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TRM1 - TECHNICAL REQUIREMENTS MANUAL UNIT 1

REMOVE MANUAL TABLE OF CONTENTS DATE: 03/26/2009

ADD MANUAL TABLE OF CONTENTS DATE: 04/16/2009

CATEGORY: DOCUMENTS TYPE: TRM1

A001
NRR

ID: TEXT 3.1.3
REMOVE: REV:4

ADD: REV: 5

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.3.12
ADD: REV: 0

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.4.2
REMOVE: REV:0

ADD: REV: 1

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.11
ADD: REV: 0

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.1
ADD: REV: 2

REMOVE: REV:1

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.2
REMOVE: REV:2

ADD: REV: 3

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.3
ADD: REV: 3

REMOVE: REV:2

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.4
REMOVE: REV:1

ADD: REV: 2

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.5
ADD: REV: 2

REMOVE: REV:1

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT 3.7.3.6
REMOVE: REV:1

ADD: REV: 2

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT B3.3.12
ADD: REV: 0

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT B3.4.2
REMOVE: REV:0

ADD: REV: 1

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT B3.7.11
ADD: REV: 0

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT LOES
REMOVE: REV:49

ADD: REV: 50

CATEGORY: DOCUMENTS TYPE: TRM1
ID: TEXT TOC
ADD: REV: 16

REMOVE: REV:15

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Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

Table Of Contents

Issue Date: 04/16/2009

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.2.1 9 04/17/2008
Title: CORE OPERATING LIMITS REPORT (COLR)

TEXT 3.3.1 0 11/18/2002
Title: INSTRUMENTATION RADIATION MONITORING INSTRUMENTATION

TEXT 3.3.2 2 11/09/2007
Title: INSTRUMENTATION SEISMIC MONITORING INSTRUMENTATION

TEXT 3.3.3 2 11/09/2007
Title: INSTRUMENTATION METEOROLOGICAL MONITORING INSTRUMENTATION

TEXT 3.3.4 5 05/23/2008
Title: INSTRUMENTATION TRM POST-ACCIDENT MONITORING INSTRUMENTATION

TEXT 3.3.5 0 11/18/2002
Title: INSTRUMENTATION THIS PAGE INTENTIONALLY LEFT BLANK

TEXT 3.3.6 2 10/19/2005
Title: INSTRUMENTATION TRM ISOLATION ACTUATION INSTRUMENTATION

TEXT 3.3.7 1 11/09/2007
Title: INSTRUMENTATION MAIN TURBINE OVERSPEED PROTECTION SYSTEM

TEXT 3.3.8 1 10/22/2003
Title: INSTRUMENTATION TRM RPS INSTRUMENTATION

TEXT 3.3.9 3 04/17/2008
Title: OPRM INSTRUMENTATION CONFIGURATION

LDCN 4502

TEXT 3.3.10 1 12/14/2004
Title: INSTRUMENTATION REACTOR RECIRCULATION PUMP MG SET STOPS

TEXT 3.3.11 1 10/22/2003
Title: INSTRUMENTATION MVP ISOLATION INSTRUMENTATION

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.3.12 0 04/16/2009
Title: WATER MONITORING INSTRUMENTATION

TEXT 3.4.1 1 04/26/2006
Title: REACTOR COOLANT SYSTEM REACTOR COOLANT SYSTEM CHEMISTRY

TEXT 3.4.2 1 04/16/2009
Title: REACTOR COOLANT SYSTEM STRUCTURAL INTEGRITY

TEXT 3.4.3 1 11/09/2007
Title: REACTOR COOLANT SYSTEM HIGH/LOW PRESSURE INTERFACE LEAKAGE MONITORS

TEXT 3.4.4 2 04/17/2008
Title: REACTOR COOLANT SYSTEM REACTOR RECIRCULATION FLOW AND ROD LINE LIMIT

TEXT 3.4.5 1 04/26/2006
Title: REACTOR COOLANT SYSTEM REACTOR VESSEL MATERIALS

TEXT 3.5.1 1 02/04/2005
Title: EMERGENCY CORE COOLING AND RCIC ADS MANUAL INHIBIT

TEXT 3.5.2 1 11/09/2007
Title: EMERGENCY CORE COOLING AND RCIC ECCS AND RCIC SYSTEM MONITORING INSTRUMENTATION

TEXT 3.5.3 0 11/18/2002
Title: EMERGENCY CORE COOLING AND RCIC LONG TERM NITROGEN SUPPLY TO ADS

TEXT 3.6.1 0 11/18/2002
Title: CONTAINMENT VENTING OR PURGING

TEXT 3.6.2 0 11/18/2002
Title: CONTAINMENT SUPPRESSION CHAMBER-TO-DRYWELL VACUUM BREAKER POSITION INDICATION

TEXT 3.6.3 0 11/18/2002
Title: CONTAINMENT SUPPRESSION POOL ALARM INSTRUMENTATION

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.6.4 0 11/18/2002
Title: CONTAINMENT PRIMARY CONTAINMENT CLOSED SYSTEM BOUNDARIES

TEXT 3.7.1 0 11/18/2002
Title: PLANT SYSTEMS EMERGENCY SERVICE WATER SYSTEM (ESW) SHUTDOWN

TEXT 3.7.2 0 11/18/2002
Title: PLANT SYSTEMS ULTIMATE HEAT SINK (UHS) AND GROUND WATER LEVEL

TEXT 3.7.3.1 2 04/16/2009
Title: PLANT SYSTEMS FIRE SUPPRESSION WATER SUPPLY SYSTEM

TEXT 3.7.3.2 3 04/16/2009
Title: PLANT SYSTEMS SPRAY AND SPRINKLER SYSTEMS

TEXT 3.7.3.3 3 04/16/2009
Title: PLANT SYSTEMS CO2 SYSTEMS

TEXT 3.7.3.4 2 04/16/2009
Title: PLANT SYSTEMS HALON SYSTEMS

TEXT 3.7.3.5 2 04/16/2009
Title: PLANT SYSTEMS FIRE HOSE STATIONS

TEXT 3.7.3.6 2 04/16/2009
Title: PLANT SYSTEMS YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

TEXT 3.7.3.7 1 04/26/2006
Title: PLANT SYSTEMS FIRE RATED ASSEMBLIES

TEXT 3.7.3.8 6 11/09/2007
Title: PLANT SYSTEMS FIRE DETECTION INSTRUMENTATION

LDCN 3503

TEXT 3.7.4 1 04/26/2006
Title: PLANT SYSTEMS SOLID RADWASTE SYSTEM

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.7.5.1 0 11/18/2002
Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS HYDROGEN MONITOR

TEXT 3.7.5.2 0 11/18/2002
Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS EXPLOSIVE GAS MIXTURE

TEXT 3.7.5.3 1 04/26/2006
Title: PLANT SYSTEMS LIQUID HOLDUP TANKS

TEXT 3.7.6 2 06/27/2008
Title: PLANT SYSTEMS ESSW PUMPHOUSE VENTILATION

TEXT 3.7.7 2 09/05/2008
Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS PRETREATMENT LOGARITHMIC RADIATION MONITORING

TEXT 3.7.8 4 06/21/2007
Title: PLANT SYSTEMS SNUBBERS

TEXT 3.7.9 1 08/28/2006
Title: PLANT SYSTEMS CONTROL STRUCTURE HVAC

TEXT 3.7.10 1 12/14/2004
Title: PLANT SYSTEMS SPENT FUEL STORAGE POOLS (SFSPS)

TEXT 3.7.11 0 04/16/2009
Title: STRUCTURAL INTEGRITY

TEXT 3.8.1 1 02/04/2005
Title: ELECTRICAL POWER PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

TEXT 3.8.2.1 2 11/09/2007
Title: ELECTRICAL POWER MOTOR OPERATED VALVES (MOV) THERMAL OVERLOAD PROTECTION - CONTINUOUS

TEXT 3.8.2.2 2 12/14/2004
Title: ELECTRICAL POWER MOTOR OPERATED VALVES (MOV) THERMAL OVERLOAD PROTECTION - AUTOMATIC

TEXT 3.8.3 0 11/18/2002
Title: ELECTRICAL POWER DIESEL GENERATOR (DG) MAINTENANCE ACTIVITIES

TEXT 3.8.4 0 11/18/2002
Title: ELECTRICAL POWER 24 VDC ELECTRICAL POWER SUBSYSTEM

TEXT 3.8.5 0 11/18/2002
Title: ELECTRICAL POWER DEGRADED VOLTAGE PROTECTION

TEXT 3.8.6 0 11/18/2002
Title: ELECTRICAL POWER EMERGENCY SWITCHGEAR ROOM COOLING

TEXT 3.8.7 0 12/14/2006
Title: BATTERY MAINTENANCE AND MONITORING PROGRAM

TEXT 3.9.1 0 11/18/2002
Title: REFUELING OPERATIONS DECAY TIME

TEXT 3.9.2 0 11/18/2002
Title: REFUELING OPERATIONS COMMUNICATIONS

TEXT 3.9.3 0 11/18/2002
Title: REFUELING OPERATIONS REFUELING PLATFORM

TEXT 3.10.1 1 04/26/2006
Title: MISCELLANEOUS SEAL SOURCE CONTAMINATION

TEXT 3.10.2 2 08/08/2006
Title: MISCELLANEOUS SHUTDOWN MARGIN TEST RPS INSTRUMENTATION

TEXT 3.10.3 1 04/26/2006
Title: MISCELLANEOUS INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

TEXT 3.10.4 2 04/17/2008
Title: MISCELLANEOUS LEADING EDGE FLOW METER (LEFM)

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.11.1.1 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS LIQUID EFFLUENTS CONCENTRATION

TEXT 3.11.1.2 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS LIQUID EFFLUENTS DOSE

TEXT 3.11.1.3 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS LIQUID WASTE TREATMENT SYSTEM

TEXT 3.11.1.4 1 12/14/2004
Title: RADIOACTIVE EFFLUENTS LIQUID RADWASTE EFFLUENT MONITORING INSTRUMENTATION

TEXT 3.11.1.5 2 05/02/2007
Title: RADIOACTIVE EFFLUENTS RADIOACTIVE LIQUID PROCESS MONITORING INSTRUMENTATION

TEXT 3.11.2.1 3 04/26/2006
Title: RADIOACTIVE EFFLUENTS DOSE RATE

TEXT 3.11.2.2 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS DOSE - NOBLE GASES

TEXT 3.11.2.3 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS DOSE - IODINE, TRITIUM, AND RADIONUCLIDES IN PARTICULATE FORM

TEXT 3.11.2.4 0 11/18/2002
Title: RADIOACTIVE EFFLUENTS GASEOUS RADWASTE TREATMENT SYSTEM

TEXT 3.11.2.5 3 11/14/2006
Title: RADIOACTIVE EFFLUENTS VENTILATION EXHAUST TREATMENT SYSTEM

TEXT 3.11.2.6 3 05/02/2007
Title: RADIOACTIVE EFFLUENTS RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

TEXT 3.11.3 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS TOTAL DOSE

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT 3.11.4.1 4 08/08/2006
Title: RADIOACTIVE EFFLUENTS MONITORING PROGRAM

TEXT 3.11.4.2 2 04/26/2006
Title: RADIOACTIVE EFFLUENTS LAND USE CENSUS

TEXT 3.11.4.3 1 04/26/2006
Title: RADIOACTIVE EFFLUENTS INTERLABORATORY COMPARISON PROGRAM

TEXT 3.12.1 0 11/19/2002
Title: LOADS CONTROL PROGRAM CRANE TRAVEL-SPENT FUEL POOL STORAGE POOL

TEXT 3.12.2 4 04/17/2008
Title: LOADS CONTROL PROGRAM HEAVY LOADS REQUIREMENTS

TEXT 3.12.3 0 11/19/2002
Title: LOADS CONTROL PROGRAM LIGHT LOADS REQUIREMENT

TEXT B3.0 4 05/23/2008
Title: APPLICABILITY BASES TECHNICAL REQUIREMENT FOR OPERATION (TRO) APPLICABILITY

TEXT B3.1.1 1 11/09/2007
Title: REACTIVITY CONTROL SYSTEMS BASES ANTICIPATED TRANSIENT WITHOUT SCRAM ALTERNATE ROD INJECTION (ATWS-ARI) INSTRUMENTATION

TEXT B3.1.2 0 11/19/2002
Title: REACTIVITY CONTROL SYSTEMS BASES CONTROL ROD DRIVE (CRD) HOUSING SUPPORT

TEXT B3.1.3 3 03/31/2006
Title: REACTIVITY CONTROL SYSTEMS BASES CONTROL ROD BLOCK INSTRUMENTATION

TEXT B3.1.4 0 11/19/2002
Title: REACTIVITY CONTROL SYSTEMS BASES CONTROL ROD SCRAM ACCUMULATORS INSTRUMENTATION AND CHECK VALVE

TEXT B3.2.1 0 11/19/2002
Title: CORE OPERATING LIMITS BASES CORE OPERATING LIMITS REPORT (COLR)

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.3.1 0 11/19/2002
Title: INSTRUMENTATION BASES RADIATION MONITORING INSTRUMENTATION

TEXT B3.3.2 1 11/09/2007
Title: INSTRUMENTATION BASES SEISMIC MONITORING INSTRUMENTATION

TEXT B3.3.3 3 12/18/2008
Title: INSTRUMENTATION BASES METEOROLOGICAL MONITORING INSTRUMENTATION

TEXT B3.3.4 3 11/09/2007
Title: INSTRUMENTATION BASES TRM POST ACCIDENT MONITORING (PAM) INSTRUMENTATION

TEXT B3.3.5 2 11/09/2007
Title: INSTRUMENTATION BASES THIS PAGE INTENTIONALLY LEFT BLANK

TEXT B3.3.6 3 10/19/2005
Title: INSTRUMENTATION BASES TRM ISOLATION ACTUATION INSTRUMENTATION

TEXT B3.3.7 1 11/09/2007
Title: INSTRUMENTATION BASES MAIN TURBINE OVERSPEED PROTECTION SYSTEM

TEXT B3.3.8 1 10/22/2003
Title: INSTRUMENTATION BASES TRM REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

TEXT B3.3.9 3 04/17/2008
Title: OPRM INSTRUMENTATION

TEXT B3.3.10 1 12/18/2008
Title: INSTRUMENTATION BASES REACTOR RECIRCULATION PUMP MG SET STOPS

TEXT B3.3.11 1 10/22/2003
Title: INSTRUMENTATION BASES MVP ISOLATION INSTRUMENTATION

TEXT B3.3.12 0 04/16/2009
Title: WATER MONITORING INSTRUMENTATION

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.4.1 0 11/19/2002
Title: REACTOR COOLANT SYSTEM BASES REACTOR COOLANT SYSTEM CHEMISTRY

TEXT B3.4.2 1 04/16/2009
Title: REACTOR COOLANT SYSTEM BASES STRUCTURAL INTEGRITY

TEXT B3.4.3 1 11/09/2007
Title: REACTOR COOLANT SYSTEM BASES HIGH/LOW PRESSURE INTERFACE LEAKAGE MONITOR

TEXT B3.4.4 0 11/19/2002
Title: REACTOR COOLANT SYSTEM BASES REACTOR RECIRCULATION FLOW AND ROD LINE LIMIT

TEXT B3.4.5 0 11/19/2002
Title: REACTOR COOLANT SYSTEM BASES REACTOR VESSEL MATERIALS

TEXT B3.5.1 0 11/19/2002
Title: ECCS AND RCIC BASES ADS MANUAL INHIBIT

TEXT B3.5.2 1 11/09/2007
Title: ECCS AND RCIC BASES ECCS AND RCIC SYSTEM MONITORING INSTRUMENTATION

TEXT B3.5.3 1 11/09/2007
Title: ECCS AND RCIC BASES LONG TERM NITROGEN SUPPLY TO ADS

TEXT B3.6.1 0 11/19/2002
Title: CONTAINMENT BASES VENTING OR PURGING

TEXT B3.6.2 0 11/19/2002
Title: CONTAINMENT BASES SUPPRESSION CHAMBER-TO-DRYWELL VACUUM BREAKER POSITION INDICATION

TEXT B3.6.3 2 04/17/2008
Title: CONTAINMENT BASES SUPPRESSION POOL ALARM INSTRUMENTATION
LDCN 3933

TEXT B3.6.4 1 12/14/2004
Title: CONTAINMENT BASES PRIMARY CONTAINMENT CLOSED SYSTEM BOUNDARIES

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.7.1 0 11/19/2002
Title: PLANT SYSTEMS BASES EMERGENCY SERVICE WATER SYSTEM (SHUTDOWN)

TEXT B3.7.2 0 11/19/2002
Title: PLANT SYSTEMS BASES ULTIMATE HEAT SINK (UHS) GROUND WATER LEVEL

TEXT B3.7.3.1 2 01/07/2008
Title: PLANT SYSTEMS BASES FIRE SUPPRESSION WATER SUPPLY SYSTEM

TEXT B3.7.3.2 2 04/26/2006
Title: PLANT SYSTEMS BASES SPRAY AND SPRINKLER SYSTEMS

TEXT B3.7.3.3 0 11/19/2002
Title: PLANT SYSTEMS BASES CO2 SYSTEMS

TEXT B3.7.3.4 1 04/26/2006
Title: PLANT SYSTEMS BASES HALON SYSTEMS

TEXT B3.7.3.5 1 04/26/2006
Title: PLANT SYSTEMS BASES FIRE HOSE STATIONS

TEXT B3.7.3.6 1 04/26/2006
Title: PLANT SYSTEMS BASES YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

TEXT B3.7.3.7 0 11/19/2002
Title: PLANT SYSTEMS BASES FIRE RATED ASSEMBLIES

TEXT B3.7.3.8 1 01/12/2004
Title: PLANT SYSTEMS BASES FIRE DETECTION INSTRUMENTATION

TEXT B3.7.4 0 11/19/2002
Title: PLANT SYSTEMS BASES SOLID RADWASTE SYSTEM

TEXT B3.7.5.1 0 11/19/2002
Title: PLANT SYSTEMS BASES MAIN CONDENSER OFFGAS HYDROGEN MONITOR

TEXT B3.7.5.2 0 11/19/2002
Title: PLANT SYSTEMS BASES MAIN CONDENSER OFFGAS EXPLOSIVE GAS MIXTURE

TEXT B3.7.5.3 0 11/19/2002
Title: PLANT SYSTEMS BASES LIQUID HOLDUP TANKS

TEXT B3.7.6 2 06/27/2008
Title: PLANT SYSTEMS BASES ESSW PUMPHOUSE VENTILATION

TEXT B3.7.7 2 01/31/2008
Title: PLANT SYSTEMS BASES MAIN CONDENSER OFFGAS PRETREATMENT LOGARITHMIC RADIATION MONITORING INSTRUMENTATION

TEXT B3.7.8 3 06/21/2007
Title: PLANT SYSTEMS BASES SNUBBERS

TEXT B3.7.9 1 12/14/2004
Title: PLANT SYSTEMS BASES CONTROL STRUCTURE HVAC

TEXT B3.7.10 1 12/14/2004
Title: PLANT SYSTEMS BASES SPENT FUEL STORAGE POOLS

TEXT B3.7.11 0 04/16/2009
Title: STRUCTURAL INTEGRITY

TEXT B3.8.1 1 02/04/2005
Title: ELECTRICAL POWER BASES PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

TEXT B3.8.2.1 0 11/19/2002
Title: ELECTRICAL POWER BASES MOTOR OPERATED VALVES (MOV) THERMAL OVERLOAD PROTECTION - CONTINUOUS

TEXT B3.8.2.2 1 09/17/2004
Title: ELECTRICAL POWER BASES MOTOR OPERATED VALVES (MOV) THERMAL OVERLOAD PROTECTION - AUTOMATIC

TEXT B3.8.3 0 11/19/2002
Title: ELECTRICAL POWER BASES DIESEL GENERATOR (DG) MAINTENANCE ACTIVITIES

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.8.4 0 11/19/2002
Title: ELECTRICAL POWER BASES 24 VDC ELECTRICAL POWER SUBSYSTEM

TEXT B3.8.5 0 11/19/2002
Title: ELECTRICAL POWER BASES DEGRADED VOLTAGE PROTECTION

TEXT B3.8.6 1 02/04/2005
Title: ELECTRICAL POWER BASES EMERGENCY SWITCHGEAR ROOM COOLING

TEXT B3.8.7 0 12/14/2006
Title: BATTERY MAINTENANCE AND MONITORING PROGRAM

TEXT B3.9.1 0 11/19/2002
Title: REFUELING OPERATIONS BASES DECAY TIME

TEXT B3.9.2 0 11/19/2002
Title: REFUELING OPERATIONS BASES COMMUNICATIONS

TEXT B3.9.3 0 11/19/2002
Title: REFUELING OPERATIONS BASES REFUELING PLATFORM

TEXT B3.10.1 0 11/19/2002
Title: MISCELLANEOUS BASES SEALED SOURCE CONTAMINATION

TEXT B3.10.2 1 03/31/2006
Title: MISCELLANEOUS BASES SHUTDOWN MARGIN TEST RPS INSTRUMENTATION

TEXT B3.10.3 0 11/19/2002
Title: MISCELLANEOUS BASES INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

TEXT B3.10.4 1 04/17/2008
Title: MISCELLANEOUS BASES LEADING EDGE FLOW METER (LEFM)

TEXT B3.11.1.1 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES LIQUID EFFLUENTS CONCENTRATION

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.11.1.2 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES LIQUID EFFLUENTS DOSE

TEXT B3.11.1.3 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES LIQUID WASTE TREATMENT SYSTEM

TEXT B3.11.1.4 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES LIQUID RADWASTE EFFLUENT MONITORING INSTRUMENTATION

TEXT B3.11.1.5 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES RADIOACTIVE LIQUID PROCESS MONITORING INSTRUMENTATION

TEXT B3.11.2.1 1 12/14/2004
Title: RADIOACTIVE EFFLUENTS BASES DOSE RATE

TEXT B3.11.2.2 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES DOSE - NOBLE GASES

TEXT B3.11.2.3 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES DOSE - IODINE, TRITIUM, AND RADIONUCLIDES IN PARTICULATES FORM

TEXT B3.11.2.4 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES GASEOUS RADWASTE TREATMENT SYSTEM

TEXT B3.11.2.5 4 11/14/2006
Title: RADIOACTIVE EFFLUENTS BASES VENTILATION EXHAUST TREATMENT SYSTEM

TEXT B3.11.2.6 1 01/27/2004
Title: RADIOACTIVE EFFLUENTS BASES RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

TEXT B3.11.3 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES TOTAL DOSE

TEXT B3.11.4.1 2 01/06/2006
Title: RADIOACTIVE EFFLUENTS BASES MONITORING PROGRAM

Manual Name: TRM1

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 1

TEXT B3.11.4.2 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES LAND USE CENSUS

TEXT B3.11.4.3 0 11/19/2002
Title: RADIOACTIVE EFFLUENTS BASES INTERLABORATORY COMPARISON PROGRAM

TEXT B3.12.1 1 10/04/2007
Title: LOADS CONTROL PROGRAM BASES CRANE TRAVEL-SPENT FUEL STORAGE POOL

TEXT B3.12.2 0 11/19/2002
Title: LOADS CONTROL PROGRAM BASES HEAVY LOADS REQUIREMENTS

TEXT B3.12.3 0 11/19/2002
Title: LOADS CONTROL PROGRAM BASES LIGHT LOADS REQUIREMENTS

TEXT 4.1 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS ORGANIZATION

TEXT 4.2 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS REPORTABLE EVENT ACTION

TEXT 4.3 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS SAFETY LIMIT VIOLATION

TEXT 4.4 1 12/18/2008
Title: ADMINISTRATIVE CONTROLS PROCEDURES & PROGRAMS

TEXT 4.5 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS REPORTING REQUIREMENTS

TEXT 4.6 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS RADIATION PROTECTION PROGRAM

TEXT 4.7 0 08/31/1998
Title: ADMINISTRATIVE CONTROLS TRAINING

TRM1 text LOES
3/16/09

3.1 Reactivity Control Systems

3.1.3 Control Rod Block Instrumentation

The control rod block instrumentation for each function in Table 3.1.3-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.1.3-1

ACTIONS

---------- NOTE ----------
Separate condition entry is allowed for each channel

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Enter the Condition referenced in Table 3.1.3-1for the channel.	Immediately
B. As required by Required Action A.1 and referenced in Table 3.1.3-1.	B.1 Place at least one inoperable channel in the tripped condition. AND B.2 Place the inoperable channel in the tripped condition.	1 hour from discovery of loss of trip capability 7 days
C. As required by Required Action A.1 and referenced in Table 3.1.3-1.	C.1 Place the inoperable channel in the tripped condition.	12 hours
D. Required Actions and Completion Time of Conditions B or C not met.	D.1 Suspend Control Rod withdrawal.	Immediately

TECHNICAL REQUIREMENT SURVEILLANCE

---------- NOTES ----------

1. Refer to Table 3.1.3-1 to determine which TRSs apply for each Control Rod Block Function.

2. Neutron detectors may be excluded from CHANNEL CALIBRATION.

3. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.

	SURVEILLANCE	FREQUENCY
TRS 3.1.3.1	Perform CHANNEL CHECK	12 hours
TRS 3.1.3.2	---------- NOTE ---------- For Function 1.a, not required to be performed when entering MODE 2 from MODE 1 until 12 hours after entering MODE 2. ---------- Perform CHANNEL FUNCTIONAL TEST	184 days
TRS 3.1.3.3	Perform CHANNEL FUNCTIONAL TEST	7 days
TRS 3.1.3.4	Perform CHANNEL FUNCTIONAL TEST	92 days
TRS 3.1.3.5	Perform CHANNEL CALIBRATION	184 days
TRS 3.1.3.6	---------- NOTE ---------- Neutron detectors are excluded. ---------- Perform CHANNEL CALIBRATION	24 months
TRS 3.1.3.7	Perform LOGIC SYSTEM FUNCTIONAL TEST	24 months

TABLE 3.1.3-1 (Page 1 of 2)
CONTROL ROD BLOCK INSTRUMENTATION

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. APRM					
a. Neutron Flux - High (Setdown)	2, 5[(a)]	3	B	TRS 3.1.3.2 TRS 3.1.3.6	≤ 14% RTP
b. Simulated Thermal Power – High	1	3	B	TRS 3.1.3.2 TRS 3.1.3.6	0.55W + 56.2%[(b)]
c. Downscale	1	3	B	TRS 3.1.3.2 TRS 3.1.3.6	≥ 3% RTP
d. Inop	1, 2	3	B	TRS 3.1.3.2	NA
	5[(a)]	3	B	TRS 3.1.3.2	NA
2. Source Range Monitors					
a. Detector not full in	2[(c)]	3	B	TRS 3.1.3.3 TRS 3.1.3.7	NA
	5[(j)]	2	B	TRS 3.1.3.3 TRS 3.1.3.7	NA
b. Upscale	2[(d)]	3	B	TRS 3.1.3.3 TRS 3.1.3.6 TRS 3.1.3.7	≤ 3.3E5 cps
	5[(j)]	2	B	TRS 3.1.3.3 TRS 3.1.3.6 TRS 3.1.3.7	≤ 3.3E5 cps
c. Inop	2[(d)]	3	B	TRS 3.1.3.3 TRS 3.1.3.7	NA
	5[(j)]	2	B	TRS 3.1.3.3 TRS 3.1.3.7	NA

(continued)

(a) When performing Shutdown Margin Demonstration per Technical Specification 3.10.8.
(b) 0.55 (W-ΔW) + 56.2% when reset for single loop operation per LCO 3.4.1, "Recirculation Loops Operating". For single loop operation, the value of ΔW = 8.7.
(c) When not automatically bypassed with SRM counts ≥ 100 cps or the IRM channels on range 3 or higher.
(d) When not automatically bypassed with IRM channels on range 8 or higher.
(j) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

TABLE 3.1.3-1 (Page 2 of 2)
CONTROL ROD BLOCK INSTRUMENTATION

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
d. Downscale	2[e]	3	B	TRS 3.1.3.3 TRS 3.1.3.6 TRS 3.1.3.7	≥ 1.8 cps[f]
	5[i] [j]	2	B	TRS 3.1.3.3 TRS 3.1.3.6 TRS 3.1.3.7	≥ 1.8 cps[f]
3. Intermediate Range Monitors					
a. Detector not full in	2, 5[j]	6	B	TRS 3.1.3.3 TRS 3.1.3.7	NA
b. Neutron Flux - High	2, 5[j]	6	B	TRS 3.1.3.1 TRS 3.1.3.3 TRS 3.1.3.5 TRS 3.1.3.7	≤ 110/125 divisions of full scale
c. Inop	2, 5[j]	6	B	TRS 3.1.3.3 TRS 3.1.3.7	NA
d. Downscale	2[g] 5[j]	6	B	TRS 3.1.3.1 TRS 3.1.3.3 TRS 3.1.3.5 TRS 3.1.3.7	3/125 divisions of full scale
4. Scram Discharge Volume Water Level - High	1, 2, 5[h]	2	C	TRS 3.1.3.4 TRS 3.1.3.6	≤ 36.5 gallons
5. Reactor Coolant System Recirculation Flow					
a. Upscale	1	3	C	TRS 3.1.3.2 TRS 3.1.3.6	≤ 117/125 divisions of full scale

(e) When not automatically bypassed with IRMs on range 3 or higher.
(f) With a signal-to-noise ratio ≥ 2, or within the limits of TS Figure 3.3.1.2-1.
(g) When not automatically bypassed with IRM channels on range 1.
(h) When more than one control rod is withdrawn. Not applicable to control rods removed per Technical Specification 3.10.5 or 3.10.6.
(i) Not required when eight or fewer fuel assemblies (adjacent to the SRMs) are in the core.
(j) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

3.3 Instrumentation

3.3.12 Water Monitoring Instrumentation

TRO 3.3.12 The water monitoring instrumentation channels shown in Table 3.3.12-1 shall be OPERABLE.

APPLICABILITY: Whenever flow is established

ACTIONS

---------- NOTES ----------
1. Separate condition entry is allowed for each function.
2. The provisions of TRO 3.0.4 are not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more water monitoring Instrument(s) inoperable.	A.1 Notify the Susquehanna River Basin Commission AND	5 days
	A.2 Restore water monitoring instrumentation to OPERABLE status.	30 days

TECHNICAL REQUIREMENT SURVEILLANCE

---------- NOTES ----------
1. The following surveillance requirements apply to all instruments listed in Table 3.3.12-1.
2. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated conditions and required actions may be delayed for up to 6 hours.

SURVEILLANCE		FREQUENCY
TRS 3.3.12.1	Perform CHANNEL CHECK	24 hours
TRS 3.3.12.2	Perform CHANNEL CALIBRATION	60 months

TABLE 3.3.12-1
WATER MONITORING INSTRUMENTATION

FUNCTION	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS
1. Well Water Flow	1	TRS 3.3.12.1 TRS 3.3.12.2
2. Unit 1 Cooling Tower Blowdown Flow	1	TRS 3.3.12.1 TRS 3.3.12.2

3.4 Reactor Coolant System

3.4.2 Section Not Used

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3.7 Plant Systems

3.7.11 Structural Integrity

TRO 3.7.11 ASME Code Class 1, 2, and 3 pressure retaining components and structural support components shall maintain structural integrity.

APPLICABILITY: MODES 1, 2, 3, 4, and 5

ACTIONS

---------- NOTE ----------
Separate condition entry is allowed for each pressure retaining component and structural support component.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ----------NOTE---------- Required Action A.1 shall be completed if this Condition is entered ---------- Unevaluated indication or failed inspection is found in ASME Code Class 1, 2, or 3 pressure retaining component(s) or structural support component(s)	A.1 Evaluate the impact of the indication or failed inspection on OPERABILITY and structural integrity of associated systems, structures, or components	72 hours
B. Required Action and associated Completion Time of Condition A not met	B.1 Declare the associated systems, structures or components inoperable	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Structural integrity (including through-wall flaws) of any ASME Code Class 1 component(s) not maintained	C.1 Initiate actions to isolate the affected component(s) AND C.2 Declare the affected component(s) inoperable	Immediately Immediately
D. Structural integrity (including through-wall flaws) of any ASME Code Class 2 or Class 3 component(s) not maintained	D.1 Perform an immediate determination of operability AND D.2 Perform a prompt determination of operability (engineering evaluation) if required	Immediately 24 hours
E. Structural integrity of any ASME Code Class 1, 2, or 3 structural support component(s) not maintained	E.1 Perform an immediate determination of operability AND E.2 Perform a prompt determination of operability (engineering evaluation) if required	Immediately 24 hours
F. The pressure retaining component(s) are not OPERABLE	F.1 Declare the associated systems, structures or components inoperable	Immediately

(continued)

TECHNICAL REQUIREMENT SURVEILLANCE

SURVEILLANCE		FREQUENCY
TRS 3.7.11.1	Perform inservice inspection of ASME Section XI Code Class 1, 2, and 3 Components	In accordance with Inservice Inspection Program

3.7.3 Fire Protection

3.7.3.1 Fire Suppression Water Supply System

TRO 3.7.3.1 Two Fire Suppression Water Supply Subsystems shall be OPERABLE

APPLICABILITY: At all times

ACTIONS

---------- NOTE ----------
1. The provisions of TRO 3.0.4 are not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One fire suppression water supply subsystem inoperable	A.1 Restore the inoperable fire suppression water supply subsystem to OPERABLE status OR A.2 Establish an alternate fire suppression water supply subsystem.	7 days 7 days
B. Both fire suppression water supply subsystems inoperable	B.1 Establish an alternate fire suppression water supply subsystem AND B.2 Restore an inoperable fire suppression water supply subsystem to OPERABLE status	24 hours 7 days

TECHNICAL REQUIREMENT SURVEILLANCE

---NOTE---
When a system is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and required Actions may be delayed up to 1 hour.

SURVEILLANCE		FREQUENCY
TRS 3.7.3.1.1	Verify the minimum contained fire suppression water supply volume.	7 days
TRS 3.7.3.1.2	Verify that the overall diesel driven fire pump diesel engine starting 24 volt battery bank and charger battery voltage is greater than or equal to 24 volts	31 days
TRS 3.7.3.1.3	Verify that the diesel driven fire pump diesel engine starting 24 volt battery bank pilot cell specific gravity, corrected to 77°F, is greater than or equal to 1.200	31 days
TRS 3.7.3.1.4	Verify that the diesel driven fire pump diesel engine starting 24 volt battery bank electrolyte level of each pilot cell is above the plates	31 days
TRS 3.7.3.1.5	Start the electric motor driven fire pump and operate it for at least 15 minutes on recirculation flow.	31 days
TRS 3.7.3.1.6	Verify that each manual, power operated or automatic valve, in the fire suppression water supply system flow path is in its correct position.	92 days
TRS 3.7.3.1.7	Verify the diesel driven fire pump fuel storage tank contains at least 250 gallons of fuel	31 days
TRS 3.7.3.1.8	Start the diesel driven fire pump from ambient conditions and operate for greater than or equal to 30 minutes on recirculation flow.	31 days

(continued)

TECHNICAL REQUIREMENT SURVEILLANCE (continued)

SURVEILLANCE		FREQUENCY
TRS 3.7.3.1.9	Verify that a sample of the diesel driven fire pump diesel fuel from the fuel storage tank is within the acceptable limits when checked for viscosity, water and sediment.	92 days
TRS 3.7.3.1.10	Verify that the diesel driven fire pump diesel engine 24-volt battery bank specific gravity is appropriate for continued service of the battery.	92 days
TRS 3.7.3.1.11	Cycle each fire suppression water supply system testable valve in the flow path through at least one complete cycle of full travel.	12 months
TRS 3.7.3.1.12	Perform a system flush of the fire suppression water supply system.	12 months
TRS 3.7.3.1.13	Perform a system functional test of the fire suppression water supply system.	18 months
TRS 3.7.3.1.14	This TRS is not used.	
TRS 3.7.3.1.15	Verify that each fire pump develops at least 2500 gpm at a system head of 125 psig.	18 months
TRS 3.7.3.1.16	Verify that the diesel driven fire pump diesel engine 24 volt battery bank cell and battery racks show no visual indication of physical damage or abnormal deterioration	18 months
TRS 3.7.3.1.17	Verify that each fire pump starts sequentially to maintain the fire suppression water supply system pressure greater than or equal to 85 psig.	18 months

(continued)

TECHNICAL REQUIREMENT SURVEILLANCE (continued)

SURVEILLANCE		FREQUENCY
TRS 3.7.3.1.18	Verify that the diesel driven fire pump diesel engine starting 24-volt battery bank Terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.	18 months
TRS 3.7.3.1.19	Perform diesel driven fire pump diesel engine inspection.	18 months
TRS 3.7.3.1.20	Perform a fire suppression water supply system flow test.	3 years

3.7.3 Fire Protection

3.7.3.2 Spray and Sprinkler Systems

TRO 3.7.3.2 The spray and sprinkler systems shown in Table 3.7.3.2-1 shall be OPERABLE.

APPLICABILITY Whenever equipment protected by the spray and/or sprinkler system is required to be OPERABLE.

ACTIONS

---------- NOTE ----------
1. Separate condition entry is allowed for each system.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the required spray and/or sprinkler systems inoperable	A.1 Enter the Condition referenced in Table 3.7.3.2-1 for the sprinkler systems	Immediately
B. As required by Required Action A.1 and referenced in Table 3.7.3.2-1	B.1 Establish a continuous fire watch with backup fire suppression equipment for the affected area	1 hour
C. As required by Required Action A.1 and referenced in Table 3.7.3.2-1	C.1 Established an hourly fire watch patrol for the affected area	1 hour

TECHNICAL REQUIREMENT SURVEILLANCE

---------- NOTE ----------
When a system is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and required Actions may be delayed up to 1 hour.

SURVEILLANCE		FREQUENCY
TRS 3.7.3.2.1	Verify that each required spray and sprinkler system, manual, power operated or automatic valve, in the flow path is in its correct position.	92 days
TRS 3.7.3.2.2	Cycle each required spray and sprinkler system testable valve in the flow path through at least one complete cycle of full travel.	12 months
TRS 3.7.3.2.3	Perform system functional test of the required spray and sprinkler systems for automatic systems.*	18 months
TRS 3.7.3.2.4	Perform a visual inspection of the dry pipe spray and sprinkler headers for the required spray and sprinkler systems.	18 months (3 years for Table 3.7.3.2-1 systems that are enclosed within charcoal filter systems)
TRS 3.7.3.2.5	Perform a visual inspection of each deluge nozzle's spray area for each of the required spray and sprinkler systems.	18 months (3 years for Table 3.7.3.2-1 systems that are enclosed within charcoal filter systems)
TRS 3.7.3.2.6	Perform an air or water flow test through each open head spray and sprinkler header for each of the required spray and sprinkler systems.	3 years

*System functional tests are not applicable to manual systems.

Table 3.7.3.2-1 (Page 1 of 2)
Spray and Sprinkler Systems

SYSTEM	DESCRIPTION	FIRE ZONE	ELEVATION	CONDITION REFERENCED FROM REQUIRED ACTION A.1
DPS-122	Railroad Airlock/Access Area	1-2C	670'-0"	C
DS-014	Transformer 0X103 (T-10)	0-00	676'-6"	C
DS-015	Transformer 0X104 (T-20)	0-00	676'-6"	C
DS-016	Transformer 0X201, 0X213	0-00	676'-6"	C
DS-017	Transformer 0X203, 0X211	0-00	676'-6"	C
DS-021*+	Charcoal Filter 0F135	0-22A	687'-8"	C
DS-022*+	Charcoal Filter 0F138	0-22A	687'-8"	C
DS-023*+	Charcoal Filter 0F141	0-22A	687'-8"	C
DS-024*+	Charcoal Filter 0F144	0-22A	687'-8"	C
DS-091+	CREOAS Charcoal Filter 0F125A	0-30A	806'-0"	C
DS-092+	CREOAS Charcoal Filter 0F125B	0-30A	806'-0"	C
DS-093+	SGTS Charcoal Filter 0F169A	0-30A	806'-0"	C
DS-094+	SGTS Charcoal Filter 0F169B	0-30A	806'-0"	C
DS-115	HPCI Pump Room	1-1C	645'-0"	C
DS-116	RCIC Pump Room	1-1D	645'-0"	C
DS-181*+	Charcoal Filter 1F257A	1-7A	799'-1"	C
DS-182*+	Charcoal Filter 1F257B	1-7A	799'-1"	C
DS-183*+	Charcoal Filter 1F217A	1-7A	799'-1"	C
DS-184*+	Charcoal Filter 1F217B	1-7A	799'-1"	C
PA-011	Diesel Generator "A" Bay	0-41A	660'-0", 677'-0"	B
PA-012	Diesel Generator "C" Bay	0-41C	660'-0", 677'-0"	C
PA-013	Diesel Generator "B" Bay	0-41B	660'-0", 677'-0"	C
PA-014	Diesel Generator "D" Bay	0-41D	660'-0", 677'-0"	C
PA-015	Diesel Generator "E" Bldg	0-41E	656'-6", 675'-6", 708'-0"	C
PA-091	H&V Equipment Room	0-29B	783'-0"	B
PA-092	SGTS & Exhaust Fan Area	0-30A	806'-0"	B
PA-093	Technical Support Center	0-26K, 0-26L	741'-1"	C

*Manual deluge systems.
+Systems enclosed within charcoal filter systems.

(continued)

Table 3.7.3.2-1 (Page 2 of 2)
Spray and Sprinkler Systems

SYSTEM	DESCRIPTION	FIRE ZONE	ELEVATION	CONDITION REFERENCED FROM REQUIRED ACTION A.1
PA-124	Core Spray Access Area	1-2B	670'-0"	B
PA-131	Equipment Removal Areas	1-3A, 1-3B-N, W, S	683'-0"	B
PA-142	Unit 1 Lower Cable Spreading	0-25E	714'-0"	B
PA-143	General Access Areas	1-4A-N, W, S	719'-1"	B
PA-151	Chillers, SLC, Fuel Pool, Wraparound Area & Over Top of Load Center & Heat Exchanger Rooms	1-5A-S, 1-5A-W	749'-1"	B
PA-161	Unit 1 Upper Cable Spreading Rm	0-27C, 0-27D	753'-0"	B
WPS-023	Chem Lab, Offices & Locker Rm	0-22A	676'-0"	C

3.7.3 Fire Protection

3.7.3.3 CO_2 Systems

TRO 3.7.3.3 The low pressure CO_2 systems shown in Table 3.7.3.3-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the CO_2 systems is required to be OPERABLE.

ACTIONS

---------- NOTE ----------
1. Separate condition entry is allowed for each system.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the required CO_2 systems inoperable	A.1 Enter the Condition referenced in Table 3.7.3.3-1 for the CO_2 systems	Immediately
B. As required by Required Action A.1 and referenced in Table 3.7.3.3-1	B.1 Establish a continuous fire watch with backup fire suppression equipment for the affected area	1 hour
C. As required by Required Action A.1 and referenced in Table 3.7.3.3-1	C.1 Establish an hourly fire watch patrol for the affected area	1 hour

TECHNICAL REQUIREMENT SURVEILLANCE

SURVEILLANCE		FREQUENCY
TRS 3.7.3.3.1	Verify the CO_2 storage tank level to be greater than 25% and pressure to be greater than 270 psig.	7 days
TRS 3.7.3.3.2	Verify that each manual, power operated, or automatic valve, in the flow path is in its correct position for each of the required low pressure CO_2 systems.	92 days
TRS 3.7.3.3.3	Verify the system valves and associated ventilation dampers actuate manually and automatically for each of the required low pressure CO_2 systems.	18 months
TRS 3.7.3.3.4	Verify the flow from each accessible nozzle by performance of a "Puff Test" for each of the required low pressure CO_2 systems.	18 months

Table 3.7.3.3-1 (Page 1 of 2)
Low Pressure CO_2 Systems

SYS. #	DESCRIPTION	FIRE ZONE	CONDITION REFERENCED FROM REQUIRED ACTION A.1
1.07	Unit 1 Control Room Underfloor	0-26F, 0-26G, 0-26H	B
1.08	Unit 2 Control Room Underfloor	0-26H, 0-26I, 0-26J	B
1.09	Unit 1 UPS Room & Underfloor	0-24C	C
1.11	Computer Room & above ceiling	0-24E	C
1.13	Unit 1 Lower Relay Room	0-24D	B
1.18	TSC Room C-411/413 Soffit	0-26M	B
1.19	Unit 1 Control Room Soffit	0-26N	B
1.20	Unit 2 Control Room Soffit	0-26P	B
1.21	North Cable Chase (698'-783')	0-24M, 0-25D, 0-26V, 0-27H, 0-28R	B
1.22	Center Cable Chase (698'-783')	0-24L, 0-25C, 0-26T, 0-27G, 0-28Q	B
1.23	South Cable Chase (698'-783')	0-24J, 0-25B, 0-26S, 0-27F, 0-28P	B
1.24	North Cable Chase (729')	0-26D	B
1.25	Center Cable Chase (729')	0-26C	B
1.26	South Cable Chase (729')	0-26B	B
1.27	Unit 1 Upper Relay Room	0-27E	B

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3.7.3 Fire Protection

3.7.3.4 Halon Systems

TRO 3.7.3.4 The Halon systems in the following panel PGCC modules shall be OPERABLE.

System Number	Fire Zone	Location
1U700	0-27E	Unit 1 Upper Relay Room
1U701	0-27E	Unit 1 Upper Relay Room
1U702	0-27E	Unit 1 Upper Relay Room
1U703	0-27E	Unit 1 Upper Relay Room
1U730	0-27E	Unit 1 Upper Relay Room
1U704	0-24D	Unit 1 Lower Relay Room
1U705	0-24D	Unit 1 Lower Relay Room
1U706	0-24D	Unit 1 Lower Relay Room
1U731	0-24D	Unit 1 Lower Relay Room
1U732	0-24D	Unit 1 Lower Relay Room

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be OPERABLE.

ACTIONS

---------- NOTE ----------
Separate condition entry is allowed for each system.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the required Halon systems inoperable.	A.1 Establish a continuous fire watch with backup fire suppression equipment for the affected area.	1 hour

TECHNICAL REQUIREMENT SURVEILLANCE

---------- NOTE ----------
When a system is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and required Actions may be delayed up to 1 hour.

SURVEILLANCE		FREQUENCY
TRS 3.7.3.4.1	Verify Halon storage tank weight and pressure for each of the required Halon systems.	12 months
TRS 3.7.3.4.2	Perform a functional test of the general alarm circuit and associated alarm and interlock devices for each of the required Halon systems.	18 months
TRS 3.7.3.4.3	Perform a flow test through accessible headers and nozzles for each of the required Halon systems.	3 years

3.7.3 Fire Protection

3.7.3.5 Fire Hose Stations

TRO 3.7.3.5 The fire hose stations shown in Table 3.7.3.5-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTIONS

---------- NOTE----------
Separate Condition entry is allowed for each fire hose station.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more fire hose stations inoperable.	A.1 Enter the Condition referenced in Table 3.7.3.5-1 for the hose station.	Immediately
B. As required by Required Action A.1 and referenced in Table 3.7.3.5-1.	B.1 Route an additional fire hose of equal or greater diameter to the unprotected area(s) from an OPERABLE hose station.	1 hour
C. As required by Required Action A.1 and referenced in Table 3.7.3.5-1.	C.1 Route an additional fire hose of equal or greater diameter to the unprotected area(s) from an OPERABLE hose station.	24 hours

TECHNICAL REQUIREMENT SURVEILLANCE

---------- NOTE ----------
When a system is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and required Actions may be delayed up to 1 hour.

SURVEILLANCE		FREQUENCY
TRS 3.7.3.5.1	Perform a visual inspection of the fire hose stations accessible during plant operation for each of the required fire hose stations shown in Table 3.7.3.5-1.	92 days
TRS 3.7.3.5.2	Inspect all gaskets and replace any degraded gaskets in the couplings for each of the required fire hose station shown in Table 3.7.3.5-1.	3 years
TRS 3.7.3.5.3	Remove the hose for inspection and re-rack for each required fire hose station shown in Table 3.7.3.5-1.	3 years
TRS 3.7.3.5.4	Conduct a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater, for each required fire hose station shown in Table 3.7.3.5-1.	3 years
TRS 3.7.3.5.5	Partially open each fire hose valve for each required fire hose station shown in Table 3.7.3.5-1.	3 years

Table 3.7.3.5-1 (Page 1 of 2)
Fire Hose Stations

Station	Fire Zone	Elev.	Column Lines	CONDITION REFERENCED FROM REQUIRED ACTION A.1
a. Control Structure				
1HR-156	0-21A	656	M-26.5	B
2HR-156	0-21A	656	M-31.8	B
1HR-191	0-22B	676	L-26	B
2HR-181	0-22A	676	L-31	C
1HR-181	0-22B	687	L-26	B
1HR-171	0-22B	698	L-26	C
2HR-171	0-21B	698	L-31	C
1HR-162	0-22B	714	L-26	C
2HR-162	0-21B	714	L-31	C
1HR-158	0-22B	729	L-25.9	C
2HR-158	0-21B	729	L-31	C
1HR-146	0-22B	741	L-26	C
2HR-147	0-21B	741	L-31	C
1HR-136	0-22B	754	L-26	C
2HR-136	0-21B	754	L-31	C
1HR-125	0-22B	771	L-26	B
2HR-125	0-21B	771	L-31	B
1HR-101	1-36B	783	L/M-25.9	C
2HR-113	0-21B	783	L-31	C
2HR-102	0-21B	806	L-31	C
b. Reactor Building				
1HR-271	1-1G	645	R-29	B
1HR-272	1-1I	645	P-21	B
1HR-273	1-1J	645	U-21.5	B
1HR-261	1-2A	670	Q-27.5	B
1HR-262	1-2B	670	Q-21	C
1HR-263	1-2B	670	T-22	C
1HR-251	1-3A	683	Q-27.5	C
1HR-252	1-3B-N	683	Q-21	B
1HR-253	1-3B-N	683	T-22	C
1HR-241	1-4A-S	719	Q-27.5	C
1HR-242	1-4A-S	719	S-27.5	C
1HR-243	1-4A-N	719	Q-21	B
1HR-244	1-4A-N	719	T-20.6	C
1HR-245	1-4A-N	719	S-22.7	C
1HR-231	1-5A-S	749	S-27.2	C
1HR-232	1-5A-N	749	Q-21	B
1HR-233	1-5A-N	749	T-21	B
1HR-221	1-6A	779	Q-25.7	B

(continued)

Table 3.7.3.5-1 (Page 2 of 2)
Fire Hose Stations

Station	Fire Zone	Elev.	Column Lines	CONDITION REFERENCED FROM REQUIRED ACTION A.1
1HR-222	1-6D	779	S-26.5	B
1HR-223	1-6A	779	Q-22	B
1HR-224	1-6C	779	T/U-21	B
1HR-211	1-7A	799	T-23.5	B
1HR-201	0-8A	818	P-26	B
1HR-202	0-8A	818	U-26.5	B
1HR-203	0-8A	818	Q-21	B
c. Diesel Generator "E" Building				
0HR-811	0-41E	656	Near N. Stairwell	C
0HR-812	0-41E	656	Near S. Stairwell	C
0HR-821	0-41E	676	Near N. Stairwell	C
0HR-822	0-41E	676	Near S. Stairwell	C
0HR-831	0-41E	708	Near N. Stairwell	C
0HR-832	0-41E	708	Near S. Stairwell	C

3.7.3 Fire Protection

3.7.3.6 Yard Fire Hydrants and Hydrant Hose Houses

TRO 3.7.3.6 Yard fire hydrants 1FH122 (ESSWPH) and 1FH104 (D/G Bldg.) and associated hydrant hose houses shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the yard fire hydrants is required to be OPERABLE.

ACTIONS

---------- NOTE ----------
Separate condition entry is allowed for each hydrant.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Yard fire hydrants 1FH122 and/or 1FH104 and/or associated hydrant hose houses inoperable	A.1 Route sufficient additional lengths of fire hose of equal or greater diameter located in adjacent OPERABLE hydrant hose house(s) to provide service to the unprotected area(s).	1 hour

TECHNICAL REQUIREMENT SURVEILLANCE

NOTE

When a system is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and required Actions may be delayed up to 1 hour.

SURVEILLANCE		FREQUENCY
TRS 3.7.3.6.1	Perform visual inspections of the hydrant hose houses for fire hydrants 1FH122 and 1FH104.	92 days
TRS 3.7.3.6.2	Perform visual inspection of the yard fire hydrants and verify that the hydrant barrels are dry and that the hydrants are not damaged for fire hydrants 1FH122 and 1FH104.	6 months, during March, April or May and during September, October or November
TRS 3.7.3.6.3	Conduct hose hydrostatic tests at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater for fire hose at yard fire hydrants 1FH122 and 1FH104 and associated hydrant hose houses.	12 months
TRS 3.7.3.6.4	Inspect and replace as required all degraded gaskets in fire hose couplings at yard fire hydrants 1FH122 and 1FH104 and associated hydrant hose houses.	12 months
TRS 3.7.3.6.5	Perform a flow check of each hydrant for yard fire hydrants 1FH122 and 1FH104.	12 months

B 3.3.12 Water Monitoring Instrumentation

BASES

TRO

The OPERABILITY of the water monitoring instrumentation ensures that sufficient water flow data is available for determining daily consumptive water use, daily surface water withdrawal and daily groundwater withdrawal. This capability is required to provide required quarterly reports to the Susquehanna River Basin Commission (SRBC). This instrumentation is consistent with the Modified Interim Water Monitoring Plan approved by the SRBC (Reference 1).

ACTIONS

The Actions are defined to ensure proper corrective measures are taken in response to the inoperable instruments and to notify the Susquehanna River Basin Commission as required by Reference 2. Reporting requirements are delineated in NDAP-QA-0720, Station Report Matrix and Reportability Evaluation Guidance (Reference 3).

TRS

The Technical Requirement Surveillances (TRS) are modified by two Notes.

Note 1 states that the TRSs for each Water Monitoring Instrumentation Function are applicable as listed in the SR column of Table 3.3.12-1.

Note 2 modifies the Surveillances to indicate that when a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours. Upon completion of the activity, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken.

The TRSs are defined to be performed at the specified Frequency to ensure that the Water Monitoring Function is maintained OPERABLE.

TRS 3.3.12.1

Performance of the CHANNEL CHECK ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel against a similar

(continued)

B 3.3.12 Water Monitoring Instrumentation

BASES

TRS

TRS 3.3.12.1 (continued)

parameter on other channels, but in this case there are no other instruments monitoring these flows. The CHANNEL CHECK will consist of a determination that the channel indication reading is consistent with current plant operation/system trends. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrument continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria which are determined by the plant staff based on an investigation of a combination of the channel instrument uncertainties may be used to support this parameter comparison and include indication and readability. If a channel is outside the criteria, it may be an indication that the instrument has drifted outside its limit and does not necessarily indicate the channel is inoperable.

TRS 3.3.12.2

The CHANNEL CALIBRATION frequency is chosen in accordance with 18 CFR 806.30 (Reference 2). An accuracy of within 5% of actual flow is also required by Reference 2.

REFERENCES

1. Susquehanna River Basin Commission letter from Eric R. Roof, Director – Compliance Program to C. J. Gannon dated November 13, 2007, Re: Modified Interim Water Monitoring Plan, PPL Susquehanna, LLC – Susquehanna Steam Electric Station, Salem Township, Luzerne County, Pennsylvania, Commission Docket No. 19950301-1.

2. 18 CFR 806.30, Susquehanna River Basin Commission, Review and Approval of Projects - Monitoring.

3. NDAP-QA-0720, Station Report Matrix and Reportability Evaluation Guidance.

B 3.4.2 Section Not Used

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B 3.7.11 Structural Integrity

BASES

TRO

The inspection programs for ASME Code Class 1, 2, and 3 components ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant. This requirement identifies appropriate actions to be taken upon discovery of indications or flaws in components that affect the structural integrity in piping and components.

This requirement applies to all ASME Code Class 1, 2, and 3 piping and components.

In addition to these piping and components, structural support components such as pipe hangers, vendor catalog items, supplementary steel, base plates, welds, bolts, etc are considered part of the scope of this TRO.

Snubbers are not considered part of the scope of this TRO. They are part of the scope of TRO 3.7.8.

The inservice inspection program for ASME Code Class 1, 2 and 3 components will be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10CFR Part 50.55a(g) except where specific written relief has been granted by the NRC pursuant to 10 CFR Part 50.55a(g)(6)(i). (Reference 1)

ACTIONS

The Actions are defined to ensure proper corrective measures are taken in response to the inoperable components.

A.1

Upon finding an "indication," ISI personnel will conduct further investigation. During the time frame of these investigations, no Condition Reports (CR) are generated and no Technical Requirement is considered not met.

At such time as the above examinations indicate that an "unevaluated indication" exists (i.e., an indication which fails to meet the acceptance criteria of the ASME or applicable code, the requirements of an endorsed ASME Code Case, or an NRC approved alternative), a CR will be written and forwarded for review. In addition, this TRO will be declared "not met" and Condition A will be entered. As stated in a Note for Condition A, an evaluation of all "unevaluated indications" must be completed. If the "indication" is found to impact the structural integrity or OPERABILITY of the component, system, or structure, the appropriate TRO Condition shall be

(continued)

B 3.7.11 Structural Integrity

BASES

ACTIONS A.1 (continued)

entered. If the evaluation determines that the flaw does not impact the component, systems, or structure OPERABILITY or structural integrity, the "indication" becomes an "evaluated indication" and the TRO is considered met and the Actions Table is exited. The 72 hour Completion Time provides a reasonable amount of time to perform the necessary evaluations.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 50.55a(g), structural integrity must be maintained in conformance with American Society of Mechanical Engineers (ASME) Code Section XI for those parts of a system that are subject to ASME Code requirements. 10 CFR 50.55a(g)(4) requires, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI..."

ASME Section XI, Article IWA 3000 contains weld examination flaw acceptance standards. If flaws are found in components for which ASME Section XI has no acceptance standards, then the construction code is to be used to establish the acceptance standards. This is supported by Sub-article IWA-3100(b) which states "if acceptance standards for a particular component, Examination Category, or examination method are not specified in this Division [Division 1] then flaws that exceed the acceptance standards for materials and welds specified in the Section III Edition applicable to construction of the component shall be evaluated to determine disposition."

The ASME Code contains requirements describing acceptable means of performing preservice and inservice inspection of welds and certain other locations in piping, vessels, and other pressure boundary components. For preservice and inservice inspections, the ASME Code also specifies acceptable flaw sizes based on material type, location, and service of the system within which the flaw is discovered. If the flaw exceeds these specified acceptance flaw sizes, the ASME Code describes an alternate method by which a calculation may be performed to evaluate the acceptability of the flaw. While ASME Section XI does not specifically provide flaw acceptance standards for components other than those specified in Table IWX-2500-1, its methods and standards may be applied to other components when appropriate.

(continued)

B 3.7.11 Structural Integrity

BASES

ACTIONS A.1 (continued)

The table below summarizes the NRC accepted methods available for evaluating structural integrity of flaws in components (including supports) classified as ASME Code Class 1, Class 2, and Class 3 components.

Pipe Class/Energy	ASME Code Section XI/ Construction Code	NRC Approved Alternative e.g. RG approved Code Case	Code Case N-513 (1)	GL 90-05
Class 1/HE(2)	X	X		
Class 2/HE	X	X		
Class 2/ME(3)	X	X	X	
Class 3/HE	X	X		X
Class 3/ME	X	X	X	X

(1) Refer to RG 1.147 for the latest revision acceptable to the NRC, and any conditions placed upon the code case.

(2) HE – High Energy – Maximum operating temperature greater than 200° F or maximum operating pressure greater than 275 psig.

(3) ME – Moderate Energy – Maximum operating temperature equal to or less than 200° F or maximum operating pressure equal to or less than 275 psig.

B.1

If the evaluation of operability can not be completed within the required Completion Time, the component shall be declared inoperable and the appropriate LCOs and TROs entered.

(continued)

B 3.7.11 Structural Integrity

BASES

ACTIONS (continued)

C.1

When ASME Class 1 components do not meet ASME Code or construction code acceptance standards, the requirements of an NRC endorsed ASME Code Case, or an NRC approved alternative, then an immediate operability determination cannot conclude a reasonable expectation of operability exists and the components are inoperable. Satisfaction of Code acceptance standards is the minimum necessary for operability of Class 1 pressure boundary components because of the importance of the safety function being performed.

TS LCO 3.4.4, RCS Operational Leakage, does not permit any reactor coolant pressure boundary leakage. Upon discovery of leakage from a Class 1 pressure boundary component (pipe wall, valve body, pump casing, etc.) the component must be declared inoperable.

D.1 and D.2

When ASME Class 2 or Class 3 components do not meet ASME Code or construction code acceptance standards, the requirements of an NRC endorsed ASME Code Case, or an NRC approved alternative, then a determination of whether the degraded or nonconforming condition results in a TS/TRM-required SSC or a TS/TRM-required support SCC being inoperable must be made. In order to determine the component is OPERABLE under an immediate operability determination, the degradation mechanism must be readily apparent. To be readily apparent, the degradation mechanism must be discernable from visual examination (such as external corrosion or wear), or there must be substantial operating experience with the identified degradation mechanism in the affected system. In addition, detailed non-destructive examination data may be necessary to determine that a component is OPERABLE under an immediate operability determination. If detailed non-destructive examination is necessary and the examination cannot be completed within 24 hours, the component should be declared inoperable and the appropriate TS/TRM action statement entered. There is no indeterminate state of operability.

The time frame for flaw characterization and engineering analysis should be no longer than a reasonable time frame for completing the actions. NRC views that 24 hours is a reasonable maximum time frame for this assessment.

(continued)

B 3.7.11 Structural Integrity

BASES

ACTIONS (continued)

E.1

Structural support components are required to be OPERABLE by the TS or TRM, or they are related support functions for SCCs in the TS or TRM. Examples of structural degradation are concrete cracking and spalling, excessive deflection or deformation, water leakage, rebar corrosion, missing or bent anchor bolts, and degradation of door and penetration sealing. If the support structure is degraded, the support structure's capability of performing its specified function shall be assessed. As long as the identified degradation does not result in exceeding acceptance limits specified in applicable design codes and standards referenced in the design basis documents, the affected structure is either operable or functional.

F.1

Once a component is evaluated for structural integrity using criteria acceptable to the NRC staff and determined to be unacceptable, the component has to be declared inoperable and the TRO or LCO action statements for the applicable system must be followed.

TRS

The TRSs are defined to be performed at the specified Frequency to ensure that the Structural Integrity requirements are maintained.

The Frequency for the TRS is defined by the Inservice Inspection (ISI) Program.

REFERENCES

1. 10 CFR Part 50.

2. Regulatory Issue Summary 2005-20, Rev. 1, "Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, 'Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability.'"