

MANUAL HARD COPY DISTRIBUTION
DOCUMENT TRANSMITTAL 2010-1060

USER INFORMATION:

~~GERLACH*ROSE M~~ EMPL#: 028401 CA#: 0363
~~Address: NUCSA2~~
~~Phone#: 254-3194~~

TRANSMITTAL INFORMATION:

TO: ~~GERLACH*ROSE M~~ 01/11/2010

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.

TSB1 - TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

REMOVE MANUAL TABLE OF CONTENTS DATE: 09/01/2009

ADD MANUAL TABLE OF CONTENTS DATE: 01/08/2010

CATEGORY: DOCUMENTS TYPE: TSB1

ADD
NRR

ID: TEXT 3.7.3

ADD: REV: 1

REMOVE: REV:0

CATEGORY: DOCUMENTS TYPE: TSB1

ID: TEXT LOES

REMOVE: REV:93

ADD: REV: 94

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.

SSSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

Table Of Contents

Issue Date: 01/08/2010

<u>Procedure Name</u>	<u>Rev</u>	<u>Issue Date</u>	<u>Change ID</u>	<u>Change Number</u>
TEXT LOES	94	01/08/2010		
Title: LIST OF EFFECTIVE SECTIONS				
TEXT TOC	17	08/20/2009		
Title: TABLE OF CONTENTS				
TEXT 2.1.1	5	05/06/2009		
Title: SAFETY LIMITS (SLS) REACTOR CORE SLS				
TEXT 2.1.2	1	10/04/2007		
Title: SAFETY LIMITS (SLS) REACTOR COOLANT SYSTEM (RCS) PRESSURE S				
TEXT 3.0	3	08/20/2009		
Title: LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY				
TEXT 3.1.1	1	04/18/2006		
Title: REACTIVITY CONTROL SYSTEMS SHUTDOWN MARGIN (SDM)				
TEXT 3.1.2	0	11/15/2002		
Title: REACTIVITY CONTROL SYSTEMS REACTIVITY ANOMALIES				
TEXT 3.1.3	2	01/19/2009		
Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD OPERABILITY				
TEXT 3.1.4	4	01/30/2009		
Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD SCRAM TIMES				
TEXT 3.1.5	1	07/06/2005		
Title: REACTIVITY CONTROL SYSTEMS CONTROL ROD SCRAM ACCUMULATORS				
TEXT 3.1.6	2	04/18/2006		
Title: REACTIVITY CONTROL SYSTEMS ROD PATTERN CONTROL				

SSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.1.7 3 04/23/2008

Title: REACTIVITY CONTROL SYSTEMS STANDBY LIQUID CONTROL (SLC) SYSTEM

TEXT 3.1.8 3 05/06/2009

Title: REACTIVITY CONTROL SYSTEMS SCRAM DISCHARGE VOLUME (SDV) VENT AND DRAIN VALVES

TEXT 3.2.1 2 04/23/2008

Title: POWER DISTRIBUTION LIMITS AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)

TEXT 3.2.2 3 05/06/2009

Title: POWER DISTRIBUTION LIMITS MINIMUM CRITICAL POWER RATIO (MCPR)

TEXT 3.2.3 2 04/23/2008

Title: POWER DISTRIBUTION LIMITS LINEAR HEAT GENERATION RATE (LHGR)

TEXT 3.3.1.1 4 04/23/2008

Title: INSTRUMENTATION REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION

TEXT 3.3.1.2 2 01/19/2009

Title: INSTRUMENTATION SOURCE RANGE MONITOR (SRM) INSTRUMENTATION

TEXT 3.3.2.1 3 04/23/2008

Title: INSTRUMENTATION CONTROL ROD BLOCK INSTRUMENTATION

TEXT 3.3.2.2 1 04/23/2008

Title: INSTRUMENTATION FEEDWATER MAIN TURBINE HIGH WATER LEVEL TRIP INSTRUMENTATION

TEXT 3.3.3.1 8 10/27/2008

Title: INSTRUMENTATION POST ACCIDENT MONITORING (PAM) INSTRUMENTATION

TEXT 3.3.3.2 1 04/18/2005

Title: INSTRUMENTATION REMOTE SHUTDOWN SYSTEM

TEXT 3.3.4.1 1 04/23/2008

Title: INSTRUMENTATION END OF CYCLE RECIRCULATION PUMP TRIP (EOC-RPT) INSTRUMENTATION

SSSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.3.4.2 0 11/15/2002

Title: INSTRUMENTATION ANTICIPATED TRANSIENT WITHOUT SCRAM RECIRCULATION PUMP TRIP
(ATWS-RPT) INSTRUMENTATION

TEXT 3.3.5.1 3 08/20/2009

Title: INSTRUMENTATION EMERGENCY CORE COOLING SYSTEM (ECCS) INSTRUMENTATION

TEXT 3.3.5.2 0 11/15/2002

Title: INSTRUMENTATION REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM INSTRUMENTATION

TEXT 3.3.6.1 4 04/23/2008

Title: INSTRUMENTATION PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TEXT 3.3.6.2 3 10/27/2008

Title: INSTRUMENTATION SECONDARY CONTAINMENT ISOLATION INSTRUMENTATION

TEXT 3.3.7.1 2 10/27/2008

Title: INSTRUMENTATION CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY (CREOAS) SYSTEM
INSTRUMENTATION

TEXT 3.3.8.1 2 12/17/2007

Title: INSTRUMENTATION LOSS OF POWER (LOP) INSTRUMENTATION

TEXT 3.3.8.2 0 11/15/2002

Title: INSTRUMENTATION REACTOR PROTECTION SYSTEM (RPS) ELECTRIC POWER MONITORING

TEXT 3.4.1 3 04/12/2006

Title: REACTOR COOLANT SYSTEM (RCS) RECIRCULATION LOOPS OPERATING

TEXT 3.4.2 1 04/23/2008

Title: REACTOR COOLANT SYSTEM (RCS) JET PUMPS

TEXT 3.4.3 2 04/23/2008

Title: REACTOR COOLANT SYSTEM RCS SAFETY RELIEF VALVES S/RVS

TEXT 3.4.4 0 11/15/2002

Title: REACTOR COOLANT SYSTEM (RCS) RCS OPERATIONAL LEAKAGE

SSSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.4.5	1	01/16/2006	Title: REACTOR COOLANT SYSTEM (RCS) RCS PRESSURE ISOLATION VALVE (PIV) LEAKAGE
TEXT 3.4.6	2	08/20/2009	Title: REACTOR COOLANT SYSTEM (RCS) RCS LEAKAGE DETECTION INSTRUMENTATION
TEXT 3.4.7	2	10/04/2007	Title: REACTOR COOLANT SYSTEM (RCS) RCS SPECIFIC ACTIVITY
TEXT 3.4.8	1	04/18/2005	Title: REACTOR COOLANT SYSTEM (RCS) RESIDUAL HEAT REMOVAL (RHR) SHUTDOWN COOLING SYSTEM - HOT SHUTDOWN
TEXT 3.4.9	0	11/15/2002	Title: REACTOR COOLANT SYSTEM (RCS) RESIDUAL HEAT REMOVAL (RHR) SHUTDOWN COOLING SYSTEM - COLD SHUTDOWN
TEXT 3.4.10	3	04/23/2008	Title: REACTOR COOLANT SYSTEM (RCS) RCS PRESSURE AND TEMPERATURE (P/T) LIMITS
TEXT 3.4.11	0	11/15/2002	Title: REACTOR COOLANT SYSTEM (RCS) REACTOR STEAM DOME PRESSURE
TEXT 3.5.1	2	01/16/2006	Title: EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM ECCS - OPERATING
TEXT 3.5.2	0	11/15/2002	Title: EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM ECCS - SHUTDOWN
TEXT 3.5.3	1	04/18/2005	Title: EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM RCIC SYSTEM
TEXT 3.6.1.1	3	04/23/2008	Title: CONTAINMENT SYSTEMS PRIMARY CONTAINMENT
TEXT 3.6.1.2	1	04/23/2008	Title: CONTAINMENT SYSTEMS PRIMARY CONTAINMENT AIR LOCK

SSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.6.1.3	8	04/23/2008	
Title: CONTAINMENT SYSTEMS PRIMARY CONTAINMENT ISOLATION VALVES (PCIVS)			
		LDCN	3092
TEXT 3.6.1.4	1	04/23/2008	
Title: CONTAINMENT SYSTEMS CONTAINMENT PRESSURE			
TEXT 3.6.1.5	1	10/05/2005	
Title: CONTAINMENT SYSTEMS DRYWELL AIR TEMPERATURE			
TEXT 3.6.1.6	0	11/15/2002	
Title: CONTAINMENT SYSTEMS SUPPRESSION CHAMBER-TO-DRYWELL VACUUM BREAKERS			
TEXT 3.6.2.1	2	04/23/2008	
Title: CONTAINMENT SYSTEMS SUPPRESSION POOL AVERAGE TEMPERATURE			
TEXT 3.6.2.2	0	11/15/2002	
Title: CONTAINMENT SYSTEMS SUPPRESSION POOL WATER LEVEL			
TEXT 3.6.2.3	1	01/16/2006	
Title: CONTAINMENT SYSTEMS RESIDUAL HEAT REMOVAL (RHR) SUPPRESSION POOL COOLING			
TEXT 3.6.2.4	0	11/15/2002	
Title: CONTAINMENT SYSTEMS RESIDUAL HEAT REMOVAL (RHR) SUPPRESSION POOL SPRAY			
TEXT 3.6.3.1	2	06/13/2006	
Title: CONTAINMENT SYSTEMS PRIMARY CONTAINMENT HYDROGEN RECOMBINERS			
TEXT 3.6.3.2	1	04/18/2005	
Title: CONTAINMENT SYSTEMS DRYWELL AIR FLOW SYSTEM			
TEXT 3.6.3.3	0	11/15/2002	
Title: CONTAINMENT SYSTEMS PRIMARY CONTAINMENT OXYGEN CONCENTRATION			
TEXT 3.6.4.1	7	10/04/2007	
Title: CONTAINMENT SYSTEMS SECONDARY CONTAINMENT			

SSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.6.4.2 2 01/03/2005

Title: CONTAINMENT SYSTEMS SECONDARY CONTAINMENT ISOLATION VALVES (SCIVS)

TEXT 3.6.4.3 4 09/21/2006

Title: CONTAINMENT SYSTEMS STANDBY GAS TREATMENT (SGT) SYSTEM

TEXT 3.7.1 3 05/06/2009

Title: PLANT SYSTEMS RESIDUAL HEAT REMOVAL SERVICE WATER (RHRSW) SYSTEM AND THE ULTIMATE HEAT SINK (UHS)

TEXT 3.7.2 2 02/11/2009

Title: PLANT SYSTEMS EMERGENCY SERVICE WATER (ESW) SYSTEM

TEXT 3.7.3 1 01/08/2010

Title: PLANT SYSTEMS CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY (CREOAS) SYSTEM

TEXT 3.7.4 0 11/15/2002

Title: PLANT SYSTEMS CONTROL ROOM FLOOR COOLING SYSTEM

TEXT 3.7.5 1 10/04/2007

Title: PLANT SYSTEMS MAIN CONDENSER OFFGAS

TEXT 3.7.6 2 04/23/2008

Title: PLANT SYSTEMS MAIN TURBINE BYPASS SYSTEM

TEXT 3.7.7 1 10/04/2007

Title: PLANT SYSTEMS SPENT FUEL STORAGE POOL WATER LEVEL

TEXT 3.7.8 0 04/23/2008

Title: PLANT SYSTEMS

TEXT 3.8.1 6 05/06/2009

Title: ELECTRICAL POWER SYSTEMS AC SOURCES - OPERATING

TEXT 3.8.2 0 11/15/2002

Title: ELECTRICAL POWER SYSTEMS AC SOURCES - SHUTDOWN

SSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.8.3 1 04/23/2008
Title: ELECTRICAL POWER SYSTEMS DIESEL FUEL OIL, LUBE OIL, AND STARTING AIR

TEXT 3.8.4 3 01/19/2009
Title: ELECTRICAL POWER SYSTEMS DC SOURCES - OPERATING

TEXT 3.8.5 1 12/14/2006
Title: ELECTRICAL POWER SYSTEMS DC SOURCES - SHUTDOWN

TEXT 3.8.6 1 12/14/2006
Title: ELECTRICAL POWER SYSTEMS BATTERY CELL PARAMETERS

TEXT 3.8.7 1 10/05/2005
Title: ELECTRICAL POWER SYSTEMS DISTRIBUTION SYSTEMS - OPERATING

TEXT 3.8.8 0 11/15/2002
Title: ELECTRICAL POWER SYSTEMS DISTRIBUTION SYSTEMS - SHUTDOWN

TEXT 3.9.1 0 11/15/2002
Title: REFUELING OPERATIONS REFUELING EQUIPMENT INTERLOCKS

TEXT 3.9.2 0 11/15/2002
Title: REFUELING OPERATIONS REFUEL POSITION ONE-ROD-OUT INTERLOCK

TEXT 3.9.3 0 11/15/2002
Title: REFUELING OPERATIONS CONTROL ROD POSITION

TEXT 3.9.4 0 11/15/2002
Title: REFUELING OPERATIONS CONTROL ROD POSITION INDICATION

TEXT 3.9.5 0 11/15/2002
Title: REFUELING OPERATIONS CONTROL ROD OPERABILITY - REFUELING

TEXT 3.9.6 1 10/04/2007
Title: REFUELING OPERATIONS REACTOR PRESSURE VESSEL (RPV) WATER LEVEL

SSES MANUAL

Manual Name: TSB1

Manual Title: TECHNICAL SPECIFICATION BASES UNIT 1 MANUAL

TEXT 3.9.7 0 11/15/2002

Title: REFUELING OPERATIONS RESIDUAL HEAT REMOVAL (RHR) - HIGH WATER LEVEL

TEXT 3.9.8 0 11/15/2002

Title: REFUELING OPERATIONS RESIDUAL HEAT REMOVAL (RHR) - LOW WATER LEVEL

TEXT 3.10.1 1 01/23/2008

Title: SPECIAL OPERATIONS INSERVICE LEAK AND HYDROSTATIC TESTING OPERATION

TEXT 3.10.2 0 11/15/2002

Title: SPECIAL OPERATIONS REACTOR MODE SWITCH INTERLOCK TESTING

TEXT 3.10.3 0 11/15/2002

Title: SPECIAL OPERATIONS SINGLE CONTROL ROD WITHDRAWAL - HOT SHUTDOWN

TEXT 3.10.4 0 11/15/2002

Title: SPECIAL OPERATIONS SINGLE CONTROL ROD WITHDRAWAL - COLD SHUTDOWN

TEXT 3.10.5 0 11/15/2002

Title: SPECIAL OPERATIONS SINGLE CONTROL ROD DRIVE (CRD) REMOVAL - REFUELING

TEXT 3.10.6 0 11/15/2002

Title: SPECIAL OPERATIONS MULTIPLE CONTROL ROD WITHDRAWAL - REFUELING

TEXT 3.10.7 1 04/18/2006

Title: SPECIAL OPERATIONS CONTROL ROD TESTING - OPERATING

TEXT 3.10.8 1 04/12/2006

Title: SPECIAL OPERATIONS SHUTDOWN MARGIN (SDM) TEST - REFUELING

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
TOC	Table of Contents	17
B 2.0	SAFETY LIMITS BASES	
	Page B 2.0-1	0
	Page TS / B 2.0-2	3
	Page TS / B 2.0-3	5
	Page TS / B 2.0-4	3
	Page TS / B 2.0-5	5
	Page TS / B 2.0-6	1
	Pages TS / B 2.0-7 through TS / B 2.0-9	1
B 3.0	LCO AND SR APPLICABILITY BASES	
	Page TS / B 3.0-1	1
	Pages TS / B 3.0-2 through TS / B 3.0-4	0
	Pages TS / B 3.0-5 through TS / B 3.0-7	1
	Page TS / B 3.0-8	3
	Pages TS / B 3.0-9 through TS / B 3.0-11	2
	Page TS / B 3.0-11a	0
	Page TS / B 3.0-12	1
	Pages TS / B 3.0-13 through TS / B 3.0-15	2
	Pages TS / B 3.0-16 and TS / B 3.0-17	0
B 3.1	REACTIVITY CONTROL BASES	
	Pages B 3.1-1 through B 3.1-4	0
	Page TS / B 3.1-5	1
	Pages TS / B 3.1-6 and TS / B 3.1-7	2
	Pages B 3.1-8 through B 3.1-13	0
	Page TS / B 3.1-14	1
	Page B 3.1-15	0
	Page TS / B 3.1-16	1
	Pages B 3.1-17 through B 3.1-19	0
	Pages TS / B 3.1-20 and TS / B 3.1-21	1
	Page TS / B 3.1-22	0
	Page TS / B 3.1-23	1
	Page TS / B 3.1-24	0
	Pages TS / B 3.1-25 through TS / B 3.1-27	1
	Page TS / B 3.1-28	2
	Page TS / B 3.1-29	1
	Pages B 3.1-30 through B 3.1-33	0
	Pages TS / B 3.3-34 through TS / B 3.3-36	1
	Pages TS / B 3.1-37 and TS / B 3.1-38	2
	Page TS / B 3.1-39 and TS / B 3.1-40	2
	Page TS / B 3.1-40a	0
	Pages TS / B 3.1-41 and TS / B 3.1-42	2

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Page TS / B 3.1.43	1
	Page TS / B 3.1-44	0
	Page TS / B 3.1-45	3
	Pages TS / B 3.1-46 through TS / B 3.1-49	1
	Page TS / B 3.1-50	0
	Page TS / B 3.1-51	3
B 3.2	POWER DISTRIBUTION LIMITS BASES	
	Page TS / B 3.2-1	2
	Pages TS / B 3.2-2 and TS / B 3.2-3	3
	Pages TS / B 3.2-4 and TS / B 3.2-5	2
	Page TS / B 3.2-6	3
	Page B 3.2-7	1
	Pages TS / B 3.2-8 and TS / B 3.2-9	3
	Page TS / B 3.2.10	2
	Page TS / B 3.2-11	3
	Page TS / B 3.2-12	1
	Page TS / B 3.2-13	2
B 3.3	INSTRUMENTATION	
	Pages TS / B 3.3-1 through TS / B 3.3-4	1
	Page TS / B 3.3-5	2
	Page TS / B 3.3-6	1
	Page TS / B 3.3-7	3
	Page TS / B 3.3-7a	1
	Page TS / B 3.3-8	4
	Pages TS / B 3.3-9 through TS / B 3.3-12	3
	Pages TS / B 3.3-12a	1
	Pages TS / B 3.3-12b and TS / B 3.3-12c	0
	Page TS / B 3.3-13	1
	Page TS / B 3.3-14	3
	Pages TS / B 3.3-15 and TS / B 3.3-16	1
	Pages TS / B 3.3-17 and TS / B 3.3-18	4
	Page TS / B 3.3-19	1
	Pages TS / B 3.3-20 through TS / B 3.3-22	2
	Page TS / B 3.3-22a	0
	Pages TS / B 3.3-23 and TS / B 3.3-24	2
	Pages TS / B 3.3-24a and TS / B 3.3-24b	0
	Page TS / B 3.3-25	3
	Page TS / B 3.3-26	2
	Page TS / B 3.3-27	1
	Pages TS / B 3.3-28 through TS / B 3.3-30	3
	Page TS / B 3.3-30a	0

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Page TS / B 3.3-31	4
	Page TS / B 3.3-32	5
	Pages TS / B 3.3-32a	0
	Page TS / B 3.3-32b	1
	Page TS / B 3.3-33	5
	Page TS / B 3.3-33a	0
	Page TS / B 3.3-34	1
	Pages TS / B 3.3-35 and TS / B 3.3-36	2
	Pages TS / B 3.3-37 and TS / B 3.3-38	1
	Page TS / B 3.3-39	2
	Pages TS / B 3.3-40 through TS / B 3.3-43	1
	Page TS / B 3.3-44	4
	Pages TS / B 3.3-44a and TS / B 3.3-44b	0
	Page TS / B 3.3-45	3
	Pages TS / B 3.3-45a and TS / B 3.3-45b	0
	Page TS / B 3.3-46	3
	Pages TS / B 3.3-47	2
	Pages TS / B 3.3-48 through TS / B 3.3-51	3
	Pages TS / B 3.3-52 and TS / B 3.3-53	2
	Page TS / B 3.3-53a	0
	Page TS / B 3.3-54	4
	Page B 3.3-55	1
	Page B 3.3-56	0
	Page B 3.3-57	1
	Page B 3.3-58	0
	Page B 3.3-59	1
	Pages B 3.3-60 through B 3.3-63	0
	Pages TS / B 3.3-64 and TS / B 3.3-65	2
	Page TS / B 3.3-66	4
	Page TS / B 3.3-67	3
	Page TS / B 3.3-68	4
	Page TS / B 3.3-69	5
	Pages TS / B 3.3-70	4
	Page TS / B 3.3-71	3
	Pages TS / B 3.3-72 and TS / B 3.3-73	2
	Page TS / B 3.3-74	3
	Page TS / B 3.3-75	2
	Page TS / B 3.3-75a	6
	Page TS / B 3.3-75b	7
	Page TS / B 3.3-75c	5
	Pages B 3.3-76 through 3.3-77	0
	Page TS / B 3.3-78	1
	Pages B 3.3-79 through B 3.3-81	0
	Page B 3.3-82	1

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Page B 3.3-83	0
	Pages B 3.3-84 and B 3.3-85	1
	Page B 3.3-86	0
	Page B 3.3-87	1
	Page B 3.3-88	0
	Page B 3.3-89	1
	Page TS / B 3.3-90	1
	Page B 3.3-91	0
	Pages TS / B 3.3-92 through TS / B 3.3-100	1
	Pages TS / B 3.3-101 through TS / B 3.3-103	0
	Page TS / B 3.3-104	2
	Pages TS / B 3.3-105 and TS / B 3.3-106	0
	Page TS / B 3.3-107	1
	Page TS / B 3.3-108	0
	Page TS / B 3.3-109	1
	Pages TS / B 3.3-110 and TS / B 3.3-111	0
	Pages TS / B 3.3-112 and TS / B 3.3-112a	1
	Pages TS / B 3.3-113 through TS / B 3.3-115	1
	Page TS / B 3.3-116	3
	Page TS / B 3.3-117	1
	Pages TS / B 3.3-118 through TS / B 3.3-122	0
	Pages TS / B 3.3-123 and TS / B 3.3-124	1
	Page TS / B 3.3-124a	0
	Page TS / B 3.3-125	0
	Pages TS / B 3.3-126 and TS / B 3.3-127	1
	Pages TS / B 3.3-128 through TS / B 3.3-130	0
	Page TS / B 3.3-131	1
	Pages TS / B 3.3-132 through TS / B 3.3-134	0
	Pages B 3.3-135 through B 3.3-137	0
	Page TS / B 3.3-138	1
	Pages B 3.3-139 through B 3.3-149	0
	Pages TS / B 3.3-150 and TS / B 3.3-151	1
	Pages TS / B 3.3-152 through TS / B 3.3-154	2
	Page TS / B 3.3-155	1
	Pages TS / B 3.3-156 through TS / B 3.3-158	2
	Pages TS / B 3.3-159 through TS / B 3.3-162	1
	Page TS / B 3.3-163	2
	Pages TS / B 3.3-164 and TS / B 3.3-165	1
	Pages TS / B 3.3-166 and TS / B 3.3-167	2
	Pages TS / B 3.3-168 and TS / B 3.3-169	1
	Page TS / B 3.3-170	2
	Pages TS / B 3.3-171 through TS / B 3.3-177	1
	Pages TS / B 3.3-178 through TS / B 3.3-179a	2
	Pages TS / B 3.3-179b and TS / B 3.3-179c	0
	Page TS / B 3.3-180	1

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Page TS / B 3.3-181	3
	Page TS / B 3.3-182	1
	Page TS / B 3.3-183	2
	Page TS / B 3.3-184	1
	Page TS / B 3.3-185	3
	Page TS / B 3.3-186	1
	Pages TS / B 3.3-187 and TS / B 3.3-188	2
	Pages TS / B 3.3-189 through TS / B 3.3-191	1
	Page TS / B 3.3-192	0
	Page TS / B 3.3-193	1
	Pages TS / B 3.3-194 and TS / B 3.3-195	0
	Page TS / B 3.3-196	2
	Pages TS / B 3.3-197 through TS / B 3.3-204	0
	Page TS / B 3.3-205	1
	Pages B 3.3-206 through B 3.3-209	0
	Page TS / B 3.3-210	1
	Pages B 3.3-211 through B 3.3-219	0
B 3.4	REACTOR COOLANT SYSTEM BASES	
	Pages B 3.4-1 and B 3.4-2	0
	Pages TS / B 3.4-3 and Page TS / B 3.4-4	4
	Pages TS / B 3.4-5 through TS / B 3.4-9	2
	Pages B 3.4-10 through B 3.4-12	0
	Page B 3.4-13	1
	Page B 3.4-14	0
	Page TS / B 3.4-15	2
	Pages TS / B 3.4-16 and TS / B 3.4-17	3
	Page TS / B 3.4-18	2
	Pages B 3.4-19 through B 3.4-27	0
	Pages TS / B 3.4-28 and TS / B 3.4-29	1
	Pages TS / B 3.4-30 and TS / B 3.4-31	0
	Pages TS / B 3.4-32 and TS / B 3.4-33	1
	Page TS / B 3.4-34	0
	Pages TS / B 3.4-35 and TS / B 3.4-36	1
	Page TS / B 3.4-37	2
	Page TS / B 3.4-38	1
	Pages B 3.4-39 and B 3.4-40	0
	Page TS / B 3.4-41	1
	Pages B 3.4-42 through B 3.4-48	0
	Page TS / B 3.4-49	3
	Page TS / B 3.4-50	1
	Page TS / B 3.4-51	3
	Page TS / B 3.4-52	2
	Page TS / B 3.4-53	1

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Pages TS / B 3.4-54 through TS / B 3.4-56	2
	Page TS / B 3.4-57	3
	Pages TS / B 3.4-58 through TS / B 3.4-60	1
B 3.5	ECCS AND RCIC BASES	
	Pages B 3.5-1 and B 3.5-2	0
	Page TS / B 3.5-3	2
	Page TS / B 3.5-4	1
	Page TS / B 3.5-5	2
	Page TS / B 3.5-6	1
	Pages B 3.5-7 through B 3.5-10	0
	Page TS / B 3.5-11	1
	Page TS / B 3.5-12	0
	Page TS / B 3.5-13	1
	Pages TS / B 3.5-14 and TS / B 3.5-15	0
	Pages TS / B 3.5-16 through TS / B 3.5-18	1
	Pages B 3.5-19 through B 3.5-24	0
	Page TS / B 3.5-25	1
	Pages TS / B 3.5-26 and TS / B 3.5-27	1
	Pages B 3.5-28 through B 3.5-31	0
B 3.6	CONTAINMENT SYSTEMS BASES	
	Page TS / B 3.6-1	2
	Page TS / B 3.6-1a	3
	Page TS / B 3.6-2	4
	Page TS / B 3.6-3	3
	Page TS / B 3.6-4	4
	Pages TS / B 3.6-5 and TS / B 3.6-6	3
	Pages TS / B 3.6-6a and TS / B 3.6-6b	2
	Page TS / B 3.6-6c	0
	Pages B 3.6-7	0
	Page B 3.6-8	1
	Pages B 3.6-9 through B 3.6-14	0
	Page TS / B 3.6-15	2
	Page TS / B 3.6-15a	0
	Page TS / B 3.6-15b	2
	Pages TS / B 3.6-16 and TS / B 3.6-17	1
	Page TS / B 3.6-17a	0
	Pages TS / B 3.6-18 and TS / B 3.6-19	0
	Page TS / B 3.6-20	1
	Page TS / B 3.6-21	2
	Page TS / B 3.6-22	1
	Page TS / B 3.6-22a	0
	Page TS / B 3.6-23	1

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Pages TS / B 3.6-24 and TS / B 3.6-25	0
	Pages TS / B 3.6-26 and TS / B 3.6-27	2
	Page TS / B 3.6-28	7
	Page TS / B 3.6-29	2
	Page TS / B 3.6-30	1
	Page TS / B 3.6-31	3
	Page TS / B 3.6-32	0
	Page TS / B 3.6-33	1
	Pages TS / B 3.6-34 and TS / B 3.6-35	0
	Page TS / B 3.6-36	1
	Page TS / B 3.6-37	0
	Page TS / B 3.6-38	3
	Page TS / B 3.6-39	2
	Page TS / B 3.6-40	6
	Page B 3.6-41	1
	Pages B 3.6-42 and B 3.6-43	3
	Pages TS / B 3.6-44 and TS / B 3.6-45	1
	Page TS / B 3.6-46	2
	Pages TS / B 3.6-47 through TS / B 3.6-51	1
	Page TS / B 3.6-52	2
	Pages TS / B 3.6-53 through TS / B 3.6-56	0
	Page TS / B 3.6-57	1
	Page TS / 3.6-58	2
	Pages B 3.6-59 through B 3.6-63	0
	Pages TS / B 3.6-64 and TS / B 3.6-65	1
	Pages B 3.6-66 through B 3.6-69	0
	Pages TS / B 3.6-70 through TS / B 3.6-72	1
	Page TS / B 3.6-73	2
	Pages TS / B 3.6-74 and TS / B 3.6-75	1
	Pages B 3.6-76 and B 3.6-77	0
	Page TS / B 3.6-78	1
	Pages B 3.6-79 through B 3.3.6-83	0
	Page TS / B 3.6-84	3
	Page TS / B 3.6-85	2
	Page TS / B 3.6-86	4
	Pages TS / B 3.6-87 through TS / B 3.6-88a	2
	Page TS / B 3.6-89	4
	Page TS / B 3.6-90	2
	Page TS / B 3.6-91	3
	Pages TS / B 3.6-92 through TS / B 3.6-96	1
	Page TS / B 3.6-97	2
	Pages TS / B 3.6-98 and TS / B 3.6-99	1
	Page TS / B 3.6-100	2
	Pages TS / B 3.6-101 and TS / B 3.6-102	1

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Pages TS / B 3.6-103 and TS / B 3.6-104	2
	Page TS / B 3.6-105	3
	Page TS / B 3.6-106	2
	Page TS / B 3.6-107	3
B 3.7	PLANT SYSTEMS BASES	
	Pages TS / B 3.7-1	3
	Page TS / B 3.7-2	4
	Pages TS / B 3.7-3 through TS / B 3.7-5	3
	Page TS / B 3.7-5a	0
	Pages TS / B 3.7-6 and TS / B 3.7-6a	2
	Page TS / B 3.7-6b	1
	Page TS / B 3.7-6c	2
	Page TS / B 3.7-7	3
	Page TS / B 3.7-8	2
	Pages TS / B 3.7-9 through TS / B 3.7-11	1
	Pages TS / B 3.7-12 and TS / B 3.7-13	2
	Pages TS / B 3.7-14 through TS / B 3.7-18	3
	Page TS / B 3.7-18a	1
	Pages TS / B 3.7-18b through TS / B 3.7-18e	0
	Pages TS / B 3.7-19 through TS / B 3.7-23	1
	Page TS / B 3.7-24	1
	Pages TS / B 3.7-25 and TS / B 3.7-26	0
	Pages TS / B 3.7-27 through TS / B 3.7-29	5
	Page TS / B 3.7-30	2
	Page TS / B 3.7-31	1
	Page TS / B 3.7-32	0
	Page TS / B 3.7-33	1
	Pages TS / B 3.7-34 through TS / B 3.7-37	0
B 3.8	ELECTRICAL POWER SYSTEMS BASES	
	Page TS / B 3.8-1	3
	Pages TS / B 3.8-2 and TS / B 3.8-3	2
	Page TS / B 3.8-4	3
	Pages TS / B 3.8-4a and TS / B 3.8-4b	0
	Page TS / B 3.8-5	5
	Page TS / B 3.8-6	3
	Pages TS / B 3.8-7 through TS/B 3.8-8	2
	Page TS / B 3.8-9	4
	Page TS / B 3.8-10	3
	Pages TS / B 3.8-11 and TS / B 3.8-17	2
	Page TS / B 3.8-18	3
	Pages TS / B 3.8-19 through TS / B 3.8-21	2
	Pages TS / B 3.8-22 and TS / B 3.8-23	3
	Pages TS / B 3.8-24 through TS / B 3.8-37	2
	Pages B 3.8-38 through B 3.8-44	0

SUSQUEHANNA STEAM ELECTRIC STATION
LIST OF EFFECTIVE SECTIONS (TECHNICAL SPECIFICATIONS BASES)

<u>Section</u>	<u>Title</u>	<u>Revision</u>
	Page TS / B 3.8-45	1
	Pages TS / B 3.8-46 through B 3.8-48	0
	Page TS / B 3.8-49	1
	Pages B 3.8-50 through B 3.8-53	0
	Pages TS / B 3.8-54 through TS / B 3.8-57	2
	Pages TS / B 3.8-58 through TS / B 3.8-61	3
	Pages TS / B 3.8-62 and TS / B 3.8-63	5
	Page TS / B 3.8-64	4
	Page TS / B 3.8-65	5
	Pages TS / B 3.8-66 through TS / B 3.8-77	1
	Pages TS / B 3.8-77A through TS / B 3.8-77C	0
	Pages B 3.8-78 through B 3.8-80	0
	Page TS / B 3.8-81	1
	Pages B 3.8-82 through B 3.8-90	0
B 3.9	REFUELING OPERATIONS BASES	
	Pages TS / B 3.9-1 and TS / B 3.9-1a	1
	Pages TS / B 3.9-2 through TS / B 3.9-4	1
	Pages B 3.9-5 through B 3.9-18	0
	Pages TS / B 3.9-19 through TS / B 3.9-21	1
	Pages B 3.9-22 through B 3.9-30	0
B 3.10	SPECIAL OPERATIONS BASES	
	Page TS / B 3.10-1	2
	Pages TS / B 3.10-2 through TS / B 3.10-5	1
	Pages B 3.10-6 through B 3.10-31	0
	Page TS / B 3.10-32	2
	Page B 3.10-33	0
	Page TS / B 3.10-34	1
	Pages B 3.10-35 and B 3.10-36	0
	Page TS / B 3.10-37	1
	Page TS / B 3.10-38	2

TSB1 Text LOES.doc
12/31/09

B 3.7 PLANT SYSTEMS

B 3.7.3 Control Room Emergency Outside Air Supply (CREOAS) System

BASES

BACKGROUND The CREOAS System provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. This radiologically controlled environment is termed the Control Room Envelope (CRE) and is comprised of Control Structure floor elevations 697'-0" through 783'-0" including the stairwells as described in FSAR Section 6.4 (Ref. 5).

The safety related function of the CREOAS System includes two independent and redundant high efficiency air filtration subsystems for emergency treatment of outside supply air and a CRE boundary that limits the inleakage of unfiltered air. Each CREOAS subsystem consists of an electric heater, a prefilter, an upstream high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section, a downstream HEPA filter, a CREOAS fan, a control structure heating and ventilation fan, a control room floor cooling fan, a computer room floor cooling fan, and the associated ductwork, valves or dampers, doors, barriers, and instrumentation. Prefilters and HEPA filters remove particulate matter, which may be radioactive. The charcoal adsorbers provide a holdup period for gaseous iodine, allowing time for decay. With the exception of the CREOAS fan, all other CREOAS subsystem fans operate continuously to maintain the affected compartments environment. These other ventilation fans operate independently of the CREOAS fans and are required to operate to ensure a positive pressure in the control structure is maintained utilizing filtered outside air supplied by the CREOAS fans.

The CRE is the area within the confines of the CRE boundary that contains the spaces that control room occupants inhabit to control the unit during normal and accident conditions. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident. The CRE is protected during normal operation, natural events, and

(continued)

BASES

BACKGROUND (continued)

accident conditions. The CRE boundary is the combination of walls, floor, roof, ducting, doors, penetrations and equipment that physically form the CRE. The OPERABILITY of the CRE boundary must be maintained to ensure that the inleakage of unfiltered air into the CRE will not exceed the inleakage assumed in the licensing basis analysis of design basis accident (DBA) consequences to CRE occupants. The CRE and its boundary are defined in the Control Room Envelope Habitability Program.

Upon receipt of the initiation signal(s) (indicative of conditions that could result in radiation exposure to CRE occupants), the CREOAS System automatically switches to the pressurization/filtration mode of operation to minimize infiltration of contaminated air into the CRE. A system of dampers aligns the outside air intake to the CREOAS fan suction and filter train. Outside air is taken in at the normal ventilation intake and passed through one of the charcoal adsorber filter subsystems. The filtered air leaving the CREOAS filtration train is routed to the inlet of the other ventilation fans for distribution.

One of the CREOAS System design requirements is to maintain a habitable environment in the CRE for a 30 day continuous occupancy after a DBA without exceeding 5 rem whole body dose or its equivalent to any part of the body. A single CREOAS subsystem operating at a flow rate of ≤ 5810 cfm with an intact CRE will pressurize the CRE (which includes the control room) to greater than or equal to 0.125 inches water gauge relative to external areas adjacent to the CRE boundary to minimize infiltration of air from all surrounding areas adjacent to the CRE boundary. CREOAS System operation in maintaining CRE habitability is discussed in the FSAR, Chapters 6 and 9, (Refs. 1 and 2, respectively).

APPLICABLE SAFETY ANALYSES

The ability of the CREOAS System to maintain the habitability of the CRE is an explicit assumption for the safety analyses presented in the FSAR, Chapters 6 and 15 (Refs. 1 and 3,

(continued)

BASES

APPLICABLE
SAFETY
ANALYSES
(continued)

respectively). The pressurization/filtration mode of the CREOAS System is assumed to operate following a DBA as discussed in the FSAR, Section 6.4.1 (Ref. 4). The radiological doses to the CRE occupants as a result of the various DBAs are summarized in Reference 3. No single active failure will cause the loss of outside or recirculated air from the CRE.

The CREOAS System provides protection from smoke and hazardous chemicals to the CRE occupants. The analysis of hazardous chemical releases demonstrates that the toxicity limits are not exceeded in the CRE following a hazardous chemical release (Ref. 5). The evaluation of a smoke challenge demonstrates that it will not result in the inability of the CRE occupants to control the reactor either from the control room or from the remote shutdown panels (Ref. 6).

The CREOAS System satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Two redundant subsystems of the CREOAS System are required to be OPERABLE to ensure that at least one is available, if a single active failure disables the other subsystem. Total CREOAS System failure, such as from a loss of both ventilation subsystems or from an inoperable CRE boundary, could result in exceeding a dose of 5 rem whole body or equivalent to the CRE occupants in the event of a DBA.

Each CREOAS subsystem is considered OPERABLE when the individual components necessary to limit CRE occupant exposure are OPERABLE. Both subsystems are considered OPERABLE when:

- a. Both filter trains each consisting of a CREOAS fan heater, a HEPA filter, and charcoal adsorber which is not excessively restricting flow is OPERABLE; and
- b. Both Control Structure Heating and Ventilation fans, Computer Room Floor Cooling fans, and Control Room Floor Cooling fans are OPERABLE; and

(continued)

BASES

LCO
(continued)

c. Ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

d. Neither Smoke Removal Fan (0V104A/B) is in operation.

One subsystem is considered OPERABLE when:

a. One filter train consisting of a CREOAS fan, heater, a HEPA filter, and charcoal adsorber which is not excessively restricting flow is OPERABLE; and

b. The 'A' Control Structure Heating and Ventilation fan (0V103A) and the 'A' Computer Room Floor Cooling fan (0V115A) and the 'A' Control Room Floor Cooling fan (0V117A) are OPERABLE

OR

The 'B' Control Structure Heating and Ventilation fan (0V103B) and the 'B' Computer Room Floor Cooling fan (0V115B) and the 'B' Control Room Floor Cooling fan (0V117B) are OPERABLE

(These fans are not dedicated to either CREOAS subsystem. As a result when any one set of fans is not OPERABLE, one arbitrarily determined CREOAS subsystem is not OPERABLE); and

c. Ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

d. Neither Smoke Removal Fan (0V104A/B) is in operation.

In order for the CREOAS subsystems to be considered OPERABLE, the CRE boundary must be maintained such that the CRE occupant dose from a large radioactive release does not exceed the calculated dose in the licensing basis consequence analyses for DBAs, and that CRE occupants are protected from hazardous chemicals and smoke. Note the CRE can not be maintained with a smoke removal fan (0V104A or 0V104B) in operation.

(continued)

BASES

LCO
(continued)

The LCO is modified by a Note allowing the CRE boundary to be opened intermittently under administrative controls. This Note only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls should be proceduralized and consist of stationing a dedicated individual at the opening who is in continuous communication with the operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated.

APPLICABILITY

In MODES 1, 2, and 3, the CREOAS System must be OPERABLE to ensure that the CRE will remain habitable during and following a DBA, since the DBA could lead to a fission product release.

In MODES 4 and 5, the probability and consequences of a DBA are reduced because of the pressure and temperature limitations in these MODES. Therefore, maintaining the CREOAS System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

- a. During operations with a potential for draining the reactor vessel (OPDRVs);
 - b. During CORE ALTERATIONS; and
 - c. During movement of irradiated fuel assemblies in the secondary containment.
-

(continued)

BASES

ACTIONS

A.1

With one CREOAS subsystem inoperable, for reasons other than an inoperable CRE boundary, the inoperable CREOAS subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE CREOAS subsystem is adequate to perform the CRE occupant protection function. However, the overall reliability is reduced because a failure in the OPERABLE subsystem could result in loss of the CREOAS System function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and that the remaining subsystem can provide the required capabilities.

B.1, B.2, and B.3

If the unfiltered inleakage of potentially contaminated air past the CRE boundary and into the CRE can result in CRE occupant radiological dose greater than the calculated dose of the licensing basis analyses of DBA consequences (allowed to be up to 5 rem whole body or its equivalent to any part of the body), or inadequate protection of CRE occupants from hazardous chemicals or smoke, the CRE boundary is inoperable. Actions must be taken to restore an OPERABLE CRE boundary within 90 days.

During the period that the CRE boundary is considered inoperable, action must be initiated to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from hazardous chemicals and smoke. These mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional.

(continued)

BASES

ACTIONS
(continued)

B.1, B.2, and B.3 (continued)

The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

C.1 and C.2

In MODE 1, 2, or 3, if the inoperable CREOAS subsystem or the CRE boundary cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

(continued)

BASES

ACTIONS (continued)

D.1, D.2.1, D.2.2, and D.2.3

The Required Actions of Condition D are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require either an entry into LCO 3.0.3 or a reactor shutdown in accordance with LCO 3.0.3.

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, if the inoperable CREOAS subsystem cannot be restored to OPERABLE status within the required Completion Time, the OPERABLE CREOAS subsystem may be placed in the pressurization/filtration mode. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent automatic actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action D.1 is to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the CRE. This places the unit in a condition that minimizes the accident risk.

If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and the subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

E.1

If both CREOAS subsystems are inoperable in MODE 1, 2, or 3, for reasons other than an inoperable CRE boundary (i.e., Condition B) the CREOAS System may not be capable of performing the intended function and the unit is in a condition outside of the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

(continued)

BASES

ACTIONS (continued)

F.1, F.2, and F.3

The Required Actions of Condition F are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require either an entry into LCO 3.0.3 or a reactor shutdown in accordance with LCO 3.0.3.

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, with two CREOAS subsystems inoperable or with one or more CREOAS subsystems inoperable due to an inoperable CRE boundary, action must be taken immediately to suspend activities that present a potential for releasing radioactivity that might require pressurization of the CRE. This places the unit in a condition that minimizes the accident risk.

If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. If applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR verifies that a CREOAS fan in a standby mode starts on demand from the control room and continues to operate with flow through the HEPA filters and charcoal adsorbers. Standby systems should be checked periodically to ensure that they start and function properly. As the environmental and normal operating conditions of this system are not severe, testing each subsystem once every month provides an adequate check on this system. Monthly heater operation dries out any moisture that has accumulated in the charcoal as a result of humidity in the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1 (continued)

ambient air. Systems with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Furthermore, the 31 day Frequency is based on the known reliability of the equipment and the availability of two redundant subsystems.

SR 3.7.3.2

This SR verifies that the required CREOAS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test Frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.3.3

This SR verifies that on an actual or simulated initiation signal, each CREOAS subsystem starts and operates. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.7.1.5 overlaps this SR to provide complete testing of the safety function. The 24 month Frequency is consistent with industry practice and other filtration systems SRs.

SR 3.7.3.4

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air leakage past the CRE boundary and into the CRE. The details of the testing are specified in the Control Room Envelope Habitability Program.

The CRE is considered habitable when the radiological dose to CRE occupants calculated in the licensing basis analyses of DBA consequences is no more than 5 rem whole body or its equivalent to any part of the body and the CRE occupants are protected from hazardous chemicals and smoke. This SR verifies that the unfiltered air leakage into the CRE is no

(continued)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

greater than the flow rate assumed in the licensing basis analyses of DBA consequences. When unfiltered air inleakage is greater than the assumed flow rate, Condition B must be entered. Required Action B.3 allows time to restore the CRE boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 7) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 8). These compensatory measures may also be used as mitigating actions as required by Required Action B.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 9). Options for restoring the CRE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the CRE boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the CRE boundary has been restored to OPERABLE status.

BASES

REFERENCES

1. FSAR, Chapter 6.
 2. FSAR, Chapter 9.
 3. FSAR, Chapter 15.
 4. FSAR, Section 6.4.1.
 5. FSAR, Section 6.4.
 6. FSAR, Section 9.5.
 7. Regulatory Guide 1.196.
 8. NEI 99-03, "Control Room Habitability Assessment," June 2001.
 9. Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040300694).
-