICCS B	Display 'A' Display 'B'	↓	↓	↓	↓								
C12		<u>CONTAINMENT - CTMT H<sub>2</sub> CONCENTRATION</u>												
	AE-6307A	Ctmt. H <sub>2</sub> Monitor	C	1	0 - 10%	0 - 10 Vol.%	Comply	Note 1	Note 10	AZ-6307B	Note 12	SAS	Yes	Yes
	AI-6307A	Ctmt. H <sub>2</sub> Indicator	↓	↓	↓	↓	↓	Note 8	↓	AI-6307B	↓	Yes	-	-
	RR-6311A	Ctmt. H <sub>2</sub> Recorder	↓	↓	↓	↓	↓	Note 8	↓	RR-6311B	↓	Yes	-	-
	AE-6307B	Ctmt. H <sub>2</sub> Monitor	↓	↓	↓	↓	↓	Note 1	↓	AE-6307A	↓	SAS	Yes	Yes
	AI-6307B	Ctmt. H <sub>2</sub> Indicator	↓	↓	↓	↓	↓	Note 8	↓	AI-6307A	↓	Yes	-	-
C13		<u>CONTAINMENT - CTMT. PRESSURE</u>												
	PT-6306A	Ctmt. Wide Range Press.	C	1	0 - 180 PSIG	-5 PSIG to 3X Design Pressure								
	PI-6306A	Ctmt. Wide Range Press. Ind.	↓	↓	↓	↓								
	PR-6306A	Ctmt. Wide Range Press.	↓	↓	↓	↓								
	PT-6306B	Ctmt. Wide Range Press.	↓	↓	↓	↓								
	PI-6306B	Ctmt. Wide Range Press. Ind.	↓	↓	↓	↓								



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 24 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
		<u>CONTAINMENT - CMT. PRESSURE</u> (Continued)													
	PT-6425A	Cmt. Narrow Range Press.	C	1	-6 to +18 PSIG	-5 PSIG to 3X Design Pressure		SEE ITEM B16							
	PI-6425A	Cmt. Narrow Range Press. Ind.	↓	↓	↓	↓		↓							
	PR-6425A	Cmt. Narrow Range Press.													
	PT-6425B	Cmt. Narrow Range Press.													
	PI-6425B	Cmt. Narrow Range Press. Ind.	↓	↓	↓	↓		↓							
	PR-6425B	Cmt. Narrow Range Press.													
C14		<u>CONTAINMENT - CMT. EFFLUENT RADIOACTIVITY-NOBLE GAS FROM IDENTIFIED RELEASE POINTS</u>													
	RAD-6304	Vent Stack Wide Range Monitor	C	2	$10^{-7}$ to $10^5$ $\mu\text{Ci}/\text{CC}$	$10^{-6}$ to $10^{-2}$ $\mu\text{Ci}/\text{CC}$	N/A	Note 8	N/A	N/A	Note 12A	SAS	Yes	Yes	
	RAD-6417	Air Ejector Condenser Exh.	↓	↓	↓	↓	↓	↓	↓	↓	↓	SAS	Yes	Yes	
	RAD-6426	Steam Line Rad. Monitor	↓	↓	↓	↓	↓	↓	↓	↓	↓	SAS	Yes	Yes	
C15		<u>CONTAINMENT - EFFLUENT RADIO- ACTIVITY NOBLE GAS (From Bldg. or Areas, etc.)</u>													
	RAD-6304	Vent Stack Wide Range Monitor	C	2	$10^{-7}$ to $10^{-5}$ $\mu\text{Ci}/\text{CC}$	$10^{-6}$ to $10^{-3}$ $\mu\text{Ci}/\text{CC}$		SEE ITEM C14							



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 25 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE / JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
D1		<u>RHR SYSTEM-RHR SYSTEM FLOW</u>													
	FT-605	RHR System Flow	D	2	0 - 8500 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SPDS	Yes	Yes	
	FI-605	RHR System Flow Indicator	↓	↓	↓	↓	Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-	
D2		<u>RHR SYSTEM - RHR Hx OUTLET TEMPERATURE</u>													
	TE-606	RHR Hx Outlet Temperature	D	2	50 - 400 F	40 - 350°F	Comply	Note 6	Note 9	N/A	Note 12	SPDS	Yes	Yes	Note 28
	TR-604	RHR Hx Outlet Temperature Recorder	↓	↓	↓	↓	Comply	Note 8	Note 10	N/A	Note 12	Yes	-	-	
D3		<u>S.I.S. - ACCUMULATOR TANK LEVEL</u>													
	LT-920	Accumulator Tank Level 'A'	D	2	6133-6761 GAL (Narrow Range)	10% to 90% Volume	Will Comply	Note 2	Note 11	LT-922	Note 12	SAS	Yes	Yes	Note 22 & 28
	LI-920	Accumulator Tank Level 'A' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-922		Yes	-	-	
	LT-922	Accumulator Tank Level 'A'	↓	↓	6133-6761 GAL (Narrow Range)	↓	Will Comply	Note 2	Note 11	LT-920		SAS	Yes	Yes	Note 22 & 28
	LI-922	Accumulator Tank Level 'A' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-920		Yes	-	-	
	LT-924	Accumulator Tank Level 'B'	↓	↓	6133-6761 GAL (Narrow Range)	↓	Will Comply	Note 2	Note 11	LT-926		SAS	Yes	Yes	Note 22 & 28
	LI-924	Accumulator Tank Level 'B' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-926		Yes	-	-	
	LT-926	Accumulator Tank Level 'B'	↓	↓	6133-6761 GAL (Narrow Range)	↓	Will Comply	Note 2	Note 11	LT-924		SAS	Yes	Yes	Note 22 & 28
	LI-926	Accumulator Tank Level 'B' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-924		Yes	-	-	
	LT-928	Accumulator Tank Level 'C'	↓	↓	6133-6761 GAL (Narrow Range)	↓	Will Comply	Note 2	Note 11	LT-930		SAS	Yes	Yes	Note 22 & 28
	LI-928	Accumulator Tank Level 'C' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-930		Yes	-	-	
	LT-930	Accumulator Tank Level 'C'	↓	↓	6133-6761 GAL (Narrow Range)	↓	Will Comply	Note 2	Note 11	LT-928		SAS	Yes	Yes	Note 22 & 28
	LI-930	Accumulator Tank Level 'C' Ind.	↓	↓	6000-7000 GAL	↓	Comply	Note 8	Note 9	LI-928		Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 26 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
D4		<u>S.I.S. - ACCUMULATOR TANK PRESSURE</u>													
	PT-921	Accumulator Tank Pressure 'A'	D	2	0 - 800 PSIG	0 - 750 PSIG	Comply	Note 1	Note 10	PT-923	Note 12	SAS	Yes	Yes	
	PI-921	Accumulator Tank Pressure 'A' Ind.						Note 8	Note 9	PI-923		Yes	-	-	
	PT-923	Accumulator Tank Pressure 'A'						Note 1	Note 10	PT-921		SAS	Yes	Yes	
	PI-923	Accumulator Tank Pressure 'A' Ind.						Note 8	Note 9	PI-921		Yes	-	-	
	PT-925	Accumulator Tank Pressure 'B'						Note 1	Note 10	PT-927		SAS	Yes	Yes	
	PI-925	Accumulator Tank Pressure 'B' Ind.						Note 8	Note 9	PI-927		Yes	-	-	
	PT-927	Accumulator Tank Pressure 'B'						Note 1	Note 10	PT-925		SAS	Yes	Yes	
	PI-927	Accumulator Tank Pressure 'B' Ind.						Note 8	Note 9	PI-925		Yes	-	-	
	PT-929	Accumulator Tank Pressure 'C'						Note 1	Note 10	PT-931		SAS	Yes	Yes	
	PI-929	Accumulator Tank Pressure 'C' Ind.						Note 8	Note 9	PI-931		Yes	-	-	
	PT-931	Accumulator Tank Pressure 'C'						Note 1	Note 10	PT-929		SAS	Yes	Yes	
	PI-931	Accumulator Tank Pressure 'C' Ind.						Note 8	Note 9	PI-929		Yes	-	-	
D5		<u>S.I.S. - ACCUMULATOR ISOLATION VALVE POSITION</u>													
	MOV-865A	Accumulator Tank Isolation Valve 'A'	D	2	Closed or Open	Closed or Open	Comply	See Schedule/ Justification	See Schedule/ Justification	N/A	Note 13	SAS	Yes	Yes	These Valves Are Locked Open
	HS-865A	Accumulator Tank Isolation Valve 'A'										Yes	-	-	
	MOV-865B	Accumulator Tank Isolation Valve 'B'										SAS	Yes	Yes	
	HS-865B	Accumulator Tank Isolation Valve 'B'										Yes	-	-	
	MOV-865C	Accumulator Tank Isolation Valve 'C'										SAS	Yes	Yes	
	HS-865C	Accumulator Tank Isolation Valve 'C'										Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 27 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING						REQUIRED	CR	TSC	
D6		<u>S.I.S. - BORIC ACID CHARGING FLOW</u>												
	FT-943	Boric Acid Charging Flow	D	2	0 - 1000 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SAS	Yes	Yes
	FI-943	Boric Acid Charging Flow Ind.	↓	↓	↓		Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-
D7		<u>S.I.S. - FLOW IN HPI SYSTEM</u>												
	FT-940	HPI System Flow	D	2	0 - 1000 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SAS	Yes	Yes
	FI-940	HPI System Flow Ind.	↓	↓	↓		Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-
D8		<u>S.I.S. - FLOW IN LPI SYSTEM</u>												
	FT-605	LPI System Flow	D	2	0 - 1000 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SPDS	Yes	Yes
	FI-605	LPI System Flow Ind.	↓	↓	↓		Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-
D9		<u>S.I.S. - REFUELING WATER STORAGE TANK</u>												
	LT-6583A	KWST Level	D	2	0 - 330,000 Gal.	Top to Bottom		SEE ITEM A4 ↓						
	LI-6583A	KWST Level Indicator	↓	↓	↓	↓								
	LT-6583B	KWST Level	↓	↓	↓	↓								
	LI-6583B	KWST Level Indicator	↓	↓	↓	↓								



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 28 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
D10		<u>PRIMARY COOLANT SYSTEM</u> <u>RCP MOTOR STATUS</u>													
	3P200A	RCP 'A' Mtr. Current	D	3	0 - 1200 AMP	Mtr. Current	N/A	N/A	N/A	N/A	Note 16	No	No	No	
		RCP 'A' Mtr. Current Indicator									Note 14	Yes	-	-	
	3P200B	RCP 'B' Mtr. Current									Note 16	No	No	No	
		RCP 'B' Mtr. Current Indicator									Note 14	Yes	-	-	
	3P200C	RCP 'C' Mtr. Current									Note 16	No	No	No	
		RCP 'C' Mtr. Current Indicator									Note 14	Yes	-	-	
D11		<u>PRIMARY COOLANT SYSTEM</u> <u>PRIMARY SYSTEM SAFETY RELIEF</u> <u>VALVE POSITION</u>													
	PCV-455C	PRZR PORV Position	D	2	Open Closed	Closed Not Closed	Will Comply	Note 2	Note 11	N/A	Note 14	SAS	Yes	Yes	Note 21
	PCV-456	PRZR PORV Position					Will Comply	Note 2	Note 11	N/A	Note 14	SAS	Yes	Yes	Note 21
		Position Indication Lights for PCV 455C & 456										Yes	-	-	
	ZS-6303A	Primary System Safety R.V. Code Safety Valve			Closed Not Closed		Comply	Note 1	Note 10	N/A	Note 12	SAS	Yes	Yes	
	ZS-6303B	Primary System Safety R.V. Code Safety Valve										SAS	Yes	Yes	
	ZS-6303C	Primary System Safety R.V. Code Safety Valve										SAS	Yes	Yes	
		Readout in CR for ZS-6306A, B, C										Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 29 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
D12		<u>PRIMARY COOLANT SYSTEM PRESSURIZER LEVEL</u>													
	LT-459	PRZR Level Ch. I	D	1	0 - 181"	Top to Bottom	Comply	Note 1	Note 10	LT-460	Note 12	SPDS	Yes	Yes	
	LI-459	PRZR Level Ch. I Ind.			0 - 100%			Note 8	Note 9	LT-461		Yes	-	-	
	LT-460	PRZR Level Ch. II			0 - 181"			Note 1	Note 10	LI-460					
	LI-460	PRZR Level Ch. II Ind.			0 - 100%			Note 8	Note 9	LI-461		SPDS	Yes	Yes	
	LT-461	PRZR Level Ch. III			0 - 181"			Note 1	Note 10	LT-459					
	LI-461	PRZR Level Ch. III Ind.			0 - 100%			Note 8	Note 9	LI-461		Yes	-	-	
D13		<u>PRIMARY COOLANT SYSTEM PRESSURIZER HEATER STATUS</u>													
	3B11	PRZR Heater Status	D	2		Current	Will Comply	Note 2	Note 11	N/A	Note 17	SAS	Yes	Yes	Note 22
		PRZR Heater Status Indicating Light			On-Off Light		Comply	Note 8	Note 9		Note 14	Yes	-	-	
	3B12	PRZR Heater Status					Will Comply	Note 2	Note 11		Note 17	SAS	Yes	Yes	Note 22
		PRZR Heater Status Indicating Light			On-Off Light		Comply	Note 8	Note 9		Note 14	Yes	-	-	
	3B13	PRZR Heater Status			0 - 600 A		Will Comply	Note 2	Note 11		Note 17	SAS	Yes	Yes	Note 22
		PRZR Heater Status Indicating Light					Comply	Note 8	Note 9		Note 14	Yes	-	-	
D14		<u>PRIMARY COOLANT SYSTEM QUENCH TANK LEVEL</u>													
	LT-470	PRZR Relief Tank Level (Quench Tank)	D	3	0 - 100%	Top to Bottom	N/A	N/A	N/A	N/A	Note 12	SAS	Yes	Yes	
	LI-470	PRZR Relief Tank Level Indicator (Quench Tank)					N/A	N/A	N/A	N/A	Note 12	Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 30 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED					CR	TSC	EOF	
D15		<u>PRIMARY COOLANT SYSTEM</u> <u>QUENCH TANK TEMPERATURE</u>												
	TE-471	PRZR Relief Tank Temperature	D	3	50 - 350 F	50 - 750 F	N/A	N/A	N/A	Note 12	SAS	Yes	Yes	Note 28
	TI-471	PRZR Relief Tank Temperature Indicator	↓	↓	↓	↓	N/A	N/A	N/A	Note 12	Yes	-	-	
D16		<u>PRIMARY COOLANT SYSTEM</u> <u>QUENCH TANK PRESSURE</u>												
	PT-472	PRZR Relief Tank Pressure	D	3	0 - 120 PSIG	0-Design Press.	N/A	N/A	N/A	Note 12	SAS	Yes	Yes	
	PI-472	PRZR Relief Tank Pressure Indicator	↓	↓	↓	↓	N/A	N/A	N/A	Note 12	Yes	-	-	
D17		<u>SECONDARY SYSTEM (Steam Gen.)</u> <u>S.G. LEVEL</u>												
	LT-474	S.G. 'A' Level Ch. I Narrow Range	D	1	30.1" to 138.22"	From Tube Sheet to Separators	SEE ITEM A5 ↓							Note 23
	LI-474	S.G. 'A' Level Ch. I Narrow Range Ind.			0 - 100%									
	LT-475	S.G. 'A' Level Ch. II Narrow Range			30.1" to 138.22"									
	LI-475	S.G. 'A' Level Ch. II Narrow Range Ind.			0 - 100%									
	LT-476	S.G. 'A' Level Ch. III Narrow Range			30.1" to 138.22"									
	LI-476	S.G. 'A' Level Ch. III Narrow Range Ind.			0 - 100%									
	LR-478	S.G. 'A' Level Ch. I, II, III Recorders - Narrow Range	↓	↓	0 - 100%	↓								





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 31 of 46

ITEM	TAG NO.	VARIABLE		CATE- GORY	INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE		EXISTING	REQUIRED						CR	TSC	EOF	
		SECONDARY SYSTEM-STEAM GENERATOR S.G. LEVEL (Continued)													
	LT-484	S.G. 'B' Level Ch. I Narrow Range	D	1	30.1" to 138.22"	From Tube Sheet to Separators		SEE ITEM A5							Note 23
	LI-484	S.G. 'B' Level Ch. I Narrow Range Ind.			0 - 100%										
	LT-485	S.G. 'B' Level Ch. II Narrow Range			30.1" to 138.22"										
	LI-485	S.G. 'B' Level Ch. II Narrow Range Ind.			0 - 100%										
	LT-486	S.G. 'B' Level Ch. III Narrow Range			30.1" to 138.22"										
	LI-486	S.G. 'B' Level Ch. III Narrow Range Ind.			0 - 100%										
	LR-488	S.G. 'B' Level Ch. I, II, III Recorders			0 - 100%										
	LT-494	S.G. 'C' Level Ch. I Narrow Range			30.1" to 138.22"										
	LI-494	S.G. 'C' Level Ch. I Narrow Range Ind.			0 - 100%										
	LT-495	S.G. 'C' Level Ch. II Narrow Range			30.1" to 138.22"										
	LI-495	S.G. 'C' Level Ch. II Narrow Range Ind.			0 - 100%										
	LT-496	S.G. 'C' Level Ch. III Narrow Range			30.1" to 138.22"										
	LI-496	S.G. 'C' Level Ch. III Narrow Range Ind.			0 - 100%										
	LR-498	S.G. 'C' Level Ch. I, II, III Recorders			0 - 100%										



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 32 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
D18		<u>SECONDARY SYSTEM (S.G.)</u> <u>S.G. PRESSURE</u>													
	PT-474	S.G. 'A' Steam Pressure Ch. II	D	2	0 - 1400 PSIG	FROM ATMOS.PRESS. TO 20% Above Lowest S.V. Setting	Comply	Note 1	Note 10	PT-475 PT-476	Note 12	SPDS	Yes	Yes	Conax Seal connectors were installed at last refueling outage.
	PI-474	S.G. 'A' Steam Pressure Ch. II Ind.						Note 8		PI-475 PI-476		Yes	-	-	
	PT-475	S.G. 'A' Steam Pressure Ch. III						Note 1		PT-474 PT-476		SPDS	Yes	Yes	
	PI-475	S.G. 'A' Steam Pressure Ch. III Ind.						Note 8		PI-474 PI-476		Yes	-	-	
	PT-476	S.G. 'A' Steam Pressure Ch. IV						Note 1		PT-474 PT-475		SPDS	Yes	Yes	
	PI-476	S.G. 'A' Steam Pressure Ch. IV Ind.						Note 8		PI-474 PI-475		Yes	-	-	
	PT-484	S.G. 'B' Steam Pressure Ch. II						Note 1		PT-485 PT-486		SPDS	Yes	Yes	
	PI-484	S.G. 'B' Steam Pressure Ch. II Ind.						Note 8		PI-485 PI-486		Yes	-	-	
	PT-485	S.G. 'B' Steam Pressure Ch. III						Note 1		PT-484 PT-486		SPDS	Yes	Yes	
	PI-484	S.G. 'B' Steam Pressure Ch. III Ind.						Note 8		PI-484 PI-486		Yes	-	-	
	PT-486	S.G. 'B' Steam Pressure Ch. IV						Note 1		PT-484 PT-485		SPDS	Yes	Yes	
	PI-486	S.G. 'B' Steam Pressure Ch. IV Ind.						Note 8		PI-484 PI-485		Yes	-	-	
	PT-494	S.G. 'C' Steam Pressure Ch. II						Note 1		PT-495 PT-496		SPDS	Yes	Yes	
	PI-494	S.G. 'C' Steam Pressure Ch. II Ind.						Note 8		PI-495 PI-496		Yes	-	-	
	PT-495	S.G. 'C' Steam Pressure Ch. III						Note 1		PT-494 PT-496		SPDS	Yes	Yes	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 33 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
		<u>SECONDARY SYSTEM (S.G.)</u> <u>STEAM GENERATOR PRESSURE</u> (Continued)													
	PI-495	S.G. 'C' Steam Pressure Ch. III Ind.	D	2	0 - 1400 PSIG	FROM ATMOS.PRESS TO 20% Above Lowest S.V. Setting	Comply	Note 8	Note 9	PI-494 PI-496	Note 12	Yes	-	-	Conax Seal Connectors were installed at last refueling outage.
	PT-496	S.G. 'C' Steam Pressure Ch. IV	↓	↓	↓	↓	↓	Note 1	Note 10	PT-494 PT-495	↓	SPDS	Yes	Yes	
	PI-496	S.G. 'C' Steam Pressure Ch. IV Ind.	↓	↓	↓	↓	↓	Note 8	Note 9	PI-494 PI-495	↓	Yes	-	-	
D19		<u>SECONDARY SYSTEM (S.G.)</u> <u>SAFETY/RELIEF VALVE POSITIONS</u> <u>OR MAIN STEAM FLOW</u>													
	RV-1400	Main Steam Safety Valve Position	D	2	None	Closed Not Closed	See Schedule/ Justification	See Schedule/ Justification	See Schedule/ Justification	-	-	-	-	-	Note 28
	RV-1401	Main Steam Safety Valve Position	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1402	Main Steam Safety Valve Position - Flow Indication	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1403	Main Steam Safety Valve Position	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	FI-474	S.G. Flow	↓	↓	0-1000" H <sub>2</sub> O (0-35.77 PSID)	-	Comply	Note 1	Note 10	FI-475	Note 12	SPDS	Yes	Yes	
	FI-474	S.G. Flow Ind.	↓	↓	↓	↓	↓	Note 8	Note 9	FI-475		Yes	-	-	
	FI-475	S.G. Flow	↓	↓	↓	↓	↓	Note 1	Note 10	FI-474		SPDS	Yes	Yes	
	FI-475	S.G. Flow Ind.	↓	↓	↓	↓	↓	Note 8	Note 9	FI-474		Yes	-	-	
	RV-1405	Main Steam Safety Valve Position	↓	↓	None	Closed Note Closed	See Schedule/ Justification	See Schedule/ Justification	See Schedule/ Justification	-	-	-	-	-	Note 28
	RV-1406	Main Steam Safety Valve Position - Flow Indication	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1407	Main Steam Safety Valve Position	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1408	Main Steam Safety Valve Position	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 33A of 46

ITEM	TAG NO.	VARIABLE		CATE- GORY	INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE		EXISTING	REQUIRED						CR	TSC	EOF	
D19		<u>SECONDARY SYSTEM (S.G.)</u> Continued													
	FT-484	S.G. Flow	D	2	0-1000" H <sub>2</sub> O (0.35.77 PSID)	-	Comply	Note 1	Note 10	FT-485	Note 12	SPDS	Yes	Yes	
	FI-484	S.G. Flow Ind.			↓	↓	↓	Note 8	Note 9	FI-485	↓	Yes	-	-	
	FT-485	S.G. Flow			↓	↓	↓	Note 1	Note 10	FT-484	↓	SPDS	Yes	Yes	
	FI-485	S.G. Flow Ind.			↓	↓	↓	Note 8	Note 9	FI-484	↓	Yes	-	-	
	RV-1410	Main Steam Safety Position			None	Closed Note Closed	See Schedule/ Justification	See Schedule/ Justification	See Schedule/ Justification	-	-	-	-	-	Note 28
	RV-1411	Main Steam Safety Valve Position			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1412	Main Steam Safety Valve Position -Flow Indication			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RV-1413	Main Steam Safety Valve Position			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	FT-494	S.G. Flow			0-1000" H <sub>2</sub> O (0.35.77 PSID)	-	Comply	Note 1	Note 10	FT-495	Note 12	SPDS	Yes	Yes	
	FI-494	S.G. Flow Ind.			↓	↓	↓	Note 8	Note 9	FI-494 <sup>5</sup>	↓	Yes	-	-	
	FT-495	S.G. Flow			↓	↓	↓	Note 1	Note 10	FT-494	↓	SPDS	Yes	Yes	
	FI-495	S.G. Flow Ind.			↓	↓	↓	Note 8	Note 9	FI-494	↓	Yes	-	-	





## PARAMETER LISTING SUMMARY SHEETS

4/85

## UNIT 4 TURKEY POINT

Sheet 34 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION	
		DESCRIPTION	TYPE	CATE- GORY	EXISTING						REQUIRED	CR	TSC		EOF
D20		SECONDARY SYSTEM (S.G.) MAIN FEEDWATER FLOW													
	FT-476	S.G. 'A' F.W. Flow Ch. III	D	3	0 - 4 x 10 <sup>6</sup> LB/HR	0 - 110% Design Flow	N/A	N/A	N/A	N/A	Note 12	SAS	Yes	Yes	
	FI-476	S.G. 'A' F.W. Flow Ch. III Ind.										Yes	-	-	
	FT-477	S.G. 'A' F.W. Flow Ch. IV										SAS	Yes	Yes	
	FI-477	S.G. 'A' F.W. Flow Ch. IV Ind.										Yes	-	-	
	FT-486	S.G. 'B' F.W. Flow Ch. III										SAS	Yes	Yes	
	FI-486	S.G. 'B' F.W. Flow Ch. III Ind.										Yes	-	-	
	FT-487	S.G. 'B' F.W. Flow Ch. IV										SAS	Yes	Yes	
	FI-487	S.G. 'B' F.W. Flow Ch. IV Ind.										Yes	-	-	
	FT-496	S.G. 'C' F.W. Flow Ch. III										SAS	Yes	Yes	
	FI-496	S.G. 'C' F.W. Flow Ch. III Ind.										Yes	-	-	
	FT-497	S.G. 'C' F.W. Flow Ch. IV										SAS	Yes	Yes	
	FI-497	S.G. 'C' F.W. Flow Ch. IV Ind.										Yes	-	-	



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 35 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
D21		<u>AUXILIARY FEEDWATER</u> <u>AUXILIARY FEEDWATER FLOW</u>													
	FT-1401A	Aux. F.W. Flow to S.G. 'A'	D	2	0 - 300 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	FT-1401B	Note 12	SAS	Yes	Yes	
	FI-1401A	Aux. F.W. Flow to S.G. 'A' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1401B	↓	Yes	-	-	
	FT-1401B	Aux. F.W. Flow to S.G. 'A'	↓	↓	↓	↓	↓	Note 1	↓	FT-1401A	↓	SAS	Yes	Yes	
	FI-1401B	Aux. F.W. Flow to S.G. 'A' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1401A	↓	Yes	-	-	
	FT-1457A	Aux. F.W. Flow to S.G. 'B'	↓	↓	↓	↓	↓	Note 1	↓	FT-1457B	↓	SAS	Yes	Yes	
	FI-1457A	Aux. F.W. Flow to S.G. 'B' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1457B	↓	Yes	-	-	
	FT-1457B	Aux. F.W. Flow to S.G. 'B'	↓	↓	↓	↓	↓	Note 1	↓	FT-1457A	↓	SAS	Yes	Yes	
	FI-1457B	Aux. F.W. Flow to S.G. 'B' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1457A	↓	Yes	-	-	
	FT-1458A	Aux. F.W. Flow to S.G. 'C'	↓	↓	↓	↓	↓	Note 1	↓	FT-1458B	↓	SAS	Yes	Yes	
	FI-1458A	Aux. F.W. Flow to S.G. 'C' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1458B	↓	Yes	-	-	
	FT-1458B	Aux. F.W. Flow to S.G. 'C'	↓	↓	↓	↓	↓	Note 1	↓	FT-1458A	↓	SAS	Yes	Yes	
	FI-1458B	Aux. F.W. Flow to S.G. 'C' Ind.	↓	↓	↓	↓	↓	Note 8	↓	FI-1458A	↓	Yes	-	-	
D22		<u>AUXILIARY FEEDWATER</u> <u>CONDENSATE STORAGE TANK</u> <u>WATER LEVEL</u>													
	LT-6384A	Condensate Storage Tank	D	1	0 - 100%	Plant Specific	Comply	Note 1	Note 10	LT-6384B	Note 12	SAS	Yes	Yes	
	LI-6384A	Condensate Storage Tank Ind.	↓	↓	↓	↓	↓	Note 8	↓	LI-6384B	↓	Yes	-	-	
	LT-6384B	Condensate Storage Tank	↓	↓	↓	↓	↓	Note 1	↓	LT-6384A	↓	SAS	Yes	Yes	
	LI-6384B	Condensate Storage Tank Ind.	↓	↓	↓	↓	↓	Note 8	↓	LI-6384A	↓	Yes	-	-	







PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 37 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
D26	None	<u>CONTAINMENT COOLING SYSTEM</u> <u>CONTAINMENT SUMP WTR. TEMP.</u> Ctmt. Sump Wtr. Temperature	D	2	---	50 - 250 F	See Schedule/ Justification	See Schedule/ Justification	See Schedule/ Justification	-	-	-	-	-	Note 28
D27	FT-122	<u>CHEMICAL &amp; VOLUME CONTROL</u> <u>SYSTEM - MAKEUP FLOW</u> Charging Flow	D	2	0 - 150 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SPDS	Yes	Yes	
	FI-122	Charging Flow Ind.	↓	↓	↓	↓	Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-	
D28	FT-150	<u>CHEMICAL &amp; VOLUME CONTROL</u> <u>SYSTEM - LETDOWN FLOW</u> Lo Pressure Letdown Flow	D	2	0 - 150 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SPDS	Yes	Yes	
	FI-150	Lo Pressure Letdown Flow Ind.	↓	↓	↓	↓	Comply	Note 8	Note 9	N/A	Note 12	Yes	-	-	
D29	LT-115	<u>CHEMICAL &amp; VOLUME CONTROL</u> <u>SYSTEM - VOLUME CONTROL TANK</u> <u>LEVEL</u> Vol. Control Tank Level	D	2	0 - 100%	Top to Bottom	Comply	Note 3	Note 9	N/A	Note 12	SAS	Yes	Yes	
	LI-115	Vol. Control Tank Level Ind.	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	
	LT-112	Vol. Control Tank Level	↓	↓	↓	↓	↓	Note 3	↓	↓	↓	SAS	Yes	Yes	
	LI-112	Vol. Control Tank Level Ind.	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 38 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION	
		DESCRIPTION	TYPE	CATEGORY	EXISTING						REQUIRED	CR	TSC		EOF
D30		<u>COOLING WATER SYSTEM</u> <u>COMPONENT COOLING WATER TEMP.</u> <u>TO ESP SYSTEM</u>													
	TE-607A	Component Cooling Hx Outlet Temperature	D	2	50 - 200 F	40 - 200°F	Comply	Note 3	Note 9	N/A	Note 12	SAS	Yes	Yes	Note 28
	TI-607A	Component Cooling Hx Outlet Temperature Ind.	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	↓
	TE-607B	Component Cooling Hx Outlet Temperature	↓	↓	↓	↓	↓	Note 3	↓	↓	↓	SAS	Yes	Yes	↓
	TI-607B	Component Cooling Hx Outlet Temperature Ind.	↓	↓	↓	↓	↓	Note 8	↓	↓	↓	Yes	-	-	
D31		<u>COOLING WATER SYSTEM</u> <u>COMPONENT COOLING WATER FLOW</u> <u>TO ESP SYSTEM</u>													
	FT-613A	CCW Header Flow	D	2	0 - 14000 GPM	0 - 110% Design Flow	Comply	Note 1	Note 10	N/A	Note 12	SAS	Yes	Yes	
	FI-613A	CCW Header Flow Ind.	↓	↓	↓	↓	↓	Note 8	Note 9	↓	↓	Yes	-	-	
	FT-613B	CCW Header Flow	↓	↓	↓	↓	↓	Note 1	Note 10	↓	↓	SAS	Yes	Yes	
	FI-613B	CCW Header Flow Ind.	↓	↓	↓	↓	↓	Note 8	Note 9	↓	↓	Yes	-	-	
D32		<u>RADWASTE SYSTEMS - HIGH LEVEL</u> <u>RADIOACTIVITY LIQ. TANK LEVEL</u>													
	LT-1001	Waste Holdup Tank Level	D	3	0 - 100%	Top to Bottom	N/A	N/A	N/A	Note 15	SAS	Yes	Yes		
	LI-1001A	Waste Holdup Tank Level Ind.	↓	↓	↓	↓	N/A	N/A	N/A	Note 15	Yes	-	-	Pneumatic	





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 39 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		O.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
D33		<u>RADWASTE SYSTEMS - RADIOACTIVE</u> <u>GAS HOLDUP TANK PRESSURE</u>													
	PT-1036	Gas Decay Tank 'A' (Holdup) Pressure	D	3	0 - 100 PSIG	0 to 150% Design Pressure	N/A	N/A	N/A	N/A	Note 15	SAS	Yes	Yes	
	PI-1036	Gas Decay Tank 'A' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
	PT-1037	Gas Decay Tank 'B' (Holdup) Pressure									Note 15	SAS	Yes	Yes	
	PI-1037	Gas Decay Tank 'B' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
	PT-1038	Gas Decay Tank 'C' (Holdup) Pressure									Note 15	SAS	Yes	Yes	
	PI-1038	Gas Decay Tank 'C' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
	PT-1039	Gas Decay Tank 'D' (Holdup) Pressure									Note 15	SAS	Yes	Yes	
	PI-1039	Gas Decay Tank 'D' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
	PT-1052	Gas Decay Tank 'E' (Holdup) Pressure									Note 15	SAS	Yes	Yes	
	PI-1052	Gas Decay Tank 'E' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
	PT-1053	Gas Decay Tank 'F' (Holdup) Pressure									Note 15	SAS	Yes	Yes	
	PI-1053	Gas Decay Tank 'F' (Holdup) Pressure Ind.									Note 18	Yes	-	-	
D34		<u>VENTILATION SYSTEM-EMERGENCY</u> <u>VENTILATION DAMPER POSITION</u>													
	D1	C.R. Normal Intake Damper Position	D	2	Open Closed	Open Closed	Comply	Note 1	Note 10	N/A	Note 13	SAS	Yes	Yes	
	D2	C.R. Emergency Intake Damper Position					Comply	Note 8	Note 9	N/A	Note 13				

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 40 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE				Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION	
		DESCRIPTION	TYPE	CATEGORY	EXISTING		REQUIRED						CR	TSC	EOF		
		<u>VENTILATION SYSTEM-EMERGENCY VENTILATION DAMPER POSITION</u> (Continued)															
	D3	C.R. Emergency Intake Damper Position	D	2	Open	Closed	Open	Closed	Comply	Note 8	Note 9	N/A	Note 13	SAS	Yes	Yes	
	D11	C.R. Recirculating Damper Position	↓	↓		↓		↓	Comply	Note 8	Note 9	N/A	Note 13	↓	↓	↓	
D35		<u>POWER SUPPLIES-STATUS OF STANDBY POWER &amp; OTHER ENERGY SOURCES IMPORTANT TO SAFETY</u>															
	3K4 AMP	Emergency Diesel Gen. 'A' Current to Unit 3	D	2	0 - 600 AMPS	AMPS	Comply	Note 8	Note 9	N/A	Note 13	SAS	Yes	Yes			
	DG AMP	Emergency Diesel Gen. 'A' Current to Unit 3			AMPS	AMPS							Yes	-	-		
	3K4 AMP	Emergency Diesel Gen. 'A' Current to Unit 4			0 - 600 AMPS	AMPS							SAS	Yes	Yes		
	DG AMP	Emergency Diesel Gen. 'A' Current to Unit 4			AMPS	AMPS							Yes	-	-		
	3K4 VOLTS	Onsite Emergency Power Unit 3			0 - 5000 VAC	VOLTS							SAS	Yes	Yes		
	DG VOLTS	Onsite Emergency Power Unit 3			VOLTS	VOLTS							Yes	-	-		
	3B05	MCC - 3A Bus Voltage			0 - 600 VOLTS	VOLTS							SAS	Yes	Yes		
	3B06	MCC - 3B Bus Voltage			0 - 600 VOLTS	VOLTS								↓	↓	↓	
	3B07	MCC - 3C Bus Voltage			0 - 600 VOLTS	VOLTS								↓	↓	↓	
	3B08	MCC - 3D Bus Voltage			0 - 600 VOLTS	VOLTS								↓	↓	↓	
	3B01	Load Center 3A Volt Status			0 - 600 VOLTS	VOLTS								↓	↓	↓	
	LC3A	Load Center 3A Volt Status	↓	↓	VOLTS	VOLTS		↓	↓	↓	↓	↓	Yes	-	-		



PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 41 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
		POWER SUPPLIES - STATUS OF STANDBY POWER & OTHER ENERGY SOURCES IMPORTANT TO SAFETY (Continued)													
	3B02	Load Center 3B Volt Status	D	2	0 - 600 VOLTS	VOLTS	Comply	Note 8	Note 9	N/A	Note 13	SAS	Yes	Yes	
	LC3B	Load Center 3B Volt Status			VOLTS	VOLTS						Yes	-	-	
	3B03	Load Center 3C Volt Status			0 - 600 VOLTS	VOLTS						SAS	Yes	Yes	
	LC3C	Load Center 3C Volt Status			VOLTS	VOLTS						Yes	-	-	
	3B04	Load Center 3D Volt Status			0 - 600 VOLTS	VOLTS						SAS	Yes	Yes	
	LC3D	Load Center 3D Volt Status			VOLTS	VOLTS						Yes	-	-	
	3Y01	120 VAC Inverter 3A Current			0 - 100 AMPS	AMPS					Note 12	SAS	Yes	Yes	
	3Y01	120 VAC Inverter 3A Voltage			0 - 150 VOLTS	VOLTS									
	3Y02	120 VAC Inverter 3B Current			0 - 100 AMPS	AMPS									
	3Y02	120 VAC Inverter 3B Voltage			0 - 150 VOLTS	VOLTS									
	3Y04	120 VAC Inverter A5 Current			0 - 100 AMPS	AMPS									
	3Y04	120 VAC Inverter A5 Voltage			0 - 150 VOLTS	VOLTS									
	3Y05	120 VAC Inverter 3C Current			0 - 100 AMPS	AMPS									
	3Y05	120 VAC Inverter 3C Voltage			0 - 150 VOLTS	VOLTS									
	3Y06	120 VAC Inverter C5 Current			0 - 100 AMPS	AMPS									
	3Y06	120 VAC Inverter C5 Voltage			0 - 150 VOLTS	VOLTS									
	3Y07	120 VAC Inverter 3D Current			0 - 100 AMPS	AMPS									
	3Y07	120 VAC Inverter 3D Voltage			0 - 150 VOLTS	VOLTS									
	PS-2322	N <sub>2</sub> Supply for Aux. F.W. Cont. Valves Pressure	D	2	300 to 2500 PSIG	Pressure					Note 14	SAS	Yes	Yes	
	PS-2323	N <sub>2</sub> Supply for Aux. F.W. Cont. Valves Pressure			300 to 2500 PSIG						Note 14				
	Later	N <sub>2</sub> Supply for PORV'S													



4/85

PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 42 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
E1		<u>CONTAINMENT RADIATION</u> <u>CONTAINMENT AREA RADIATION</u> <u>HI RANGE</u>													
	RAD-6311A	Ctmt. High Range Rad. Monitor Ch. 'A'	E	2	$10^0$ to $10^8$ R/HR.	1 R/HR to $10^7$ R/HR	Comply	Note 1	Note 10	RAD-6311B	Note 12	SPDS	Yes	Yes	
	RR-6311A	Ctmt. High Range Rad. Monitor Ch. 'A' Recorder	↓	↓	↓	↓	↓	Note 8	↓	RR-6311B	↓	Yes	-	-	
	RAD-6311B	Ctmt. High Range Rad. Ch. 'B'	↓	↓	↓	↓	↓	Note 1	↓	RAD-6311A	↓	SPDS	Yes	Yes	
	RR-6311B	Ctmt. High Range Rad. Monitor Ch. 'B' Recorder	↓	↓	↓	↓	↓	Note 8	↓	RR-6311A	↓	Yes	-	-	
E2		<u>AREA RADIATION - RADIATION</u> <u>EXPOSURE RATE</u>													
	RD-1417	East End of E/W Corridor	E	2	10-1 to $10^3$ MR/HR.	10-1 to $10^4$ R/HR.	N/A	Note 8	N/A	N/A	Note 12	SAS	Yes	Yes	Note 28
	RD-1418	West End of E/W Corridor	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1419	Spent Fuel Pit Exhaust	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1420	Control Room	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1415	North End of N/S Corridor	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1416	South End of N/S Corridor	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1413	Outside Sample Rm. - Unit 3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	RD-1414	Outside Sample Rm. - Unit 4	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	R-1405	Recorder	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes	-	-	





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

Sheet 43 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED						CR	TSC	EOF	
E3		<u>AIRBORNE RADIOACTIVE MATERIALS RELEASED FROM PLANT NOBLE GAS &amp; VENT FLOW RATE</u>													
	None	Ctmt. or Purge Effluent	E	2		$10^{-6} \mu\text{Ci}/\text{CC}$ to $10^3 \mu\text{Ci}/\text{CC}$									No Inst. Exists
	None	Ctmt. or Purge Effluent (Flow)	E	2		0 - 110% Design Flow									No Inst. Exists
	None	Reactor Shield Blg. Annulus	E	2	<u>THIS DESIGN NOT USED ON TURKEY POINT</u>										No Inst. Exists
	None	Auxiliary Building	E	2		$10^{-6} \mu\text{Ci}/\text{CC}$ to $10^3 \mu\text{Ci}/\text{CC}$									No Inst. Exists
	None	Auxiliary Building (Flow)	E	2		0 - 110% Design Flow									No Inst. Exists
		<u>NOTE: TURKEY POINT HAS COMMON PLANT VENT FOR ALL THE ABOVE</u>													
E4		<u>CONDENSER AIR REMOVAL SYS. EXH.</u>													
	RAD-6417	Air Ejector Condenser Exh.	E	2	$10^{-7}$ to $10^5$ $\mu\text{Ci}/\text{CC}$	$10^{-6}$ to $10^5$ $\mu\text{Ci}/\text{CC}$	N/A	Note 8	N/A	N/A	Note 12A	SAS	Yes	Yes	
		Air Ejector Condenser Flow			-	-	-	-	-	-	-	-	-	-	No Inst. Exists
E5		<u>COMMON VENT</u>													
	RAD-6304	Vent Stack W.R. Rad. Monitor	E	2	$10^{-7}$ to $10^5$ $\mu\text{Ci}/\text{CC}$	$10^{-6}$ to $10^3$ $\mu\text{Ci}/\text{CC}$	N/A	Note 8	N/A	N/A	Note 12A	SAS	Yes	Yes	
	FT-6584	Vent Stack - Flow	E	2	0 - 150,000 cfm	0 - 110% Design Flow						SAS	Yes	Yes	
E6		<u>VENT FROM STEAM GENERATOR SAFETY RELIEF VALVE</u>													
	RAD-6426	Steam Line Rad. Monitor	E	2	$10^{-7}$ to $10^5$ $\mu\text{Ci}/\text{CC}$	$10^{-1}$ to $10^3$ $\mu\text{Ci}/\text{CC}$	N/A	Note 8	N/A	N/A	Note 12A	SAS	Yes	Yes	



## PARAMETER LISTING SUMMARY SHEETS

4/85

## UNIT 4 TURKEY POINT

Sheet 44 of 46

ITEM	TAG NO.	VARIABLE			INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATE- GORY	EXISTING	REQUIRED						CR	TSC	EOF	
E7	RAD-6304	<u>PARTICULATES &amp; HALOGENS</u> <u>ALL IDENTIFIED PLANT</u> <u>RELEASE POINTS</u>  Vent Stack	E	3	100 - 200 $\mu$ Ci/CC	$10^{-3}$ $\mu$ Ci/CC to $10^2$ $\mu$ Ci/CC	N/A	N/A	N/A	N/A	Note 12A	SAS	Yes	Yes	23 Note 26
E8	ND6700	<u>PLANT &amp; ENVIRONS</u> <u>RADIATION</u> <u>(PORTABLE INST.)</u>  Plant Environs Airborn	E	3	$10^{-9}$ x $10^{-3}$ $\mu$ Ci/CC	Isotopic Analysis	N/A	N/A	N/A	N/A	-	-	-	-	
	RO-2A	Plant Environs Activity	↓	↓	0 - 50 R/HR	↓	↓	↓	↓	↓	↓	↓	↓	↓	
	ND6700	Plant Environs Activity	↓	↓	$10^{-9}$ x $10^{-3}$ $\mu$ Ci/CC	↓	↓	↓	↓	↓	↓	↓	↓	↓	



## PARAMETER LISTING SUMMARY SHEETS

4/85

## UNIT 4 TURKEY POINT

Sheet 44A of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION
		DESCRIPTION	TYPE	CATEGORY	EXISTING	REQUIRED					CR	TSC	EOF	
29		<u>METEOROLOGY - WIND DIRECTION &amp; SPEED; ESTIMATE OF ATMOSPHERIC STABILITY</u>												
	10 M. W.D. So.Dade	Meteorology 10 Meter Wind Direction	E	3	0 - 340°	0 - 360°	N/A	N/A	N/A	N/A	Note 12	SAS	Yes	Yes
	10 M. W.D. Turkey Point	Meteorology 10 Meter Wind Direction												
	60 M. W.D. So.Dade	Meteorology 60 Meter Wind Direction												
	10 M. W.S. So.Dade	Meteorology 10 Meter Wind Speed			0 - 120 MPH	0 - 50 MPH								
	10 M. W.S. Turkey Point	Meteorology 10 Meter Wind Speed												
	60 M. W.S. So.Dade	Meteorology 60 Meter Wind Speed												

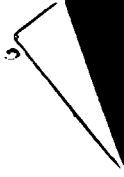


PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 45 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIRE- MENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUN- DANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION		
		DESCRIPTION	TYPE	CATE- GORY	EXISTING						REQUIRED	CR	TSC		EOF	
		<u>METEOROLOGY - WIND DIRECTION &amp; SPEED; ESTIMATE OF ATMOSPHERIC STABILITY</u> (Continued)														
	Delta T 'A' S.D.	Estimate of Atmos. Stability	E	3	-5 to +5 F	BASED ON VERTICAL TEMPERATURE DIFF ERENCE FROM PRIMARY METEORO- LOGICAL SYSTEM, -5°C to 10°C (-9°F to 18°F) AND ± 0.15°C ACCURACY PER 50. METER INTERVALS (± 0.3°F ACCUR- ACY PER 164-FOOT INTERVALS) OR ANALOGOUS RANGE FOR ALTERNATIVE STABILITY ESTIMATES.	N/A	N/A	N/A	ΔT'B'	Note 12	SAS	Yes	Yes		
	Delta T 'B' S.D.	Estimate of Atmos. Stability			-5 to +5 F		ΔT'A'									
	10 M. Sigma Theta T.P.	Estimate of Atmos. Stability			0 - 100°		N/A									
	Temp. 'A' S.D.	Estimate of Atmos. Stability			0 - 120 F		Temp 'B'									
	Temp. 'B' S.D.	Estimate of Atmos. Stability			0 - 120 F		Temp 'A'									
	10 M. Dew Pt. S.D.	Estimate of Atmos. Stability			0 - 120 F											
	60 M. Dew Pt. S.D.	Estimate of Atmos. Stability			0 - 120 F											
	Rainfall S.D.	Estimate of Atmos. Stability			0 - 1"											
	Direct Solar S.D.	Estimate of Atmos. Stability														
	Total Solar S.D.	Estimate of Atmos. Stability														





PARAMETER LISTING SUMMARY SHEETS  
UNIT 4 TURKEY POINT

4/85

Sheet 46 of 46

ITEM	TAG NO.	VARIABLE		INSTRUMENT RANGE		Q.A. REQUIREMENT	ENVIRONMENTAL QUALIFICATION	SEISMIC QUALIFICATION	REDUNDANCE	POWER SUPPLY	DISPLAY LOCATION			SCHEDULE/ JUSTIFICATION	
		DESCRIPTION	TYPE	CATEGORY	EXISTING						REQUIRED	CR	TSC		EOF
BY EIO		ACCIDENT SAMPLING CAPABILITY													
		PRIMARY COOLANT AND SUMP													
	AE-6372	RCS Activity Gross CPS	E	3	10 - 10 CPS	10 $\mu$ Cl/ml to 10 Cl/ml	N/A	N/A	N/A	N/A	Note 15	SAS	Yes	Yes	
	AE-6373	Ctmt. Air - Isotopic Analysis Gamma Spectrum			10 - 10 <sup>6</sup> CPS	Isotopic Analysis	↓	N/A	N/A	↓	↓	↓	↓	↓	
	AE-6424	Boron Analyzer RCS Soluble Boron Concentration			0 - 6000 ppm	0 - 6000 ppm		SEE ITEM B3							
	AE-6455	RCS Chloride Analysis of Primary Coolant			0 - 20 ppm	0 - 20 ppm	N/A	N/A	N/A	N/A	Note 15	SAS	Yes	Yes	
	AE-6453	Dissolved H <sub>2</sub> Analysis of Primary Coolant			0 - 100% of Vol.	0 to 2000 CC/kg	↓								
	AE-6456	Dissolved O <sub>2</sub> Analysis of Primary Coolant			0 - 20 ppm	0 - 20 ppm									
	AE-6454	RCS pH Analysis of Primary Coolant	↓	↓	1 - 13 ph	1 - 13 ph	↓	↓	↓	↓	↓	↓	↓	↓	
		CONTAINMENT AIR													
	AE-6307A	Ctmt. H <sub>2</sub> Concentration Ch. A	E	3	0 - 10% and 0 - 20%	0 - 10 Vol. %		SEE ITEM C12							
	AE-6307B	Ctmt. H <sub>2</sub> Concentration Ch. B			0 - 10% and 0 - 20%	0 - 10 Vol. %		SEE ITEM C12							
	None	Ctmt. O <sub>2</sub>			Grab Sample	0 - 30 Vol. %									No Inst. Exists
	AE-6373	Ctmt. Air Gamma Spectrum	↓	↓	10 - 10 <sup>6</sup> CPS	Isotopic Analysis		SEE ITEM C12		N/A		SAS	Yes	Yes	

