

MANUAL HARD COPY DISTRIBUTION
DOCUMENT TRANSMITTAL 2016-35205

USER INFORMATION:

GERLACH*ROSEY M EMPL#: 028401 CA#: 0363
Address: NUCSA2
Phone#: 542-3194

TRANSMITTAL INFORMATION:

TO: GERLACH*ROSEY M 10/18/2016

LOCATION: USNRC

FROM: NUCLEAR RECORDS DOCUMENT CONTROL CENTER (NUCSA-2)

THE FOLLOWING CHANGES HAVE OCCURRED TO THE HARDCOPY OR ELECTRONIC MANUAL ASSIGNED TO YOU. HARDCOPY USERS MUST ENSURE THE DOCUMENTS PROVIDED MATCH THE INFORMATION ON THIS TRANSMITTAL. WHEN REPLACING THIS MATERIAL IN YOUR HARDCOPY MANUAL, ENSURE THE UPDATE DOCUMENT ID IS THE SAME DOCUMENT ID YOU'RE REMOVING FROM YOUR MANUAL. TOOLS FROM THE HUMAN PERFORMANCE TOOL BAG SHOULD BE UTILIZED TO ELIMINATE THE CHANCE OF ERRORS.

ATTENTION: "REPLACE" directions do not affect the Table of Contents, Therefore no TOC will be issued with the updated material.

TRM2 - TECHNICAL REQUIREMENTS MANUAL UNIT 2

REMOVE MANUAL TABLE OF CONTENTS DATE: 09/12/2016

ADD MANUAL TABLE OF CONTENTS DATE: 10/17/2016

CATEGORY: DOCUMENTS TYPE: TRM2

ADD!
NRR

ID: TEXT 3.11.2.6

ADD: REV: 7

REMOVE: REV:6

CATEGORY: DOCUMENTS TYPE: TRM2

ID: TEXT 3.3.4

REMOVE: REV:9

ADD: REV: 10

CATEGORY: DOCUMENTS TYPE: TRM2

ID: TEXT B3.3.4

ADD: REV: 6

REMOVE: REV:5

CATEGORY: DOCUMENTS TYPE: TRM2

ID: TEXT LOES

REMOVE: REV:90

ADD: REV: 91

ANY DISCREPANCIES WITH THE MATERIAL PROVIDED, CONTACT DCS @ X3107 OR X3136 FOR ASSISTANCE. UPDATES FOR HARDCOPY MANUALS WILL BE DISTRIBUTED WITHIN 3 DAYS IN ACCORDANCE WITH DEPARTMENT PROCEDURES. PLEASE MAKE ALL CHANGES AND ACKNOWLEDGE COMPLETE IN YOUR NIMS INBOX UPON COMPLETION OF UPDATES. FOR ELECTRONIC MANUAL USERS, ELECTRONICALLY REVIEW THE APPROPRIATE DOCUMENTS AND ACKNOWLEDGE COMPLETE IN YOUR NIMS INBOX.

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

Table Of Contents

Issue Date: 10/17/2016

| <u>Procedure Name</u> | <u>Rev</u> | <u>Issue Date</u> | <u>Change ID</u> | <u>Change Number</u> |
|---|------------|-------------------|------------------|----------------------|
| TEXT LOES | 91 | 10/17/2016 | | |
| Title: LIST OF EFFECTIVE SECTIONS | | | | |
| TEXT TOC | 25 | 05/10/2016 | | |
| Title: TABLE OF CONTENTS | | | | |
| TEXT 1.1 | 0 | 11/19/2002 | | |
| Title: USE AND APPLICATION DEFINITIONS | | | | |
| TEXT 2.1 | 1 | 02/04/2005 | | |
| Title: PLANT PROGRAMS AND SETPOINTS PLANT PROGRAMS | | | | |
| TEXT 2.2 | 11 | 01/31/2014 | | |
| Title: PLANT PROGRAMS AND SETPOINTS INSTRUMENT TRIP SETPOINT TABLE | | | | |
| TEXT 3.0 | 6 | 03/05/2015 | | |
| Title: APPLICABILITY TECHNICAL REQUIREMENT FOR OPERATION (TRO) APPLICABILITY | | | | |
| TEXT 3.1.1 | 1 | 11/09/2007 | | |
| Title: REACTIVITY CONTROL SYSTEMS ANTICIPATED TRANSIENT WITHOUT SCRAM ALTERNATE ROD INJECTION (ATWS-ARI) INSTRUMENTATION | | | | |
| TEXT 3.1.2 | 0 | 11/19/2002 | | |
| Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD DRIVE (CRD) HOUSING SUPPORT | | | | |
| TEXT 3.1.3 | 4 | 05/14/2009 | | |
| Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD BLOCK INSTRUMENTATION | | | | |
| TEXT 3.1.4 | 0 | 11/19/2002 | | |
| Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD SCRAM ACCUMULATORS INSTRUMENTATION AND CHECK VALVE | | | | |
| TEXT 3.2.1 | 12 | 11/10/2015 | | |
| Title: CORE OPERATING LIMITS REPORT (COLR) | | | | |

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

| | | |
|--|----|------------|
| TEXT 3.3.1 | 0 | 11/19/2002 |
| Title: INSTRUMENTATION RADIATION MONITORING INSTRUMENTATION | | |
| TEXT 3.3.2 | 3 | 03/31/2011 |
| Title: INSTRUMENTATION SEISMIC MONITORING INSTRUMENTATION | | |
| TEXT 3.3.3 | 2 | 11/09/2007 |
| Title: INSTRUMENTATION METEOROLOGICAL MONITORING INSTRUMENTATION | | |
| TEXT 3.3.4 | 10 | 10/17/2016 |
| Title: INSTRUMENTATION TRM POST-ACCIDENT MONITORING INSTRUMENTATION | | |
| TEXT 3.3.5 | 0 | 11/19/2002 |
| Title: INSTRUMENTATION THIS PAGE INTENTIONALLY LEFT BLANK | | |
| TEXT 3.3.6 | 4 | 04/29/2014 |
| Title: INSTRUMENTATION TRM ISOLATION ACTUATION INSTRUMENTATION | | |
| TEXT 3.3.7 | 2 | 11/10/2015 |
| 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 | 05/14/2009 |
| Title: INSTRUMENTATION LPRM UPSCALE ALARM INSTRUMENTATION | | |
| 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 | | |
| TEXT 3.3.12 | 1 | 03/05/2015 |
| Title: WATER MONITORING INSTRUMENTATION | | |

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

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 REACTOR COOLANT SYSTEM (RCS)

TEXT 3.4.4 2 05/14/2009

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 3.4.6 1 04/25/2013

Title: REACTOR RECIRCULATION SINGLE LOOP OPERATION SLO FLOW RATE RESTRICTION

TEXT 3.5.1 1 02/04/2005

Title: ECCS AND RCIC ADS MANUAL INHIBIT

TEXT 3.5.2 1 11/09/2007

Title: ECCS AND RCIC ECCS AND RCIC SYSTEM MONITORING INSTRUMENTATION

TEXT 3.5.3 0 11/19/2002

Title: ECCS AND RCIC LONG TERM NITROGEN SUPPLY TO ADS

TEXT 3.6.1 0 11/19/2002

Title: CONTAINMENT VENTING OR PURGING

TEXT 3.6.2 2 04/29/2014

Title: SUPPRESSION CHAMBER TO DRYWELL VACUUM BREAKER POSITION INDICATION

TEXT 3.6.3 0 11/19/2002

Title: CONTAINMENT SUPPRESSION POOL ALARM INSTRUMENTATION

SSSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

TEXT 3.6.4 0 11/19/2002
Title: CONTAINMENT PRIMARY CONTAINMENT CLOSED SYSTEM BOUNDARIES

TEXT 3.7.1 0 11/19/2002
Title: PLANT SYSTEMS EMERGENCY SERVICE WATER SYSTEM (ESW) SHUTDOWN

TEXT 3.7.2 0 11/19/2002
Title: PLANT SYSTEMS ULTIMATE HEAT SINK (UHS) AND GROUND WATER LEVEL

TEXT 3.7.3.1 4 09/08/2016
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 4 05/16/2016
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 11 09/27/2012
Title: PLANT SYSTEMS FIRE DETECTION INSTRUMENTATION

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

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

TEXT 3.7.5.1 1 03/05/2015

Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS HYDROGEN MONITOR

TEXT 3.7.5.2 0 11/19/2002

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 3 06/04/2012

Title: PLANT SYSTEMS ESSW PUMPHOUSE VENTILATION

TEXT 3.7.7 2 09/05/2008

Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS PRETREATMENT LOGARITHMIC RADIATION
MONITORING INSTRUMENTATION

TEXT 3.7.8 9 03/05/2015

Title: PLANT SYSTEMS SNUBBERS

TEXT 3.7.9 1 08/28/2006

Title: PLANT SYSTEMS CONTROL STRUCTURE HVAC

TEXT 3.7.10 2 04/29/2014

Title: PLANT SYSTEMS SPENT FUEL STORAGE POOLS (SFSPS)

TEXT 3.7.11 1 10/02/2009

Title: PLANT SYSTEMS

TEXT 3.8.1 3 06/20/2012

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

—

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

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 2 10/09/2012

Title: RADIOACTIVE EFFLUENTS LIQUID RADWASTE EFFLUENT MONITORING INSTRUMENTATION

TEXT 3.11.1.5 3 03/05/2015

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 11/19/2002

Title: RADIOACTIVE EFFLUENTS GASEOUS RADWASTE TREATMENT SYSTEM

TEXT 3.11.2.5 4 07/03/2013

Title: RADIOACTIVE EFFLUENTS VENTILATION EXHAUST TREATMENT SYSTEM

TEXT 3.11.2.6 7 10/17/2016

Title: RADIOACTIVE EFFLUENTS RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

TEXT 3.11.3 1 04/26/2006

Title: RADIOACTIVE EFFLUENTS TOTAL DOSE

TEXT 3.11.4.1 4 03/05/2015

Title: RADIOACTIVE EFFLUENTS MONITORING PROGRAM

SSSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

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 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 REQUIREMENTS

TEXT 4.1 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS ORGANIZATION

TEXT 4.2 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS REPORTABLE EVENT ACTION

TEXT 4.3 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS SAFETY LIMIT VIOLATION

TEXT 4.4 1 12/18/2008

Title: ADMINISTRATIVE CONTROLS PROCEDURES & PROGRAMS

TEXT 4.5 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS REPORTING REQUIREMENTS

TEXT 4.6 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS RADIATION PROTECTION PROGRAM

TEXT 4.7 0 09/27/2003

Title: ADMINISTRATIVE CONTROLS TRAINING

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

| | | | |
|-------------|---|------------|--|
| TEXT B3.0 | 6 | 03/05/2015 | Title: APPLICABILITY BASES TECHNICAL REQUIREMENT FOR OPERATION (TRO) APPLICABILITY |
| TEXT B3.1.1 | 2 | 04/29/2014 | Title: REACTIVITY CONTROL SYSTEM BASES ANTICIPATED TRANSIENT WITHOUT SCRAM ALTERNATE ROD INJECTION (ATWS-ARI) INSTRUMENTATION |
| TEXT B3.1.2 | 0 | 11/19/2002 | Title: REACTIVITY CONTROL SYSTEM BASES CONTROL ROD DRIVE (CRD) HOUSING SUPPORT |
| TEXT B3.1.3 | 3 | 04/10/2007 | Title: REACTIVITY CONTROL SYSTEM BASES CONTROL ROD BLOCK INSTRUMENTATION |
| TEXT B3.1.4 | 0 | 11/19/2002 | Title: REACTIVITY CONTROL SYSTEM 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) |
| TEXT B3.3.1 | 1 | 01/31/2014 | Title: INSTRUMENTATION BASES RADIATION MONITORING INSTRUMENTATION |
| TEXT B3.3.2 | 2 | 03/31/2011 | Title: INSTRUMENTATION BASES SEISMIC MONITORING INSTRUMENTATION |
| TEXT B3.3.3 | 2 | 11/09/2007 | Title: INSTRUMENTATION BASES METEOROLOGICAL MONITORING INSTRUMENTATION |
| TEXT B3.3.4 | 6 | 10/17/2016 | 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 | 5 | 01/31/2014 | Title: INSTRUMENTATION BASES TRM ISOLATION ACTUATION INSTRUMENTATION |

SSSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

TEXT B3.3.7 2 11/10/2015

Title: INSTRUMENTATION BASES MAIN TURBINE OVERSPEED PROTECTION SYSTEM

TEXT B3.3.8 1 10/22/2003

Title: INSTRUMENTATION BASES TRM RPS INSTRUMENTATION

TEXT B3.3.9 3 05/14/2009

Title: INSTRUMENTATION BASES LPRM UPSCALE ALARM INSTRUMENTATION

TEXT B3.3.10 3 02/22/2012

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

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 B3.4.6 1 04/25/2013

Title: REACTOR RECIRCULATION SINGLE LOOP OPERATION SLO FLOW RATE RESTRICTION

SSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

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 1 04/19/2007

Title: CONTAINMENT BASES SUPPRESSION POOL ALARM INSTRUMENTATION

TEXT B3.6.4 1 12/14/2004

Title: CONTAINMENT BASES PRIMARY CONTAINMENT CLOSED SYSTEM BOUNDARIES

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 3 06/15/2010

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

SSS MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

TEXT B3.7.3.4 2 04/29/2014

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 3 09/27/2012

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 4 06/04/2013

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 4 01/31/2014

Title: PLANT SYSTEMS BASES SNUBBERS

SSSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

TEXT B3.7.9 2 12/08/2011

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 2 04/14/2010

Title: STRUCTURAL INTEGRITY

TEXT B3.8.1 2 03/10/2010

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

TEXT B3.8.4 0 11/19/2002

Title: ELECTRICAL POWER BASES 24 VDC ELECTRICAL POWER SUBSYSTEM

TEXT B3.8.5 1 11/14/2013

Title: ELECTRICAL POWER BASES DEGRADED VOLTAGE PROTECTION

TEXT B3.8.6 3 06/20/2012

Title: ELECTRICAL POWER BASES EMERGENCY SWITCHGEAR ROOM COOLING

TEXT B3.8.7 2 06/04/2013

Title: BATTERY MAINTENANCE AND MONITORING PROGRAM

TEXT B3.9.1 0 11/19/2002

Title: REFUELING OPERATIONS BASES DECAY TIME

SSSES MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

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 04/10/2007

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 B3.11.1.1 1 05/10/2016

Title: RADIOACTIVE EFFLUENTS BASES LIQUID EFFLUENTS CONCENTRATION

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

SSS MANUAL

Manual Name: TRM2

Manual Title: TECHNICAL REQUIREMENTS MANUAL UNIT 2

| | | |
|--|---|------------|
| 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 | 5 | 07/03/2013 |
| Title: RADIOACTIVE EFFLUENTS BASES VENTILATION EXHAUST TREATMENT SYSTEM | | |
| TEXT B3.11.2.6 | 2 | 09/08/2016 |
| 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 | 5 | 03/05/2015 |
| Title: RADIOACTIVE EFFLUENTS BASES MONITORING PROGRAM | | |
| 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 | 1 | 12/03/2010 |
| Title: LOADS CONTROL PROGRAM BASES HEAVY LOADS REQUIREMENTS | | |
| TEXT B3.12.3 | 0 | 11/19/2002 |
| Title: LOADS CONTROL PROGRAM BASES LIGHT LOADS REQUIREMENTS | | |

LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|--|-----------------------|
| TOC | TABLE OF CONTENTS | 04/28/2016 |
| 1.0 | USE AND APPLICATION | |
| | Page TRM / 1.0-1 | 08/31/1998 |
| | Page TRM / 1.0-2 | 10/04/2002 |
| | Page TRM / 1.0-3 | 08/31/1998 |
| 2.0 | PLANT PROGRAMS | |
| | Page 2.0-1 | 08/31/1998 |
| | Pages TRM / 2.0-2 and TRM 2.0-3 | 01/28/2005 |
| | Page TRM / 2.0-4 | 06/25/2002 |
| | Page TRM / 2.0-5 | 01/21/2014 |
| | Page TRM / 2.0-6 | 04/15/2009 |
| | Page TRM / 2.0-7 | 05/15/2008 |
| | Pages TRM / 2.0-8 and TRM / 2.0-9 | 01/07/2011 |
| | Page TRM / 2.0-10 | 02/02/2010 |
| | Page TRM / 2.0-11 | 11/15/2004 |
| | Page TRM / 2.0-12 | 04/15/2009 |
| | Pages TRM / 2.0-13 and TRM / 2.0-14 | 11/15/2004 |
| | Page TRM / 2.0-15 | 11/15/2005 |
| 3.0 | APPLICABILITY | |
| | Pages TRM / 3.0-1 and TRM / 3.0-2 | 02/19/2015 |
| | Page TRM / 3.0-3 | 03/15/2002 |
| | Page TRM / 3.0-4 | 02/19/2015 |
| 3.1 | REACTIVITY CONTROL SYSTEMS | |
| | Page TRM / 3.1-1 | 10/31/2007 |
| | Pages TRM / 3.1-2 through TRM / 3.1-5 | 08/31/1998 |
| | Page TRM / 3.1-6 | 03/27/2007 |
| | Page TRM / 3.1-7 | 04/15/2009 |
| | Page TRM / 3.1-8 | 03/27/2007 |
| | Pages TRM / 3.1-9 and TRM / 3.1-9a | 02/18/1999 |
| | Page TRM / 3.1-10 | 02/18/1999 |
| 3.2 | CORE OPERATING LIMITS REPORT | |
| | Page TRM / 3.2-1 | 08/31/1998 |
| | Pages TRM / 3.2-2 through TRM / 3.2-63 | 11/04/2015 |
| 3.3 | INSTRUMENTATION | |
| | Pages TRM / 3.3-1 through TRM / 3.3-3 | 07/16/1999 |
| | Pages TRM / 3.3-4 and TRM / 3.3-5 | 10/31/2007 |
| | Page TRM / 3.3-6 | 03/10/2011 |
| | Page TRM 3.3-7 | 10/31/2007 |
| | Page 3.3-8 | 08/31/1998 |

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

Rev. 91

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|-----------------------|
| | Page TRM / 3.3-9 | 10/07/2015 |
| | Page TRM / 3.3-9a | 06/30/2010 |
| | Page TRM / 3.3-10 | 10/31/2007 |
| | Page TRM / 3.3-11 | 10/07/2015 |
| | Page TRM / 3.3-11a | 10/06/2016 |
| | Page TRM / 3.3-12 | 03/30/2001 |
| | Page TRM / 3.3-13 | 01/07/2011 |
| | Page TRM / 3.3-14 | 12/14/1998 |
| | Page TRM / 3.3-15 | 04/11/2014 |
| | Page TRM / 3.3-16 | 01/07/2011 |
| | Page TRM / 3.3-17 | 11/04/2015 |
| | Page TRM / 3.3-17a | 11/04/2015 |
| | Page TRM / 3.3-18 | 10/31/2007 |
| | Pages TRM / 3.3-19 and TRM / 3.3-20 | 10/22/2003 |
| | Page TRM / 3.3-21 | 04/15/2009 |
| | Page TRM / 3.3-21a | 11/15/2004 |
| | Pages TRM / 3.3-21b through TRM / 3.3-21d | 03/27/2007 |
| | Page TRM / 3.3-22 | 12/03/2004 |
| | Pages TRM / 3.3-23 and TRM / 3.3-24 | 05/16/2003 |
| | Page TRM / 3.3-25 | 10/22/2003 |
| | Page TRM / 3.3-26 | 02/19/2015 |
| | Page TRM / 3.3-27 | 04/07/2009 |
| 3.4 | REACTOR COOLANT SYSTEM | |
| | Page TRM / 3.4-1 | 03/31/2006 |
| | Pages 3.4-2 through 3.4-5 | 10/23/1998 |
| | Pages TRM / 3.4-6 through TRM / 3.4-8 | 04/01/2009 |
| | Page 3.4-9 | 08/31/1998 |
| | Page 3.4-10 | 10/31/2007 |
| | Page 3.4-11 | 08/31/1998 |
| | Page TRM / 3.4-12 | 04/17/2009 |
| | Page TRM / 3.4-13 | 03/31/2006 |
| | Page TRM / 3.4-14 | 04/25/2013 |
| 3.5 | EMERGENCY CORE COOLING AND RCIC | |
| | Page TRM / 3.5-1 | 01/28/2005 |
| | Pages 3.5-2 and 3.5-3 | 08/31/1998 |
| | Page TRM / 3.5-4 | 10/31/2007 |
| | Pages 3.5-5 through 3.5-7 | 08/31/1998 |
| 3.6 | CONTAINMENT | |
| | Pages 3.6-1 and 3.6-2 | 08/31/1998 |
| | Pages TRM / 3.6-3 and TRM / 3.6-3a | 04/16/2014 |
| | Page 3.6-4 | 08/31/1998 |
| | Page TRM / 3.6-5 | 01/07/2002 |
| | Page 3.6-6 | 08/31/1998 |
| | Pages TRM / 3.6-7 through TRM / 3.6-9 | 12/31/2002 |

LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|-----------------------|
| 3.7 | PLANT SYSTEMS | |
| | Pages TRM / 3.7-1 and TRM / 3.7-2 | 07/29/1999 |
| | Page 3.7-3 | 08/31/1998 |
| | Page TRM / 3.7-4 | 03/31/2006 |
| | Pages TRM / 3.7-5 through TRM / 3.7-7 | 08/18/2016 |
| | Page TRM / 3.7-8 | 08/02/1999 |
| | Pages TRM / 3.7-9 and TRM / 3.7-10 | 04/07/2009 |
| | Page TRM / 3.7-11 | 01/21/2000 |
| | Page TRM / 3.7-12 | 08/02/1999 |
| | Page TRM / 3.7-13 | 05/09/2016 |
| | Page TRM / 3.7-14 | 08/09/2005 |
| | Pages TRM / 3.7-15 and TRM / 3.7-16 | 08/02/1999 |
| | Page TRM / 3.7-17 | 04/07/2009 |
| | Page TRM / 3.7-18 | 08/02/1999 |
| | Page TRM / 3.7-19 | 04/07/2009 |
| | Pages TRM / 3.7-20 through TRM / 3.7-22 | 08/02/1999 |
| | Page TRM / 3.7-23 | 04/07/2009 |
| | Page TRM / 3.7-24 | 03/31/2006 |
| | Page TRM / 3.7-25 | 08/02/1999 |
| | Page TRM / 3.7-26 | 09/25/2012 |
| | Page TRM / 3.7-27 | 11/24/2011 |
| | Pages TRM / 3.7-28 through TRM / 3.7-32a | 09/25/2012 |
| | Page TRM / 3.7-33 | 09/25/2012 |
| | Page TRM / 3.7-34 | 03/31/2006 |
| | Pages TRM / 3.7-35 and TRM / 3.7-36 | 02/01/1999 |
| | Page TRM / 3.7-37 | 02/19/2015 |
| | Page TRM / 3.7-38 | 08/31/1998 |
| | Page TRM / 3.7-39 | 03/31/2006 |
| | Page TRM / 3.7-40 | 05/24/2012 |
| | Pages TRM / 3.7-40a through TRM / 3.7-40c | 05/24/2012 |
| | Page TRM / 3.7-41 | 09/04/2008 |
| | Page TRM / 3.7-42 | 08/31/1998 |
| | Pages TRM / 3.7-43 | 02/19/2015 |
| | Pages TRM / 3.7-44 and TRM / 3.7-45 | 10/05/2006 |
| | Page TRM / 3.7-46 | 06/07/2007 |
| | Page TRM / 3.7-47 | 09/05/2012 |
| | Page TRM / 3.7-48 | 06/07/2007 |
| | Page TRM / 3.7-49 | 03/09/2001 |
| | Page TRM / 3.7-50 | 08/16/2006 |
| | Page TRM / 3.7-51 | 12/03/2004 |
| | Page TRM / 3.7-52 | 04/15/2003 |
| | Page TRM / 3.7-53 | 07/29/1999 |
| | Page TRM / 3.7-54 | 04/01/2009 |
| | Page TRM / 3.7-55 | 09/25/2009 |
| | Page TRM / 3.7-56 | 04/01/2009 |

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

Rev. 91

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|--|-----------------------|
| 3.8 | ELECTRICAL POWER | |
| | Page TRM / 3.8-1 | 04/02/2002 |
| | Page TRM / 3.8-2 | 01/28/2005 |
| | Pages TRM / 3.8-3 and TRM / 3.8-4 | 06/12/2012 |
| | Pages TRM / 3.8-5 and TRM / 3.8-6 | 04/02/2002 |
| | Pages TRM / 3.8-7 through TRM / 3.8-10 | 10/31/2007 |
| | Page TRM / 3.8-11 | 09/03/2004 |
| | Page TRM / 3.8-12 | 12/03/2004 |
| | Page TRM / 3.8-13 | 06/12/2012 |
| | Page TRM / 3.8-14 | 08/31/1998 |
| | Page TRM / 3.8-15 | 01/28/2005 |
| | Pages TRM / 3.8-16 and TRM / 3.8-17 | 04/02/2002 |
| | Page 3.8-18 | 02/01/1999 |
| | Page TRM / 3.8-19 | 04/02/2002 |
| | Page TRM / 3.8-20 | 02/01/1999 |
| | Pages TRM / 3.8-21 and TRM / 3.8-22 | 06/06/1999 |
| | Page TRM / 3.8-23 | 11/07/2013 |
| | Page TRM / 3.8-24 | 11/30/2011 |
| | Page TRM / 3.8-25 | 06/11/2012 |
| | Pages TRM / 3.8-25a and TRM / 3.8-25b | 11/30/2011 |
| | Page TRM / 3.8-26 | 05/28/2009 |
| | Page TRM / 3.8-27 | 11/29/2006 |
| | Page TRM / 3.8-28 | 05/28/2009 |
| | Page TRM / 3.8-29 | 10/20/2009 |
| 3.9 | REFUELING OPERATIONS | |
| | Pages 3.9-1 through 3.9-3 | 08/31/1998 |
| 3.10 | MISCELLANEOUS | |
| | Page TRM / 3.10-1 | 03/31/2006 |
| | Pages 3.10-2 through 3.10-4 | 08/30/1998 |
| | Pages TRM / 3.10-5 and TRM / 3.10-6 | 03/27/2007 |
| | Page TRM / 3.10-7 | 06/10/2010 |
| 3.11 | RADIOACTIVE EFFLUENTS | |
| | Page TRM / 3.11-1 | 03/31/2006 |
| | Pages 3.11-2 through 3.11-3 | 08/31/1998 |
| | Page TRM / 3.11-4 | 03/31/2006 |
| | Page 3.11-5 | 08/31/1998 |
| | Page TRM / 3.11-6 | 03/31/2006 |
| | Pages 3.11-7 and TRM / 3.11-8 | 08/31/1998 |
| | Pages TRM / 3.11-9 and TRM / 3.11-10 | 10/09/2012 |
| | Pages TRM / 3.11-11 and TRM / 3.11-12 | 08/31/1998 |

LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|-----------------------|
| | Page TRM / 3.11-13 | 02/19/2015 |
| | Page TRM / 3.11-14 | 12/03/2004 |
| | Pages 3.11-15 and 3.11-16 | 09/01/1998 |
| | Page TRM / 3.11-17 | 03/31/2006 |
| | Page 3.11-18 | 08/31/1998 |
| | Page TRM / 3.11-19 | 08/15/2005 |
| | Pages TRM / 3.11-20 and TRM / 3.11-21 | 03/31/2006 |
| | Page TRM / 3.11-22 | 04/02/2002 |
| | Page TRM / 3.11-23 | 11/14/2006 |
| | Page TRM / 3.11-24 | 06/18/2013 |
| | Page TRM / 3.11-25 | 04/12/2007 |
| | Page TRM / 3.11-26 | 01/21/2004 |
| | Page TRM / 3.11-27 | 08/11/2016 |
| | Page TRM / 3.11-28 | 10/06/2016 |
| | Page TRM / 3.11-29 | 12/03/2004 |
| | Page TRM / 3.11-30 | 01/21/2004 |
| | Page TRM / 3.11-31 | 08/11/2016 |
| | Page TRM / 3.11-32 | 10/06/2016 |
| | Page TRM / 3.11-33 | 03/31/2006 |
| | Page 3.11-34 | 08/31/1998 |
| | Page TRM / 3.11-35 | 03/31/2006 |
| | Pages TRM / 3.11-36 through TRM / 3.11-39 | 11/30/2005 |
| | Page TRM / 3.11-40 | 02/19/2015 |
| | Pages TRM / 3.11-41 through TRM / 3.11-44 | 08/31/1998 |
| | Page TRM / 3.11-45 | 03/31/2006 |
| | Page 3.11-46 | 08/31/1998 |
| | Page TRM / 3.11-47 | 03/31/2006 |
| 3.12 | LOADS CONTROL PROGRAM | |
| | Pages TRM / 3.12-1 through TRM / 3.12-3 | 02/05/1999 |
| | Page TRM / 3.12-4 | 03/14/2008 |
| | Page TRM / 3.12-5 | 02/05/1999 |
| 4.0 | ADMINISTRATIVE CONTROLS | |
| | Pages TRM / 4.0-1 through TRM / 4.0-3 | 08/31/1998 |
| | Page TRM / 4.0-4 | 12/11/2008 |
| | Pages TRM / 4.0-5 through TRM / 4.0-8 | 08/31/1998 |

LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|-----------------------|
| B 3.0 | APPLICABILITY BASES | |
| | Pages TRM / B 3.0-1 through TRM / B 3.0-3 | 08/31/1998 |
| | Page TRM / B 3.0-4 | 02/19/2015 |
| | Pages TRM / B 3.0-4a and TRM / B 3.0-4b | 02/19/2015 |
| | Page TRM / B 3.0-5 | 02/19/2015 |
| | Page TRM / B 3.0-6 | 06/12/2012 |
| | Pages TRM / B 3.0-7 through TRM / B 3.0-9 | 08/31/1998 |
| | Pages TRM / B 3.0-10 and TRM / B 3.0-11 | 03/15/2002 |
| | Page TRM / B 3.0-12 | 11/30/2005 |
| | Pages TRM / B 3.0-13 through TRM / B 3.0-15 | 02/19/2015 |
| B 3.1 | REACTIVITY CONTROL SYSTEMS BASES | |
| | Page TRM / B 3.1-1 | 07/13/1999 |
| | Page TRM / B 3.1-2 | 04/16/2014 |
| | Page TRM / B 3.1-3 | 10/31/2007 |
| | Page B 3.1-4 | 08/31/1998 |
| | Pages TRM / B 3.1-5 through TRM / B 3.1-7 | 03/27/2007 |
| | Page TRM / B 3.1-8 | 02/18/1999 |
| B 3.2 | CORE OPERATING LIMITS BASES | |
| | Page B 3.2-1 | 08/31/1998 |
| B 3.3 | INSTRUMENTATION BASES | |
| | Page TRM / B 3.3-1 | 01/21/2014 |
| | Page TRM / B 3.3-2 | 03/10/2011 |
| | Page TRM / B-3.3-2a | 10/31/2007 |
| | Pages TRM / B 3.3-3 and TRM / B 3.3-3a | 10/31/2007 |
| | Page TRM / B 3.3-4 | 06/30/2010 |
| | Pages TRM / B 3.3-5 and TRM / B 3.3-5a | 10/06/2016 |
| | Page TRM / B 3.3-6 | 10/06/2016 |
| | Page TRM / B 3.3-7 | 10/07/2015 |
| | Page TRM / B 3.3-8 | 06/30/2010 |
| | Page TRM / B 3.3-9 | 10/31/2007 |
| | Page TRM / B 3.3-10 | 01/07/2011 |
| | Page TRM / B 3.3-11 | 02/21/2014 |
| | Pages TRM / B 3.3-12 and TRM / B 3.3-13 | 01/07/2011 |
| | Page TRM / B 3.3-14 | 06/25/2002 |
| | Page TRM / B 3.3-14a | 11/04/2015 |
| | Page TRM / B 3.3-14b | 11/04/2015 |
| | Page TRM / B 3.3-14c | 11/04/2015 |
| | Pages TRM / B 3.3-15 through TRM / B 3.3-17 | 10/22/2003 |
| | Pages TRM / B 3.3-18 and TRM / B 3.3-19 | 03/27/2007 |
| | Pages TRM / B 3.3-19a and TRM / B 3.3-19b | 03/27/2007 |
| | Page TRM / B 3.3-19c | 04/17/2009 |

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

Rev. 91

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|--|-----------------------|
| | Pages TRM / B 3.3-19d and TRM / B 3.3-19e | 03/27/2007 |
| | Page TRM / B 3.3-20 | 02/16/2012 |
| | Page TRM / B 3.3-21 | 08/03/2010 |
| | Page TRM / B 3.3-22 | 10/22/2003 |
| | Page TRM / B 3.3-23 | 05/16/2003 |
| | Pages TRM / B 3.3-24 and TRM / B 3.3-25 | 04/07/2009 |
| B 3.4 | REACTOR COOLANT SYSTEM BASES | |
| | Page TRM / B 3.4-1 | 08/31/1998 |
| | Pages TRM / B 3.4-2 and TRM / B3.4-3 | 04/01/2009 |
| | Pages TRM / B 3.4-4 and TRM / B 3.4-4a | 10/31/2007 |
| | Page TRM / B 3.4-5 | 10/15/1999 |
| | Page B 3.4-6 | 08/31/1998 |
| | Page TRM / B 3.4-7 | 04/25/2013 |
| B 3.5 | ECCS AND RCIC BASES | |
| | Pages B 3.5-1 and B 3.5-2 | 08/31/1998 |
| | Pages TRM / B 3.5-3 and TRM / B 3.5-3a | 10/31/2007 |
| | Page B 3.5-4 | 08/31/1998 |
| | Page TRM / B 3.5-5 | 10/31/2007 |
| B 3.6 | CONTAINMENT BASES | |
| | Page TRM / B 3.6-1 | 07/26/2001 |
| | Page TRM / B 3.6-2 | 02/01/1999 |
| | Page B 3.6-3 | 08/31/1998 |
| | Page TRM / B 3.6-4 | 03/29/2007 |
| | Page TRM / B 3.6-5 | 04/04/2007 |
| | Page TRM / B 3.6-6 | 12/03/2004 |
| | Pages TRM / B 3.6-7 through TRM / B 3.6-11 | 12/31/2002 |
| B 3.7 | PLANT SYSTEMS BASES | |
| | Pages B 3.7-1 and B 3.7-2 | 08/31/1998 |
| | Page TRM / B 3.7-3 | 06/10/2010 |
| | Page TRM / B 3.7-3a | 12/27/2007 |
| | Page TRM / B 3.7-4 | 03/31/2006 |
| | Page TRM / B 3.7-5 | 08/02/1999 |
| | Pages TRM / B 3.7-6 and TRM / B 3.7-6a | 03/31/2006 |
| | Pages TRM / B 3.7-7 and TRM / B 3.7-7a | 08/02/1999 |
| | Page TRM / B 3.7-8 | 08/02/1999 |
| | Page TRM / B 3.7-9 | 04/11/2014 |
| | Page TRM / B 3.7-10 | 08/02/1999 |

LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|-----------------------|
| | Pages TRM / B 3.7-10a through TRM / B 3.7-11a | 03/31/2006 |
| | Pages TRM / B 3.7-12 and TRM / B 3.7-13 | 08/02/1999 |
| | Pages TRM / B 3.7-14 through TRM / B 3.7-14b | 09/25/2012 |
| | Pages TRM / B 3.7-15 and TRM / B 3.7-16 | 02/01/1999 |
| | Pages B 3.7-17 through B 3.7-20 | 08/31/1998 |
| | Page TRM / B 3.7-21 | 05/29/2013 |
| | Pages TRM / B 3.7-21a through TRM / B 3.7-21d | 05/24/2012 |
| | Pages TRM / B 3.7-21e through TRM / B 3.7-21g | 05/29/2013 |
| | Pages TRM / B 3.7-22 and TRM / B 3.7-23 | 01/30/2008 |
| | Page TRM / B 3.7-24 | 10/05/2006 |
| | Page TRM / B 3.7-25 | 01/21/2014 |
| | Pages TRM / B 3.7-26 through TRM / B 3.7-29 | 10/05/2006 |
| | Page TRM / B 3.7-30 | 06/07/2007 |
| | Page TRM / B 3.7-30a | 10/05/2006 |
| | Page TRM / B 3.7-30b | 01/21/2014 |
| | Page TRM / B 3.7-31 | 11/30/2011 |
| | Page TRM / B 3.7-32 | 03/09/2001 |
| | Page TRM / B 3.7-33 | 04/15/2003 |
| | Page TRM / B 3.7-34 | 12/03/2004 |
| | Page TRM / B 3.7-35 | 07/05/2000 |
| | Pages TRM / B 3.7-36 and TRM / B 3.7-37 | 04/01/2009 |
| | Page TRM / B 3.7-38 | 09/25/2009 |
| | Page TRM / B 3.7-39 | 04/01/2009 |
| | Page TRM / B 3.7-40 | 04/08/2010 |
| B 3.8 | ELECTRICAL POWER BASES | |
| | Page TRM / B 3.8-1 | 04/02/2002 |
| | Pages TRM / B 3.8-2 | 01/28/2005 |
| | Page TRM / B 3.8-2a | 03/01/2010 |
| | Pages TRM / B 3.8-3 and TRM / B 3.8-3a | 04/02/2002 |
| | Page TRM / B 3.8-4 | 09/03/2004 |
| | Page TRM / B 3.8-4a | 04/02/2002 |
| | Page TRM / B 3.8-5 | 08/31/1998 |
| | Pages TRM / B 3.8-6 through TRM / B 3.8-15 | 04/02/2002 |
| | Page TRM / B 3.8-16 | 11/07/2013 |
| | Page TRM / B 3.8-17 | 11/30/2011 |
| | Page TRM / B 3.8-17a | 06/11/2012 |
| | Page TRM / B 3.8-17b | 11/30/2011 |
| | Pages TRM / B 3.8-18 through TRM / B 3.8-20 | 05/29/2013 |
| | Pages TRM / B 3.8-21 and TRM / B 3.8-22 | 05/28/2009 |
| | Page TRM / B 3.8-23 | 05/29/2013 |
| | Page TRM / B 3.8-24 | 05/28/2009 |

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL REQUIREMENTS MANUAL)

Rev. 91

| <u>Section</u> | <u>Title</u> | <u>Effective Date</u> |
|----------------|---|--|
| B.3.9 | REFUELING OPERATIONS BASES Pages B 3.9-1 and B 3.9-2 Pages B 3.9-3 through B 3.9-7 | 08/31/1998 10/23/1998 |
| B 3.10 | MISCELLANEOUS BASES Page B 3.10-1 Pages TRM / B 3.10-2 and TRM / B 3.10-3 Pages TRM / B 3.10-4 and TRM / B 3.10-5 | 08/31/1998 03/27/2007 08/23/1999 |
| B 3.11 | RADIOACTIVE EFFLUENTS BASES Pages TRM / B 3.11-1 and TRM / B 3.11-2 Page TRM / B 3.11-3 Pages B 3.11-4 through B 3.11-9 Page TRM / B 3.11-10 Pages TRM / B 3.11-11 and TRM / B 3.11-11a Pages TRM / B 3.11-12 and TRM / B 3.11-13 Page TRM / B 3.11-14 Page TRM / B 3.11-15 Pages B 3.11-16 through B 3.11-19 Pages TRM / B 3.11-20 and TRM / B 3.11-20a Page TRM / B 3.11-21 Pages TRM / B 3.11-22 and TRM / B 3.11-23 Pages TRM / B 3.11-23a and TRM / B 3.11-23b Pages TRM / B 3.11-24 and TRM / B 3.11-24a Page TRM / B 3.11-25 Pages B 3.11-26 through B 3.11-27 Page TRM / B 3.11-28 Page TRM / B 3.11-29 Pages TRM / B 3.11-30 and TRM / B 3.11-31 Page TRM / B 3.11-32 Page TRM / B 3.11-33 Pages TRM / B 3.11-34 and TRM / B 3.11-35 Page TRM / B 3.11-36 | 08/31/1998 04/28/2016 08/31/1998 02/01/1999 04/07/2000 02/01/1999 12/03/2004 02/01/1999 08/31/1998 04/02/2002 05/13/2005 11/14/2006 06/18/2013 08/11/2016 01/21/2004 08/31/1998 11/30/2005 02/19/2015 05/29/2013 08/31/1998 06/30/2010 08/31/1998 02/12/1999 |
| B.3.12 | LOADS CONTROL PROGRAM BASES Page TRM / B 3.12-1 Page TRM / B 3.12-2 Page TRM / B 3.12-3 | 09/19/2007 11/29/2010 02/05/1999 |

3.3 Instrumentation

3.3.4 TRM Post-Accident Monitoring Instrumentation

TRO 3.3.4 The TRM post-accident monitoring instrumentation channels shown in Table 3.3.4-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.4-1

ACTIONS

NOTES

1. Separate condition entry is allowed for each Function.
2. The provisions of TRO 3.06 are not applicable.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|---|
| A. One or more required channel inoperable. | A.1 Enter the Condition referenced in Table 3.3.4-1 for the channel. | Immediately |
| B. As required by Required Action A.1 and referenced in Table 3.3.4-1. | B.1 Initiate the preplanned alternate method of monitoring the appropriate parameter(s). <u>AND</u> B.2 Restore the required channel to OPERABLE status. | 72 hours 7 days / 30 days ^(c) |
| C. As required by Required Action A.1 and referenced in Table 3.3.4-1 | C.1 Restore the required channel(s) to OPERABLE status. | 30 days |
| D. As required by Required Action A.1 and referenced in Table 3.3.4-1 | D.1 Verify a minimum 14 of the associated acoustic monitor channels and 5 of the ADS SRV acoustic monitor channels are operable. | Immediately <u>AND</u> Once per 24 hours thereafter |

^(c) COMPLETION TIME for REQUIRED ACTION B.2 is extended from 7 days to 30 days during construction activities associated with the replacement of SPING equipment with VERMS equipment.

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|-----------|---|--|
| | <u>OR</u> | |
| | D.2 Verify SRV tailpipe temperature indication and alarm are available for the tailpipe associated with the inoperable acoustic monitor. | Immediately <u>AND</u> Once per 24 hours thereafter |
| | <u>OR</u> | |
| | D.3 Verify that the following alternate monitoring methods in TS Table 3.3.3.1-1 are OPERABLE: <ul style="list-style-type: none"> • Function 1 • Function 2 • Function 3 • Function 10 | Immediately <u>AND</u> Once per 24 hours thereafter |
| | <u>AND</u> | |
| | D.4. Restore the required channel(s) to OPERABLE status. | 30 days <u>OR</u> At next outage with containment entry, not to exceed the next refueling outage for in-accessible containment components. |

TECHNICAL REQUIREMENT SURVEILLANCE

-----NOTES-----

1. Refer to Table 3.3.4-1 to determine which TRSs apply for each Post Accident Monitoring Function.
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 provided an alternate means of monitoring the parameter or an associated function is available.

| SURVEILLANCE | | FREQUENCY |
|--------------|--|-----------|
| TRS 3.3.4.1 | Perform CHANNEL CHECK | 31 days |
| TRS 3.3.4.2 | Perform CHANNEL FUNCTIONAL TEST | 92 days |
| TRS 3.3.4.3 | Perform a CHANNEL CALIBRATION. The Trip Setpoint shall be less than or equal to 0.25 of the full open noise level. | 24 months |
| TRS 3.3.4.4 | Perform CHANNEL CALIBRATION | 24 months |
| TRS 3.3.4.5 | Perform CHANNEL CALIBRATION of the Primary Containment H ₂ and O ₂ Analyzers. | 92 days |

TABLE 3.3.4-1
TRM POST-ACCIDENT MONITORING INSTRUMENTATION

| FUNCTION | | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS | REQUIRED CHANNELS | CONDITIONS REFERENCED FROM REQUIRED ACTION A.1 | REQUIRED SURVEILLANCE |
|----------|--|---|----------------------|---|---|
| 1. | Suppression Chamber Air Temperature | 1,2 | 2 | C | TRS 3.3.4.1 TRS 3.3.4.4 |
| 2. | Main Steam Safety/Relief Valve Position Indicator (Acoustic Monitor) | 1,2 | 1/valve | D | TRS 3.3.4.1 TRS 3.3.4.2 TRS 3.3.4.3 |
| 3. | Reactor Building Vent Noble Gas Monitor | | | | |
| | a. Mid Range ^(b) | 1,2, (a) | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |
| | b. High Range ^(b) | 1,2, (a) | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |
| 4. | Standby Gas Treatment System Vent Noble Gas Monitor | | | | |
| | a. Mid Range ^(b) | 1,2, (a) | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |
| | b. High Range ^(b) | 1,2, (a) | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |
| 5. | Turbine Building Vent Noble Gas Monitor | | | | |
| | a. Mid Range ^(b) | 1,2 | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |
| | b. High Range ^(b) | 1,2 | 1 | B | TRS 3.3.4.1 TRS 3.3.4.4 |

(continued)

TABLE 3.3.4-1 (continued)
TRM POST-ACCIDENT MONITORING INSTRUMENTATION

| FUNCTION | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS | REQUIRED CHANNELS | CONDITIONS REFERENCED FROM REQUIRED ACTION A.1 | REQUIRED SURVEILLANCE |
|---|---|----------------------|---|----------------------------|
| 6. Standby Gas Treatment System Vent Stack Sampling System Flow | | | | |
| a. Effluent System flow rate monitor ^(b) | 1,2, (a) | 1 | C | TRS 3.3.4.1 TRS 3.3.4.4 |
| b. Sample flow rate monitor ^(b) (Mid/High Range & Bypass) | 1,2, (a) | 1 | C | TRS 3.3.4.1 TRS 3.3.4.4 |
| 7. Turbine Building Vent Stack Sampling System Flow | | | | |
| a. Effluent System flow rate monitor ^(b) | 1,2 | 1 | C | TRS 3.3.4.1 TRS 3.3.4.4 |
| b. Sample flow rate monitor ^(b) (Mid/High Range & Bypass) | 1,2 | 1 | C | TRS 3.3.4.1 TRS 3.3.4.4 |
| 8. Containment H ₂ and O ₂ Analyzer ^(b) | 1,2 | 2 | C | TRS 3.3.4.1 TRS 3.3.4.5 |

(a) When moving irradiated fuel in the secondary containment.

(b) TRO 3.0.4.c is applicable.

3.11 Radioactive Effluents

3.11.2 Gaseous Effluents

3.11.2.6 Radioactive Gaseous Effluent Monitoring Instrumentation

TRO 3.11.2.6 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.11.2.6-1 shall be OPERABLE with their setpoints established in accordance with the ODCM to ensure that the limits of Requirement 3.11.2.1 are not exceeded.

APPLICABILITY: According to Table 3.11.2.6-1

ACTIONS

-----NOTE-----

1. Separate condition entry is allowed for each channel.
2. The provisions of TRO 3.0.6 are not applicable.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|-----------------|
| A. Radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required to ensure that the limits of Requirement 3.11.2.1 are not exceeded | A.1 Suspend the release of radioactive gaseous effluents monitored by the affected channel | Immediately |
| | <u>OR</u> A.2 Declare the channel inoperable | Immediately |

(continued)

Rev. 7

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|--|
| B. Reactor Building Ventilation System Noble Gas Activity Monitor low range channel inoperable | B.1 Take grab samples | Once per 8 hours while release is in progress. |
| | <u>AND</u> | |
| | B.2 Analyze grab samples for isotopic activity to the required LLDs for principal noble gas gamma emitters (Table 3.11.2.1-1) | Within 24 hours of grab sample |
| | <u>AND</u> | |
| | B.3 Restore monitoring instrumentation. | 30 days |
| C. Deleted | | |
| D. Reactor Building Ventilation Monitoring System Effluent System Flow Rate Monitor or Sampler Flow Rate Monitor inoperable | D.1 Estimate flow rate. | Once per 4 hours while release is in progress |
| | <u>AND</u> | |
| | D.2 Restore monitoring instrumentation. | 30 days |

(continued)

Rev. 7

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|--|
| E. Turbine Building Ventilation System Noble Gas Activity Monitor low range channel inoperable | E.1 Verify mechanical vacuum pump is not in operation. | Immediately |
| | <u>AND</u> | |
| | E.2 Take grab samples. | Once per 8 hours while release is in progress |
| | <u>AND</u> | |
| | E.3 Analyze grab samples for isotopic activity to the required LLDs for principal noble gas gamma emitters (Table 3.11.2.1-1). | Within 24 hours after sample |
| | <u>AND</u> | |
| | E.4 Restore monitoring instrumentation | 30 days |
| F. Deleted | | |
| G. Turbine Building Ventilation Monitoring System: Effluent Flow Rate Monitor or Sample (Bypass or Low Range) Flow Rate Monitor inoperable | G.1 Estimate flow rate. | Once per 4 hours while release is in progress. |
| | <u>AND</u> | |
| | G.2 Restore monitoring instrumentation | 30 days |

(continued)

Rev. 7

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|---|
| H. Standby Gas Treatment System Noble Gas Activity Monitor low range channel inoperable | H.1 Take grab samples. | Once per 4 hours during operation of SGTS |
| | <u>AND</u> | |
| | H.2 Analyze grab samples for isotopic activity to the required LLDs for principal noble gas gamma emitters (Table 3.11.2.1-1). | Within 24 hours of grab sample being taken. |
| | <u>AND</u> | |
| | H.3 Restore monitoring instrumentation. | 30 days |
| I. Deleted | | |
| J. SGTS Ventilation Monitoring System: Effluent flow rate monitor or sample (Bypass or Low Range) flow rate monitor Inoperable. | J.1 Estimate flow rate. | Once per 4 hours during operation of SGTS |
| | <u>AND</u> | |
| | J.2 Restore monitoring Instrumentation. | 30 days |

(continued)

Rev. 7

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|---|
| K. Required Actions and Completion Times not met for Conditions B through J. | K.1 Explain why this inoperability was not corrected in a timely manner. | In the next Radioactive Effluent Release Report per TS Section 5.6. |

TECHNICAL REQUIREMENT SURVEILLANCE

-----NOTE-----

Refer to Table 3.11.2.6-1 to determine which TRSs apply for each Monitoring Function.

| SURVEILLANCE | FREQUENCY |
|--|-----------|
| TRS 3.11.2.6.1 Perform CHANNEL CHECK | 24 hours |
| TRS 3.11.2.6.2 Deleted | |
| TRS 3.11.2.6.3 Perform Source Check | 31 days |
| TRS 3.11.2.6.4 Perform CHANNEL FUNCTIONAL TEST | 92 days |
| TRS 3.11.2.6.5 Perform CHANNEL CALIBRATION | 24 months |

Rev. 7

TABLE 3.11.2.6-1 (Page 1 of 3)
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

| FUNCTION | APPLICABILITY | REQUIRED CHANNELS | SURVEILLANCE REQUIREMENTS |
|---|---------------|-------------------|--|
| 1. REACTOR BUILDING VENTILATION MONITORING SYSTEM | | | |
| a. Noble Gas Activity Monitor (Low Range) | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.3 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| b. Deleted | | | |
| c. Deleted | | | |
| d. Effluent System Flow Rate Monitor | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| e. Sampler Flow Rate Monitor | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |

(continued)

Rev. 7

TABLE 3.11.2.6-1 (Page 2 of 3)
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

| FUNCTION | | APPLICABILITY | REQUIRED CHANNELS | SURVEILLANCE REQUIREMENTS |
|----------|--|---------------|-------------------|--|
| 2. | TURBINE BUILDING VENTILATION MONITORING SYSTEM | | | |
| a. | Noble Gas Activity Monitor (Low Range) | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.3 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| b. | Deleted | | | |
| c. | Deleted | | | |
| d. | Effluent System Flow Rate Monitor | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| e. | Sample Flow Rate Monitor (Bypass) | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| f. | Sample Flow Rate Monitor (Low Range) | At all Times | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |

(continued)

Rev. 7

TABLE 3.11.2.6-1 (Page 3 of 3)
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

| FUNCTION | APPLICABILITY | REQUIRED CHANNELS | SURVEILLANCE REQUIREMENTS |
|--|---|-------------------|--|
| 3. STANDBY GAS TREATMENT SYSTEM (SGTS) MONITOR | | | |
| a. Noble Gas Activity Monitor (Low Range) | During operation of SGTS ^(a) | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.3 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| b. Deleted | | | |
| c. Deleted | | | |
| d. Effluent System Flow Rate Monitor | During operation of SGTS ^(a) | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| e. Sample Flow Rate Monitor (Bypass) | During operation of SGTS ^(a) | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |
| f. Sample Bypass Flow Rate Monitor (Low Range) | During operation of SGTS ^(a) | 1 | TRS 3.11.2.6.1 TRS 3.11.2.6.4 TRS 3.11.2.6.5 |

(a) TRO 3.0.4.c is applicable.

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASES

TRO The primary purpose of the TRM PAM instrumentation is to display plant variables that provide information required by the control room operators during accident situations. The OPERABILITY of the TRM PAM instrumentation ensures that the identified information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97 Revision 2, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and following an Accident," NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" and NEDO-33160-A Revision 1, "Regulatory Relaxation For The Post Accident SRV Position Indication System" (Reference 6). It should be noted that the Technical Specifications LCO 3.3.3.1 contains all Category 1, non-type A instruments and Regulatory Guide 1.97 Type A instrument (References 1 and 2). This TRO requires instruments outside of these criteria.

Table 3.3.4-1 identifies the following required Functions. Suppression Chamber Air Temperature provides a post accident indication of problems with the primary containment pressure suppression system. The Suppression Chamber Air Temperature loops are comprised of the following instruments for the purposes of this TRM. The recorders are the primary method of indication used by operator during an accident; therefore, the PAM specification deals specifically with this portion of the instrument.

LOOP A

- TE-25703
- TT-25703
- TR-25795A

LOOP B

- TE-25725
- TT-25725
- TR-25795B

Main Steam Safety/Relief Valve Position Indicators (Acoustic Monitors) provide indication when the valves are functioning. Alternate methods for monitoring SRV position include SRV Tailpipe Temperature and the following Functions from Technical Specification Table 3.3.3.1-1:

Suppression Chamber Water Level (Function 3)

Suppression Chamber Water Temperature (Function 10)

Reactor Vessel Water Level (Function 2)

Reactor Steam Dome Pressure (Function 1)

(continued)

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASESTRO
(continued)

The required channels for REACTOR BUILDING VENT Noble Gas Monitor, Standby Gas Treatment System Vent Noble Gas Monitor, and Turbine Building Vent Noble Gas Monitor provide information regarding the release of radioactive materials to allow for early indication of the need to initiate action necessary to protect the public and for an estimate of the magnitude of any impending threat. For the Noble Gas Monitors the only required channels are the mid range and high range.

The drywell and suppression chamber hydrogen and oxygen concentrations gas analyzers monitor hydrogen and oxygen concentration to detect combustible gas levels in primary containment. The analyzers are capable of determining hydrogen concentration in the range of 0 to 30% by volume and oxygen concentration in the range of 0 to 10% by volume, and each provide control room indication and output to a control room recorder. Each gas analyzer must be capable of sampling either the drywell or the suppression chamber. The recorders are the primary method of indication available for use by the operator during an accident, therefore the PAM Specification deals specifically with this portion of the instrument channel. The gas analyzer piping is provided with heat tracing to reduce the buildup of condensation in the system. H_2O_2 Analyzers can be considered OPERABLE for accident monitoring for up to 100 days with their heat tracing INOPERABLE.

The vent effluent monitor for the Turbine Building and Standby Gas Treatment System (SGTS) is a wide range noble gas monitor. The Effluent channel #4 for each of the Turbine and SGTS displays the release rate in $\mu Ci/min$ using the best detector in range. Upscale and failure alarms originate from the Effluent channel. There are 3 detectors for each wide range gas monitor, low, mid and high range. During normal plant operations, the low range channel will be selected for Effluent channel calculation. The mid and high range detectors are in standby mode. The mid and high range detectors are activated and selected automatically based upon the monitored noble gas concentration. During high range noble gas releases, the mid and high range detectors are activated and the low range noble gas detector loop is selected in standby mode. Faults detected by the vent effluent monitor will be annunciated in the main control room overhead annunciator via the Effluent channel. These loops can be considered Operable if the Effluent release rate channel is not alarmed.

(continued)

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASES

| | |
|--------------------|---|
| TRO (continued) | The Turbine Building and SGTS vent sample flow system operates to support the detector selection requirements. Normally the low range sample flow is operating to support the low range detector. On detection of an upscale noble gas release, the mid/high range sample pump that is normally in standby mode is activated to draw a sample through the mid and high range noble gas detectors and low range sample flow system is in standby mode. The mid / high range sample is then selected and low range sample flow is activated automatically when noble gas concentrations return to normal levels. The bypass sample flow system is designed to make up the proper sample flow rate from the isokinetic nozzle array. For the Turbine Building monitor, the bypass system is required to operate continuously. For the SGTS, the bypass system is in standby mode until high range noble gas is sensed and the bypass system is automatically activated and selected as required. These loops can be considered Operable if the Effluent release rate channel is not alarmed. |
|--------------------|---|

ACTIONS

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

During construction activities that replace existing SPING equipment with new VERMS equipment, the Vent Noble Gas Monitor for each release path is anticipated to be inoperable for longer than 7 days. Restoration completion time to return the affected channel to OPERABLE status to support construction activities is extended to 30 days. This condition is compensated for by the enhanced Preplanned Alternate Monitoring Plan per REQUIRED ACTION B.1.

Action D requirements were determined by balancing the safety significance of the system with the impact of the actions on the operating unit. The loss of the acoustic monitors is not safety significant providing the diverse and redundant alternate methods of determining SRV position are available. System components in the control room are restorable within 30 days without unit operation impact. Components located in containment require a unit shutdown to gain access to individual components. The system channels shall be restored to operable condition at earliest opportunity.

(continued)

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASES

ACTIONS
(continued)

Noble gas monitoring may be interrupted for up to 30 minutes to perform particulate filter/iodine cartridge changeout required by TRM Table 3.11.2-1 without entering the TRO ACTIONS.

Components of alternate SRV position systems may be taken inoperable for routine surveillances and periodic maintenance providing the appropriate LCO requirements are met during this action statement. Tailpipe temperature is the direct process monitoring, alternate method and is not covered by Technical Specification LCO's as are the other alternative methods.

TRS

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

Note 1 states that the TRSs for each Post Accident Monitoring instrumentation Function are located in the SR column of Table 3.3.4-1.

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

(continued)

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASESTRS
(continued)

The alternate means of monitoring the parameter or the associated function are:

| <u>Parameter</u> | <u>Alternate Means/Associated Function</u> |
|---|---|
| Suppression Chamber Air Temperature | One channel of Suppression Chamber Air Temperature |
| Main Steam Safety/Relief Valve Position Indicator | Suppression Pool level Suppression Pool Temperature RPV level RPV pressure SRV Tailpipe Temperature |

Containment H₂ and O₂ Analyzer One channel of Containment H₂ and O₂

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

(continued)

B 3.3.4 TRM Post Accident Monitoring (PAM) Instrumentation

BASES

TRS
(continued)TRS 3.3.4.1

Performance of the CHANNEL CHECK once every 31 days 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 parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels or something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation 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.

-
- | | |
|------------|---|
| REFERENCES | <ol style="list-style-type: none">1. Regulatory Guide 1.97 Revision 2, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."2. NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."3. Technical Specification Amendment No. 100 to License No. NPF-22 for failed Unit 2 "S" acoustic monitor.4. Technical Specification Amendment No. 169 to License No. NPF-14 for failed Unit 1 "S" acoustic monitor.5. Proposed amendment No. 183 to License No. NPF-22 failed Unit 2 "J" acoustic monitor.6. NEDO-33160-A, Revision 1, "Regulatory Relaxation For The Post Accident SRV Position Indication System," dated October 2006.7. NRC letter, "Final Safety Evaluation For Boiling Water Reactor Owners' Group (BWROG) Topical Report (TR) NEDO-33160, Regulatory Relaxation For The Post Accident SRV [Safety Relief Valve] Position Indication System (TAC No. MC5446)," dated September 26, 2006. |
|------------|---|
-