Nuclear Operating Company

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

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South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Revised Request for Exemption to Exclude Certain Components
From The Scope of Special Treatment Requirements Required by Regulations

Reference 1: Draft Safety Evaluation on Exemption Requests from Special Treatment Requirements of 10CFR Parts 21, 50, and 100 (TAC Nos. MA6057 and MA6058), dated November 15, 2000

In Reference 1, the Nuclear Regulatory Commission (NRC) responded to the STP Nuclear Operating Company's (STPNOC) request for an exemption from various special treatment requirements found in the regulations. The NRC response, via a Draft Safety Evaluation Report, included sixteen Open Items and two Confirmatory Items in the body of the response. STPNOC has previously forwarded responses to five of the Open Items. STPNOC now encloses 5 additional responses and 1 revised response. The 6 enclosed responses are attached, and includes replies to Open Item 3.4, Open Item 5.1, Open Item 7.1, and Confirmatory Item 4.1, Confirmatory Item 4.2, and a revision to Open Item 3.1.

STPNOC anticipates forwarding the remainder of the Open Item and Confirmatory Item responses to the NRC by January 26, 2001.

Attachment 1	Open Item 3.4
Attachment 2	Open Item 5.1
Attachment 3	Open Item 7.1
Attachment 4	Confirmatory Item 4.1
Attachment 5	Confirmatory Item 4.2
Attachment 6	Revised Open Item 3.1

If you have any questions, please call Mr. Glen E. Schinzel at 361-972-7854 or me at 361-972-8757.

/pld

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Attachment 1

Open item 3.4: STPNOC needs to clarify how it addresses the significance of SSCs that function to protect the integrity of the containment for consequence mitigation in its categorization process.

Response:

STPNOC s deterministic categorization process evaluates system functions based on answering a set of questions and providing the basis for the answers. For the systems categorized to date, the system functions related to protecting containment integrity are shown on Attachment 1. With one exception, all of the functions were categorized as Medium. The one exception pertains to the containment pressure input signals for safety injection, containment spray, and isolation - - this function was rated low in part because other signals (such as pressurizer level and containment pressure) perform a similar function.

At the component level, the deterministic categorization process provides for the initial risk of components to be the same risk as the most limiting system function. In the case of components supporting the subject functions, these components were initially categorized as Medium. As detailed in Attachment 2, the Working Group then deliberates further on the initial risk categorization. In cases where failure of an individual component will not fail the function, due to redundancy, diversity, or other factors and where component reliability has been good, the initial risk may be lowered. For the subject components, which are shown on Attachment 3, the Working Group determined that there existed substantial redundancy and diversity, such that a component failure would not result in loss of the function. Thus, the component risk could be lowered. For each component, the basis that the Working Group used to justify the lower risk is documented in the last column. The final risk was consistent with that provided by the PRA.

For components associated with providing containment isolation, STPNOC categorizes these as LSS only if they meet certain criteria as detailed in Attachment 4, which was included in the exemption request. These containment isolation valves are categorized as LSS only if failure of these components to isolate would not result in a radiation release to the public. However, some components that provide containment isolation, notably the Reactor Containment Building HVAC containment isolation valves, were categorized as MSS. The Reactor Containment Building HVAC system directly interacts with the environment. In addition, the line (duct) size is large, and failure to isolate the line concurrent with a purging operation could lead to a radiation release. Thus, the categorization process factored in this increased risk and ranked these valves as MSS.

Finally, Attachment 5 demonstrates that late containment failure is not a significant contributor to risk at STP. Large, dry containments, like the ones at STP, have been shown to be robust under severe accident conditions, including conditions that are present late during an accident. Thus, even if the functions that serve to protect the integrity of the containment are themselves lost, it is extremely unlikely that containment integrity would be compromised in such a way as to impact the public health and safety in the late stages of an accident. Furthermore, the dominant contributor to risk is early fatalities, not latent fatalities. Late containment failures would not pose an undue risk to public health and safety because offsite emergency protective actions would be implemented prior to release, thereby reducing any potential for risk to the public even if a large release were to occur.

In summary, late containment failure at STPEGS is not a significant contributor to fatalities or overall risk. Therefore, STPEGS concludes that the potential for late containment failure need not be considered in the STPEGS categorization process. Instead, the categorization process at STPEGS appropriately focuses on the dominant contributors to risk - - core damage frequency and large early releases.

ATTACHMENT 1
SYSTEM FUNCTIONS THAT PROTECT CONTAINMENT INTEGRITY

(For systems risk categorized to date and not including containment isolation functions)

SYS	ID	FUNC_DESC	RISK	INIT	FRS	ACC	EOP	SD	DETERMINISTIC_INPUT
CC	1.2.2	CIRCULATE COOLING WATER TO THE REACTOR CONTAINMENT FAN COOLERS (RCFCs) DURING ACCIDENT CONDITIONS	MEDIUM	0	3	2	3	1	INIT: THIS FUNCTION IS IN RESPONSE TO AN INITIATING EVENT --- FRS: LOSS OF THIS FUNCTION WOULD FAIL THE RCFC DURING ACCIDENT CONDITIONS --- ACC: FUNCTION REQUIRED FOR HEAT REMOVAL FROM THE CONTAINMENT BUILDING. MINOR IMPACT FOR MITIGATION --- EOP: RCFCS ARE ONE SYSTEM THAT PROVIDES CONTAINMENT HEAT REMOVAL. CONTAINMENT SPRAY SYSTEM IS ALSO AVAILABLE TO SUPPORT CONTAINMENT HEAT REMOVAL IF NECESSARY. --- SD: LOWER RCS TEMPERATURES AND PRESSURES WHILE THE PLANT IS SHUTDOWN REDUCES THE IMPACT IF THIS FUNCTION WERE LOST. NO EFFECT ON MODE CHANGE ACTIVITIES.
HC	1.1.2	VENTILATE AND COOL THE MAIN AREA REACTOR CONTAINMENT BUILDING DURING ACCIDENT CONDITIONS	MEDIUM	0	3	2	3	2	INIT: LOSS OF THIS FUNCTION, IN OF ITSELF, WILL NOT CAUSE AN INITIATING EVENT. --- FRS: LOSS OF FUNCTION DURING ACCIDENT CONDITIONS WOULD BE MITIGATED BY THE AVAILABILITY OF THE CONTAINMENT SPRAY SYSTEM --- ACC: LOSS OF THIS FUNCTION WILL IMPACT ACCIDENT/TRANSIENT MITIGATION. IMPACT TO CORE DAMAGE OR LARGE EARLY RELEASE FREQUENCIES IS LOW. --- EOP: THIS FUNCTION IS NOT SPECIFICALLY CALLED OUT IN THE EOPS OR ERPS. --- S/D - FAILURE OF THIS FUNCTION WOULD NOT AFFECT S/D OR MODE CHANGE ACTIVITIES.
HC	3.2.1	TRANSFER AND OPERATE MAIN AREA REACTOR CONTAINMENT BUILDING VENTILATION IN THE EMERGENCY MODE	MEDIUM	0	3	2	3	2	INIT: LOSS OF THIS FUNCTION, IN OF ITSELF, WILL NOT CAUSE AN INITIATING EVENT. --- FRS: LOSS OF FUNCTION DURING ACCIDENT CONDITIONS WOULD BE MITIGATED BY THE AVAILABILITY OF THE CONTAINMENT SPRAY SYSTEM --- ACC: LOSS OF THIS FUNCTION COULD HAMPER MITIGATION OF ACCIDENTS/TRANSIENTS. IMPACT TO CORE DAMAGE FREQUENCY IS LOW. --- EOP: RCFCS PROVIDE COOLING. CARBON FILTERS ARE PLACED IN SERVICE FOLLOWING SOME ACCIDENTS TO REDUCE IODINE CONCENTRATIONS. CRDM VENT FANS AND CAVITY AND VESSEL SUPPORT FANS AID NATURAL CIRC COOLDOWN. ERPS-THIS FUNCTION NOT SPECIFICALLY MENTIONED. --- S/D - RCFCS PROVIDE COOLING. CARBON FILTERS ARE PLACED IN SERVICE FOLLOWING SOME ACCIDENTS TO REDUCE IODINE CONCENTRATIONS. CRDM VENT FANS AND CAVITY AND VESSEL SUPPORT FANS AID NATURAL CIRC COOLDOWN. MODE CHANGE-FAILURE MAY DELAY PLANT COOLDOWN.
HC	3.2.6	PROVIDE CONTAINMENT PRESSURE INPUT SIGNALS FOR SAFETY INJECTION, CONTAINMENT SPRAY, AND CONTAINMENT ISOLATION	LOW	0	3	2	2	2	INIT: LOSS OF THIS FUNCTION, IN OF ITSELF, WILL NOT CAUSE AN INITIATING EVENT. --- FRS: SIGNALS ARE IMPORTANT TO IDENTIFYING ACCIDENT CONDITIONS AND INITIATING RECOVERY ACTIONS. HOWEVER, OTHER SIGNALS SUCH AS LOW-LOW PRESSURIZER LEVEL AND CONTAINMENT TEMPERATURE ARE AVAILABLE, AS ARE MANUAL BACKUP ACTIONS --- ACC: THIS FUNCTION IS REQUIRED FOR ACCIDENT/TRANSIENT MITIGATION. IMPACT TO CORE DAMAGE AND/OR LARGE EARLY RELEASE FREQUENCIES IS LOW. --- EOP: AUTOMATIC ACTUATION IS VERIFIED BUT MANUAL OPERATOR ACTION BASED ON CONTAINMENT PRESSURE IS SPECIFIED IN THE EOPS IF NECESSARY. ERPS-THIS FUNCTION NOT SPECIFICALLY MENTIONED. --- S/D - REDUCED PRIMARY AND SECONDARY TEMPERATURES AND PRESSURES WOULD MAKE FAILURE OF THIS FUNCTION LESS SIGNIFICANT AND TYPICALLY THIS SIGNAL IS DEFEATED WHEN THE PLANT ENTERS MODE 5 BY PLACING SSPS IN TEST. MODE CHANGE NO EFFECT.
HC	5.2	MAINTAIN CONTAINMENT PRESSURE WITHIN DESIGN LIMITS DURING ACCIDENT CONDITIONS	MEDIUM	0	4	2	4	2	INIT: THIS FUNCTION IS IN RESPONSE TO AN INITIATING EVENT. --- FRS: FAILURE WOULD IMPACT THE CONTAINMENT BUILDING INTEGRITY --- ACC: THIS FUNCTION IS REQUIRED FOR ACCIDENT/TRANSIENT MITIGATION. IMPACT TO CORE DAMAGE AND/OR LARGE EARLY RELEASE FREQUENCIES IS LOW. --- EOP: FAILURE OF THIS FUNCTION MAY RESULT IN LOSS OF LAST BARRIER TO FISSION PRODUCT RELEASE. ERPS-FAILURE OF CONTAINMENT WOULD REQUIRE ENTRY INTO EAL OR POSSIBLE ESCALATION TO HIGHER LEVEL. --- S/D - REDUCED PRIMARY AND SECONDARY TEMPERATURES AND PRESSURES WOULD MAKE FAILURE OF THIS FUNCTION LESS SIGNIFICANT. MODE CHANGE NO EFFECT.

Legend: INIT = Could directly cause or has caused an initiating event; FRS = Could Fail Risk Significant system; EOP = Used in EOPs and/or ERPs; ACC = Mitigates accidents or transients ; SD = Shutdown or Mode Change safety significant; 0 = negative response, 1-5 = positive responses with 5 being most positive ; NRS = Not Risk Significant

ATTACHMENT 1
SYSTEM FUNCTIONS THAT PROTECT CONTAINMENT INTEGRITY

(For systems risk categorized to date and not including containment isolation functions)

SYS	ID	FUNC_DESC	RISK	INIT	FRS	ACC	EOP	SD	DETERMINISTIC_INPUT
HF	2.3	PROVIDE COOLING FOR THE SAFETY INJECTION PUMP AND CONTAINMENT SPRAY PUMP CUBICLES	MEDIUM	0	5	4	2	1	INIT: LOSS OF THIS FUNCTION WILL NOT IMMEDIATELY CAUSE A CHALLENGE TO THE PLANT. --- FRS: LOSS OF THIS FUNCTION COULD CAUSE LOSS OF THESE PUMPS ON OVERHEATING --- ACC: THE NUMBER OF ROOM COOLERS REQUIRED IS N-1, WHERE N IS THE NUMBER OF SAFETY INJECTION TRAINS RUNNING. FOR MOST LOCA SCENARIOS, COOLING OF THESE AREAS IS NOT REQUIRED SINCE ONLY ONE SAFETY INJECTION TRAIN WOULD BE RUNNING (BECHTEL ENGINEERING CALC) --- EOP: FHB HVAC SYSTEM/COMPONENT RESPONSE IS VERIFIED IN THE EOPs. OPERATOR ACTION TO MANUALLY REALIGN EQUIPMENT IS DIRECTED IN THE EOPs IN THE EVENT AUTOMATIC FUNCTIONS FAIL. THIS FUNCTION IS NOT CALLED OUT IN THE ERPs. --- S/D - LOSS OF THIS FUNCTION WOULD REQUIRE OPERATOR ACTION TO MONITOR ROOM TEMPERATURES AND/OR PROVIDE COMPENSATORY ACTIONS (E.G. PROVIDE TEMPORARY VENTILATION). MODE CHANGE - NO EFFECT.
HF	5.9	PROVIDE FOR THE MANUAL START OF SAFETY INJECTION AND CONTAINMENT SPRAY PUMP CUBICLE COOLERS	MEDIUM	0	5	4	2	1	INIT: LOSS OF THIS FUNCTION WILL NOT IMMEDIATELY CAUSE A CHALLENGE TO THE PLANT. --- FRS: LOSS OF THIS FUNCTION COULD CAUSE LOSS OF THESE PUMPS ON OVERHEATING --- ACC: BACK-UP IN CASE THE AUTO START FUNCTION FAILS. REFER TO FUNCTION 2.3 FOR BASIS --- EOP: FHB HVAC SYSTEM/COMPONENT RESPONSE IS VERIFIED IN THE EOPs. OPERATOR ACTION TO MANUALLY REALIGN EQUIPMENT IS DIRECTED IN THE EOPs IN THE EVENT AUTOMATIC FUNCTIONS FAIL. THIS FUNCTION IS NOT CALLED OUT IN THE ERPs. --- S/D - LOSS OF THIS FUNCTION WOULD REQUIRE OPERATOR ACTION TO MONITOR ROOM TEMPERATURES AND/OR PROVIDE COMPENSATORY ACTIONS (E.G. PROVIDE TEMPORARY VENTILATION). MODE CHANGE - NO EFFECT.

Legend: INIT = Could directly cause or has caused an initiating event; FRS = Could Fail Risk Significant system; EOP = Used in EOPs and/or ERPs; ACC = Mitigates accidents or transients ; SD = Shutdown or Mode Change safety significant; 0 = negative response, 1-5 = positive responses with 5 being most positive ; NRS = Not Risk Significant

4. Determining Risk Significance of Components

4.1 The system function risk ranking is combined with the matrix of system functions supported by each component (from the previous review) to determine the highest-risk (most limiting) function that each component supports. This risk is then initially assigned to the component. For example, if the component supports two system functions and one function is ranked Low and the other Medium, then the initial risk of the component is Medium.

4.2 The GQA Working Group performs a deterministic review of this initial risk to ensure appropriateness. Factors that are considered include:

- Validating that system functions supported by the component have been adequately captured.
- Members insights, including the results of data reviews within their area of responsibility (section 6.3.2).
- System engineer input
- Component redundancy or diversity
- Probability of failure

4.3 The GQA Working Group can take credit for component redundancy or diversity of functions as a basis for assigning a risk that is lower than the initial risk. Looking at the highest-risk system function supported by a particular component, the following question is asked: Will failure of the component fail the function? Possible answers are:

- Yes.
- No, because there is a redundant component available to support the function (e.g., failure of a boric acid tank will not fail the function of storing and transferring boric acid solution into the RCS because there is a 2nd boric acid tank available).
- No, because there is another means to accomplish the function (e.g., failure of the Emergency Boration MOV (from boric acid tank) will not prevent the capability to provide safe shutdown boration because the RWST is also available).

If the component failure will not fail the function and the reliability of the component has been good, then credit for redundancy or diversity may be taken. In such cases, the component risk may be ranked lower than the most limiting system function risk. On the other hand, if the component failure will fail the function or if credit for component reliability cannot be taken, then the component is ranked at the same risk as the most limiting system function it supports. It should be emphasized that the Working Group should use conservative judgment when taking credit for component redundancy or diversity.

4.4 In all cases where the final deterministic risk is not the same as the initial risk, appropriate justification shall be documented for the subject component, either by specific textual basis or by reference to a general note.

ATTACHMENT 3
COMPONENTS THAT FUNCTION TO PROTECT CONTAINMENT INTEGRITY

(For systems risk categorized to date and not including containment isolation components)

SYS	COMP_ID	COMP_DESC	RISK	DETERMINISTIC_INPUT
CC	3R201TCC0015	(IRC) CCW TRAIN A SUPPLY TO RCFC	LOW	NORMALLY LOCKED OPEN TO ENSURE CHILLED WATER OR CCW IS AVAILABLE TO THE RCFCs. VALVES MAY BE CLOSED WHEN IT IS DESIRABLE TO ISOLATE SECTIONS OF THE CCWS FOR MAINTENANCE.
CC	A1CCMOV0057	RCFC TRAIN A CCW SUPPLY ISOLATION MOV OPERATOR	LOW	VALVE IS NORMALLY CLOSED TO ISOLATE CCW FROM THE RCFCs AND OPENS ON A SAFETY INJECTION SIGNAL TO PROVIDE CCW TO THE RCFCs. VALVE CLOSES TO PROVIDE CONTAINMENT ISOLATION. OPERATOR ACTION IS REQUIRED TO REMOTE MANUALLY OPEN THESE VALVES WITH 30 MINUTES AFTER A LOOP. THE FOLLOWING ADDITIONAL DISCUSSION IS PROVIDED FOR THE ASSOCIATED VALVE. FAILURE OF VALVE TO OPEN MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	2R201TCC0057	CC-MOV-0057 (A CCW TO RCFC UPSTREAM MOV)	LOW	A NORMALLY CLOSED VALVE. PROVIDES CONTAINMENT ISOLATION. IT ALSO ISOLATES THE CCW FROM THE RCFCs. THE NORMAL SUPPLY OF COOLING WATER TO THE RCFCs IS CHILLED WATER. ON A SAFETY INJECTION SIGNAL, THE VALVE OPENS TO PROVIDE CCW TO THE RCFCs. FAILURE OF VALVE TO OPEN MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	2R201TCC0058	(IRC) A TRAIN CCW TO RCFC'S ICIV CHECK VALVE	LOW	PROVIDE CCW TO THE RCFCs IN THE EVENT OF A SAFETY INJECTION SIGNAL OR A LOOP. PROVIDE CONTAINMENT ISOLATION. NORMALLY OPEN CHECK VALVE. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION DICTATE RISK.
CC	2R201TCC0059	CC-MOV-0059 (CHILL H2O INLET TO TRAIN A RCFC'S)	LOW	VALVE IS NORMALLY OPEN TO PROVIDE CHILLED WATER TO THE RCFCs. VALVE WILL CLOSE ON A SAFETY INJECTION SIGNAL SO THAT CCW WILL BE PROVIDED TO THE RCFCs. VALVE CLOSES TO PROVIDE CONTAINMENT ISOLATION. FAILURE OF VALVE TO CLOSE WILL PREVENT THE OPENING OF THE ASSOCIATED VALVE THAT SUPPLIES CCW, AS THESE VALVES ARE INTERLOCKED. THIS WOULD RESULT IN NO CCW FLOW, BUT CONTINUED CHILLED WATER FLOW TO THE RCFCs. THIS TYPE OF FAILURE IS MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	A1CCMOV0059	RCFC TRAIN A CHILLED WATER SUPPLY ORC ISOLATION MOV OPERATOR	LOW	VALVE IS NORMALLY OPEN TO PROVIDE CHILLED WATER TO THE RCFCs. VALVE WILL CLOSE ON A SAFETY INJECTION SIGNAL SO THAT CCW WILL BE PROVIDED TO THE RCFCs. VALVE CLOSES TO PROVIDE CONTAINMENT ISOLATION. THE FOLLOWING ADDITIONAL DISCUSSION IS PROVIDED FOR THE ASSOCIATED VALVE. FAILURE OF VALVE TO CLOSE WILL PREVENT THE OPENING OF THE ASSOCIATED VALVE THAT SUPPLIES CCW, AS THESE VALVES ARE INTERLOCKED. THIS WOULD RESULT IN NO CCW FLOW, BUT CONTINUED CHILLED WATER FLOW TO THE RCFCs. THIS TYPE OF FAILURE IS MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	A1CCMOV0060	RCFC 12A CHILLED WATER/CCW SUPPLY MOV OPERATOR	NRS	POWER LOCKED OUT AT MCC
CC	3R201TCC0060	(IRC) CC-MOV-0060 (A CCW SUPPLY TO RCFC 12A MOV)	LOW	POWER LOCKED OUT AT MCC
CC	A1CCMOV0063	RCFC 12A CHILLED WATER/CCW RETURN MOV OPERATOR	NRS	POWER LOCKED OUT AT MCC
CC	3R201TCC0063	(IRC) CC-MOV-0063 (A CCW FROM RCFC 12A DISCHARGE)	LOW	POWER LOCKED OUT AT MCC

ATTACHMENT 3
COMPONENTS THAT FUNCTION TO PROTECT CONTAINMENT INTEGRITY
(For systems risk categorized to date and not including containment isolation components)

SYS	COMP_ID	COMP_DESC	RISK	DETERMINISTIC_INPUT
CC	A1CCMOV0064	RCFC 11A CHILLED WATER/CCW SUPPLY MOV OPERATOR	NRS	POWER LOCKED OUT AT MCC
CC	3R201TCC0064	(IRC) A CCW SUPPLY TO RCFC 11A	LOW	POWER LOCKED OUT AT MCC
CC	3R201TCC0067	(IRC) CC-MOV-0067 (RCFC 11A CCW DISCHARGE MOV)	LOW	POWER LOCKED OUT AT MCC
CC	A1CCMOV0067	RCFC 11A CHILLED WATER/CCW RETURN MOV OPERATOR	NRS	POWER LOCKED OUT AT MCC
CC	2R201TCC0068	(IRC) CC-MOV-0068 (A CCW FROM RCFC'S CNTMNT ISOL)	LOW	NORMALLY OPEN VALVE IN RETURN LINE FROM RCFCs. CLOSES FOR CONTAINMENT ISOLATION. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION CONSIDERATIONS DICTATE RISK. VALVE IS ONLY OPERATED BY HANDSWITCH. IT IS NOT ONE OF THOSE VALVES THAT GET AUTOMATICALLY ISOLATED IN THE EVENT OF AN SI AND/OR LOOP SIGNAL OR IN THE EVENT OF A LOW SURGE TANK SIGNAL. VALVE DISK FAILURE OR INADVERTANT OPERATION COULD IMPEDE FLOW; HOWEVER THESE ARE NOT CONSIDERED CREDIBLE EVENTS. GROSS LEAKAGE NOT CREDIBLE. GOOD RELIABILITY BASED ON STP AND INDUSTRY EXPERIENCE. OPERATION OF THE SYSTEM AND THE MONITORING OF SYSTEM PARAMETERS ARE OTHER INDICATORS OF PROPER VALVE STATUS.
CC	A1CCMOV0069	RCFC TRAIN A CCW RETURN ORC ISOLATION MOV OPERATOR	LOW	RCFC DISCHARGE CONTAINMENT ISOLATION VALVE. NORMALLY CLOSED IF RCFC CHILLER SUPPLY AND RETURN VALVES ARE CLOSED. VALVE OPENS ON A SAFETY INJECTION SIGNAL TO ALLOW CCW TO THE RCFCs. VALVE CLOSES TO PROVIDE CONTAINMENT ISOLATION FOR THE RCB. OPERATOR ACTION IS REQUIRED TO REMOTE MANUALLY OPEN VALVE WITHIN 30 MINUTES AFTER A LOOP. VALVE IS NORMALLY CLOSED TO ISOLATE CCW FROM THE RCFCs. NORMAL SUPPLY OF COOLING WATER TO THE RCFCs IS CHILLED WATER. THE FOLLOWING ADDITIONAL DISCUSSION IS PROVIDED FOR THE ASSOCIATED VALVE. FAILURE OF VALVE TO OPEN MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	2R201TCC0069	CC-MOV-0069 (CCW TRAIN A DISCHARGE FROM RCFC'S)	LOW	THE RCFC DISCHARGE CONTAINMENT ISOLATION VALVE IS A NORMALLY CLOSED VALVE USED TO ISOLATE THE CCW FROM THE RCFCs (CHILLED WATER IS THE NORMAL SUPPLY OF COOLING WATER TO THE RCFCs). ON A SAFETY INJECTION SIGNAL, THE VALVE OPENS AND CCW IS SUPPLIED TO THE RCFCs. FAILURE OF VALVE TO OPEN MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	A1CCMOV0070	RCFC TRAIN A CHILLED WATER RETURN ORC ISOLATION MOV OPERATOR	LOW	CLOSE UPON RECEIPT OF A SAFETY INJECTION SIGNAL TO PROVIDE CONTAINMENT ISOLATION AND TO BLOCK CHILLED WATER FLOW TO THE RCFC'S. NORMALLY OPEN TO SUPPLY CHILLED WATER TO THE RCFC'S. THE FOLLOWING ADDITIONAL DISCUSSION IS PROVIDED FOR THE ASSOCIATED VALVE. FAILURE OF VALVE TO CLOSE WILL PREVENT THE OPENING OF THE ASSOCIATED VALVE THAT SUPPLIES CCW, AS THESE VALVES ARE INTERLOCKED. THIS WOULD RESULT IN NO CCW FLOW, BUT CONTINUED CHILLED WATER FLOW TO THE RCFCs. THIS TYPE OF FAILURE IS MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.
CC	2R201TCC0070	CC-MOV-0070 (CHILL H2O RETURN FROM A TRAIN RCFC'S)	LOW	THIS VALVE IS NORMALLY OPEN TO PROVIDE CHILL WATER TO THE RCFCs. THE VALVE CLOSES UPON RECIEVING A SAFETY INJECTION SIGNAL TO PROVIDE CONTAINMENT ISOLATION AND PREVENT CHILL WATER FLOW THROUGH THE RCFCs. FAILURE OF VALVE TO CLOSE WILL PREVENT THE OPENING OF THE ASSOCIATED VALVE THAT SUPPLIES CCW, AS THESE VALVES ARE INTERLOCKED. THIS WOULD RESULT IN NO CCW FLOW, BUT CONTINUED CHILLED WATER FLOW TO THE RCFCs. THIS TYPE OF FAILURE IS MITIGATED BY AVAILABILITY OF THE RCFCs IN THE OTHER TRAINS. PRESSURE BOUNDARY AND CONTAINMENT ISOLATION FUNCTIONS ARE CATEGORIZED AS LOW.

ATTACHMENT 3
COMPONENTS THAT FUNCTION TO PROTECT CONTAINMENT INTEGRITY

(For systems risk categorized to date and not including containment isolation components)

SYS	COMP_ID	COMP_DESC	RISK	DETERMINISTIC_INPUT
CC	3R201TCC0073	CCW TRAIN A TO RCFC	LOW	NORMALLY LOCKED OPEN TO ENSURE CCW IS AVAILABLE TO THE RCFCs. DURING NORMAL OPERATION, CHILLED WATER IS THE NORMAL SUPPLY OF COOLING WATER TO THE RCFCs.
CC	3R201TCC0076	CCW TRAIN A DISCHARGE FROM RCFC	LOW	NORMALLY LOCKED OPEN TO ENSURE CCW IS AVAILABLE TO THE RCFCs. DURING NORMAL OPERATION, CHILLED WATER IS THE NORMAL SUPPLY OF COOLING WATER TO THE RCFCs.
CC	3R201TCC0081	(IRC) CCW TRAIN A FROM RCFC COMMON DISCHARGE	LOW	OPERATOR ACTION IS REQUIRED TO MANUALLY THROTTLE THESE VALVES TO ATTAIN A FLOW RATE OF 1,800 GPM THROUGH EACH RCFC DURING THE RECIRCULATION MODE OF OPERATION. NORMALLY LOCKED IN PLACE TO ENSURE CHILLED WATER OR CCW IS AVAILABLE TO THE RCFCs. VALVES MAY BE CLOSED WHEN IT IS DESIRABLE TO ISOLATE SECTIONS OF CCWS FOR MAINTENANCE. VALVES MAY BE USED TO THROTTLE THE FLOW RATE THROUGH THE RCFCs TO CONTROL COOLING.
CC	A1CCMOV0208	RCFC TRAIN C CHILLED WATER/CCW RETURN IRC ISOLATION MOV OPERATOR	LOW	NORMALLY OPEN VALVE IN RETURN LINE FROM RCFCs. CLOSES FOR CONTAINMENT ISOLATION
HC	2V141VFN001	RCFC 11A	LOW	THE RCFC SUBSYSTEM MAINTAINS THE RCB SPACE AND CONCRETE TEMPERATURE WITHIN THE DESIGN LIMITS, AND PROVIDES ADEQUATE HYDROGEN MIXING DURING NORMAL PLANT OPERATING CONDITIONS. DURING A DESIGN BASIS ACCIDENT THE SUBSYSTEM REMOVES THERMAL ENERGY TO REDUCE PRESSURE AND TEMPERATURE INSIDE THE RCB. ALL RCFC UNITS START AUTOMATICALLY UPON RECEIPT OF A SAFETY INJECTION SIGNAL AND CONTINUE OPERATING, EVEN AFTER THE ACTUATION SIGNAL HAS BEEN RESET, UNTIL THEY ARE MANUALLY STOPPED. FAILURE MITIGATED BY AVAILABILITY OF OTHER RCFC TRAINS.
HC	2V141VXV001	RCFC FAN 11A BACKDRAFT DAMPER	LOW	PREVENT BACKFLOW THROUGH IDLE FAN WHILE OTHER CORRESPONDING FANS ARE OPERATING. THIS PROTECTS THE IDLE FAN MOTOR FROM REVERSE ROTATION AND PREVENTS SHORT CIRCUITING OF AIR FLOW THROUGH THE FANS THAT ARE NOT OPERATING. ALSO THE BACKDRAFT DAMPER PROTECTS THE RCFC ENCLOSURE HOUSING AND RING DUCT AGAINST PRESSURE TRANSIENTS DURING A DBA. FAILURE MITIGATED BY AVAILABILITY OF OTHER RCFC TRAINS.
HC	2V141VXV005	REACTOR CONTAINMENT BUILDING DAMPER	LOW	PREVENT BACKFLOW THROUGH IDLE FAN WHILE OTHER CORRESPONDING FANS ARE OPERATING. THIS PROTECTS THE IDLE FAN MOTOR FROM REVERSE ROTATION AND PREVENTS SHORT CIRCUITING OF AIR FLOW THROUGH THE FANS THAT ARE NOT OPERATING. ALSO THE BACKDRAFT DAMPER PROTECTS THE RCFC ENCLOSURE HOUSING AND RING DUCT AGAINST PRESSURE TRANSIENTS DURING A DBA. FAILURE MITIGATED BY AVAILABILITY OF OTHER RCFC TRAINS.
HC	2V141VHX001	REACTOR CONTAINMENT FAN COOLER COOLING COIL (10 COILS)	LOW	SAFETY FUNCTION: HEAT EXCHANGERS FOR THE REACTOR CONTAINMENT FAN COOLERS (RCFCs) REMOVE THERMAL ENERGY FROM INSIDE THE RCB TO REDUCE THE CONTAINMENT ATMOSPHERE PRESSURE AND TEMPERATURE FOLLOWING LOOP OR A DBA. NORMAL FUNCTION: REDUCE THE THERMAL ENERGY FROM THE CONTAINMENT ATMOSPHERE BY REMOVING HEAT LOADS AND MOISTURE FROM OPERATING EQUIPMENT LOCATED IN THE RCB. THE RCFCs MAINTAIN THE CONTAINMENT TEMPERATURE DURING ALL NORMAL MODES OF OPERATION & DURING ILRT WITHIN A MINIMUM-MAXIMUM RANGE. CREDIT TAKEN FOR REDUNDANCY.
HF	3V121VHX012A	LHSI PUMP COOLER CLG COIL	HIGH	COOL THE AIRSTREAM TO SAFETY INJECTION AND CONTAINMENT SPRAY PUMP ROOM AND MAINTAIN TEMPERATURE WITHIN DESIGN LIMITS
HF	3V121VFN015A	LHSI PUMP CLR SUP. FAN	HIGH	ONE OF TWO FANS (PER TRAIN) WHICH SUPPLY COOLING AIR TO SAFETY INJECTION AND CONTAINMENT SPRAY PUMP ROOM AND MAINTAIN TEMPERATURE WITHIN DESIGN LIMITS. FAN STARTS UPON RECEIPT OF HIGH ROOM TEMPERATURE SIGNAL OR ANY ONE OF HHSI, LHSI OR CS PUMP START SIGNALS.
HF	3V121VAH004	TRAIN A SI/CS PUMP ROOM AIR HANDLING UNIT 11A	HIGH	SUPPLY COOLING AIR TO SAFETY INJECTION AND CONTAINMENT SPRAY PUMP ROOM AND MAINTAIN TEMPERATURE WITHIN DESIGN LIMITS. UNIT STARTS UPON RECEIPT OF HIGH ROOM TEMPERATURE SIGNAL OR ANY ONE OF HHSI, LHSI OR CS PUMP START SIGNALS.

ATTACHMENT 4
CONTAINMENT ISOLATION COMPONENTS

Containment isolation valves are typically categorized as LSS if they meet one or more of the following criteria:

a. The valve is required to operate (i.e., open) under accident conditions to prevent or mitigate core damage events (e.g., CC-MOV-0057, Component Cooling Water to Reactor Containment Fan Coolers).
b. The valve is normally closed and in a physically closed, water-filled system. (e.g., containment isolation valves in the Demineralized Water system)
c. The valve is in a physically closed system whose piping pressure rating exceeds the containment design pressure rating and that is not connected to the reactor coolant pressure boundary (e.g., containment isolation valves in the Component Cooling Water system).
d. The valve is in a closed system whose piping pressure rating exceeds the containment design pressure rating, and is connected to the reactor coolant pressure boundary. The process line between the containment isolation valve and the reactor coolant pressure boundary is non-nuclear safety (i.e., the valve itself would have been classified as non-nuclear safety were it not for the fact that it penetrates the containment building). An example is the Safety Injection accumulator nitrogen supply valve.
e. The valve size is 1 inch NPS or less (i.e., by definition the valve failure does not contribute to large early release).

The above criteria describe a set of penetrations where leakage paths which would threaten public health and safety are not credible. The penetrations meeting criterion 2.a are in a closed system which is under duty during accident conditions and, therefore, represent pathways for mass and inventory to enter containment and, if exiting containment (e.g., recirculation cooling post LOCA), represent mass and inventory which is contained in a closed system. Criterion 2.b penetrations, which are normally water-filled and closed, are eliminated since, in addition to the physical barriers of piping and water inventory, the CIVs are already in a closed position (i.e., the containment isolation function is already satisfied), thus providing an additional physical barrier to prevent leakage. Criterion 2.c represents penetrations where leakage is not possible due to the physical barriers of piping (which is rated higher than containment design pressure), existing water inventories, and actuated valve barriers of various types contained within these closed systems. Criterion 2.d represents containment isolation valves in a closed system where the rating exceeds the containment design pressure rating. This criterion applies to valves connected to the reactor coolant boundary where the process line between the CIV and the reactor coolant boundary is non-nuclear safety. Criterion 2.e is for valves of 1 inch or less in size whose failure will not, by definition, lead to a large early release.

LATE CONTAINMENT FAILURE IS NOT A SIGNIFICANT CONTRIBUTOR TO RISK AT STPEGS.

The categorization of SSCs for STPEGS was performed based on the role of the SSC in preventing and mitigating core damage (i.e., role in CDF) and large early release (i.e., role in LERF). As discussed below, these two measures address the dominant risk factors at STPEGS, and late containment failure of STPEGS is not a significant contributor to risk.

- STPEGS has, what is categorized in PRA analyses, as a large, dry containment. These containments are known to be robust under severe accident conditions, including under conditions postulated to occur late during an accident.

- Level 3 PRAs have shown that the individual early fatality risk is the more limiting safety goal for the current generation of nuclear power plants. LERF is used as a surrogate for early fatality risk. Non-LERF scenarios, such as late containment failures, would not be expected to impact early fatality risk because offsite emergency protective actions would be implemented prior to release. (See NUREG-1150, Volume 1, Figure 12.2)

- Level 3 risk studies of plants with a large, dry containment have found that the dominant contributor to public health and safety, as measured by both early and latent fatalities, is large early releases. For example, the NRC's NUREG-1150 analysis of Zion Nuclear Plant showed that essentially all of the early and latent cancer fatality risk came from either containment bypass scenarios or early containment failures, both of which would be covered by LERF. (See NUREG-1150, Volume 1, Figure 12.8, Zion pie charts).

- Based on industry studies and the Level 2 PRA performed for STPEGS, the dominant late containment failure modes for a large, dry containment do not involve large airborne releases of radionuclides. The dominant late containment failure mode which results in an airborne release of radionuclides is a late overpressure failure which would have relatively small source term and, as a result, relatively little impact on public health and safety.

- Beyond the Level 2 analysis, at STPEGS, the likelihood that external events would prevent the effective implementation of offsite emergency protective actions is small. For example, the advance recognition of hurricane potential allows for the plant to be placed in a safe condition prior to severe weather conditions. The design basis upstream dam failure event also permits advance recognition and allows for personnel evacuation and placement of the plant in a safe condition. High winds, with little advance warning (such as tornadoes), are considered to have a small, localized effect and would have little to no impact on effectively implementing offsite emergency protective actions.

In summary, core damage frequency assesses the likelihood of challenge to the containment and large early release frequency assesses the likelihood of the containment failing to prevent large releases to the public. Late containment failure at STPEGS is not a significant contributor to fatalities or overall risk. Therefore, STPEGS concludes that the potential for late containment failure need not be considered in the STPEGS categorization process, because it is not a dominant contributor to off-site consequences.

Attachment 2

Open item 5.1: As a condition of the exemptions the NRC may grant, the change control exemption conditions described in Section 5.0 of this draft safety evaluation will be imposed.

Response:

As an alternative to the change control exemption conditions described in Section 5.0 of the Draft Safety Evaluation Report, and as discussed during a 12/8/00 meeting between the NRC and STPNOC, the following change control process is proposed. This change control process will supercede the process stated in 13.7.5.3 of the draft FSAR section proposed in the Exemption Request.

Changes affecting FSAR Section 13.7 will be controlled in accordance with the following provisions:

- Changes in the Component Categorization Process as described in Section 13.7.2 may be made without prior NRC approval, unless the change would decrease the effectiveness of the process in identifying HSS and MSS components.

- Changes in the Treatment of Component Categories as described in Section 13.7.3 may be made without prior NRC approval, unless the change would result in more than a minimal reduction in the assurance of component functionality.

- Changes in the Continuing Evaluations and Assessments as described in Section 13.7.4 may be made without prior NRC approval, unless the change would result in more than a minimal decrease in effectiveness of the evaluations and assessments.

STPNOC shall submit a report, as specified in 10CFR50.4, of each change made without prior NRC approval pursuant to these provisions. The report shall identify each change and summarize the basis for the conclusion that the change does not involve either a decrease in effectiveness or a more than minimal decrease/reduction in effectiveness/assurance as described above. The report shall be submitted within 60 days of the approval of the change.

Attachment 3

Open item 7.1: STPNOC should propose, for implementation concurrent with any approved exemptions, a revision to the Operations QA Program description, which includes a discussion of the scope of the SSCs exempted from 10 CFR Part 50, Appendix B, requirements, the basis for the exemptions (e.g., by referencing the staff's safety evaluation), and also references the document(s) where the alternative treatment processes are described (i.e., STP FSAR, proposed Section 13.7). The QA Program description should identify any portions of the QA Program that remain applicable to the exempted SSCs (i.e., those sections related to design control, corrective actions, and nonconforming items). All changes to the QA Program that supplement and complete the exemption request should be submitted to the staff pursuant to the requirements of 10 CFR 50.54(a)(3). The revised QA Program should be implemented concurrently with implementation of any exemptions granted.

Response:

STPNOC has identified the proposed changes that will be necessary to incorporate into the Operations Quality Assurance Plan (OQAP) upon grant of the Exemption Request. STPNOC has determined that the only sections that are affected and require revision are the Definitions section, Chapter 1 'Organization', Chapter 2 'Program Description', Chapter 6 'Design and Modification Control', Chapter 7 'Procurement', and Chapter 13 'Control of Conditions Adverse to Quality'. Attached are the summary of changes and the proposed revisions to the affected OQAP sections.

STPNOC intends to incorporate these changes into the OQAP upon grant of the Exemption Request and prior to Exemption Request implementation.

ALL CHANGES ARE IN BOLD TYPE

CHAPTER	LOCATION	ACTION	TEXT
Definition	Critical Attribute	DELETE	**its associated system's critical**
	Critical Attribute	INSERT	**a risk significant system**
	Dedication	INSERT	**(as defined in 10CFR21)** in two places
CH. 1.0	2.2	DELETE	**The requirements of this chapter are applicable for structures, systems, and components designated as "Full", "Targeted", or "Basic".**
CH. 2.0	3.3	INSERT	**applied to safety-related SSCs categorized as High Safety Significant (HSS)**
	3.4	DELETE	**Good business practice/lower level**
	3.4	INSERT	**Levels** and **, lower than in the Full Program, applied to safety-related SSCs categorized as Medium Safety Significant (MSS)**
	3.5	DELETE	**and/or quality related structures, systems, and components (SSCs) and site programs**
	3.5	INSERT	**-related SSCs categorized as either HSS or MSS**
	3.6	INSERT	**Limited program controls – Limited controls applied to safety-related SSCx categorized as either Low Safety Significant (LSS) or Non-Risk Significant (NRS).**
	4.7	INSERT	**Updated Final Safety Analysis Report**

ALL CHANGES ARE IN BOLD TYPE

CH. 2.0	4.8	INSERT	**Safety Evaluation Report XXXXX**
	5.1.3	INSERT	**These regulations are not applicable to LSS and NRS safety-related components, to the extent that the Nuclear Regulatory Commission has granted STP an exemption from the regulations as described in Reference 4.8.**
	5.3.4	DELETE	**s' , missions** (2 places), **risk achievement,**
	5.3.4	INSERT	...after consideration of **the risk significance of ,** **functions** after "system" (in 2 places), **large early release frequency,** and **risk significant** before "system:
	5.3.5	DELETE	**three**
	5.3.5	INSERT	**four** and **"Limited"**
	5.3.6	DELETE	**being "high" safety significant/risk important**
	5.3.6	INSERT	**HSS**
	5.3.7	DELETE	**"medium" or "low" safety significant/risk important** and **systems' critical**
	5.3.7	INSERT	**MSS** and **risk significant system**

ALL CHANGES ARE IN BOLD TYPE

CH. 2.0	5.3.8	INSERT	**"Limited" program controls are applied to safety-related SSCs categorized as either LSS or NRS. Only specific program controls related to the activities listed in the following subparagraphs are applicable to these SSCs. The other chapters of the OQAP are not applicable to safety-related LSS and NRS SSCs. Instead, the treatment processes applicable to these SSCs are described in the Updated Final Safety Analysis Report Section 13.7.3.3 and implementing procedures:**
	5.3.8.1	INSERT	**Those elements in Chapter 1.0 that are needed to implement and control the activities described above;**
	5.3.8.2	INSERT	**Applicable requirements in this Chapter;**
	5.3.8.3	INSERT	**Modification/design activities as described Chapter 6.0; and**
	5.3.8.4	INSERT	**Corrective action as described in Chapter 13.0.**
	5.3.9 (old 5.3.8)	DELETE	**"high" or "medium" safety significant/risk importance** and **significant or important**
	5.3.9 (old 5.3.8)	INSERT	**HSS or MSS** and **risk significance**
	5.3.10 (old 5.3.9)	DELETE	**importance**
	5.3.10 (old 5.3.9)	INSERT	**Safety-related** and **significance**
	5.3.11(old 5.3.10)	DELETE	**"Full" , other** , and **"Targeted" or "Basic"**

ALL CHANGES ARE IN BOLD TYPE

CH. 2.0	5.3.11 (old 5.3.10)	INSERT	**their current , the graded** and **"Full", "Basic", "Targeted", or "Limited."**
	5.3.12 (old 5.3.11)	DELETE	**Those components for which an increase in failure rates results in a significant increase in risk will have Full program controls established.**
	5.8.1	INSERT	**to the extent not exempted**
CH. 6.0	5.12.2	INSERT	**(This paragraph does not apply to components in the "Limited" program category, unless design verification testing is being performed in accordance with 5.4.1.1.)**
CH. 7.0	5.6.1	DELETE	**for items except those in the "Basic" category,**
	5.6.1	INSERT	**For items in the Full Program,**
CH. 13.0	5.5	INSERT	**(to the extent not exempted),**
	5.8	DELETE	**For medium and low safety significant SSCs treated by the Basic program controls, measures shall be established to identify causes and to trend failures to assist in evaluating the need for more detailed root cause analysis (if excessive failures occur) and proper corrective action. Further, particular consideration will be given to assessing the potential implications of such failures generically to similar SSCs treated by the Full program.**

This chapter is provided to define terminology used in chapters of the OQAP. They are derived from standard definitions where possible. Program procedures and documents, which implement the OQAP, may provide variations of these definitions provided the intent of the OQAP definition and requirements are satisfied.

DEFINITIONS

Abnormal Condition - Any of the following:

a. Exceeding a limiting condition for a power plant operation established in the applicable technical specifications or technical requirements manual.

b. Observed inadequacies in the implementation of administrative or procedural controls such that the adequacy causes or threatens to cause the existence or development of an unsafe condition in connection with the operation of a nuclear power plant.

c. Conditions arising from natural or off-site man-made events that affect or threaten to affect the safe operation of a power plant.

Administrative controls - Rules, orders, instructions, procedures, policies, and designations of authority and responsibility written by management to obtain assurance of safety and high-quality operation.

Approval - An act of endorsing or adding positive authorization or both.

Approved Vendors List - A listing of vendors who have been evaluated to specific criteria and have been found to be qualified to provide specific items and/or services.

As-Built Data - Documented data that describe the condition actually achieved in a product.

Assessment/Evaluation - Systematic examination of plant systems/components, various plant activities or incidents to evaluate the effectiveness of work practices and/or management controls (i.e., self-assessments, independent assessments, and combinations of the two).

Audit - A documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the quality

assurance program have been developed, documented, and effectively implemented in accordance with specified requirements. An audit does not include surveillance or inspection for the purpose of process control or product acceptance (ANSI N45.2.12). An audit may include performance monitoring as an input to satisfy a specific portion or aspect of an audit, but should not totally replace an audit.

Authorized Nuclear Inspector (ANI) - Inspectors performing inspections required by Section III of the ASME Code who have been qualified by written examination under the rules of any state of the United States or province of Canada, which has adopted the Code. The inspector shall be an employee of an authorized inspection agency and shall not be an employee of the Certificate of Authorization holder. The ANI shall meet the requirements of ANSI N626.

Authorized Nuclear Inservice Inspector (ANII) - Inspectors performing inspections required by Section XI of the ASME code. The ANII is a representative of an authorized inspection agency or a state or municipality of the United States, Canadian Province, or other enforcement authority having jurisdiction over the Nuclear Power components at the plant site.

Calibration - The process by which standards or working equipment are checked against standards of known higher accuracy and adjusted as necessary to ensure their compliance with designated specifications.

Certification - The action of determining, verifying, and attesting in writing to the qualifications of personnel or material.

Cleanness - A state of being clean in accordance with predetermined standards, and usually implies freedom from dirt, scale, heavy rust, oil, or other contaminating impurities.

Commercial Grade Item - A commercial grade item (as defined in 10CFR21) is one which:

A structure, system, or component, or part thereof that affects its safety function that was not designed and manufactured as a basic component. Commercial grade items do not include items where the design and manufacturing process require in-process inspections and verifications to ensure that defects or failures to comply are identified and corrected (i.e., one or more critical characteristics of the item cannot be verified)

Component - A piece of equipment such as a vessel, piping, pump, valve, or core support structure, which will be combined with other components to form an assembly.

Contaminants - Foreign materials such as mill scale, dirt, oil, chemicals, and any matter that renders a fluid, solid, or surface impure and unclean according to present standards of acceptable cleanness.

Contractor - Any organization under contract for furnishing equipment, material, or services. It includes the term's vendor, supplier, subcontractor, fabricator, and subtier levels of these, where appropriate. Prime contractor is used to indicate either the architect engineer, NSSS supplier, constructor, or nuclear fuel supplier.

Corrective Action - Any appropriate measure applied for the purpose of making less likely the recurrence of the initial deficiency. Examples are:

a. Revision of procedures, practices, and/or design documents.

b. Increased surveillance of procedures and practices.

c. Work stoppage until problem situation is alleviated.

d. Special training of personnel.

Corrective Maintenance - Repair and restoration of equipment or components that have failed or are malfunctioning and are not performing their intended function.

Critical Attribute - An attribute or capability of a component to support a risk significant system function.

Critical Characteristics - Important design, material and performance characteristics of a commercial grade item that, once verified, will provide reasonable assurance that the item will perform its intended safety function.

Dedication - An acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component (as defined in 10CFR21) will perform its

intended safety function and, in this respect, is deemed equivalent to an item designed and manufactured under a 10CFR50, Appendix B, quality assurance program. This assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses performed by the purchaser or third-party dedicating entity after delivery, supplemented as necessary by one or more of the following: commercial grade surveys; product inspections or witness at holdpoints at the manufacturer's facility, and analysis of historical records for acceptable performance. In all cases, the dedication process must be conducted in accordance with the applicable provisions of 10CFR50, Appendix B. The process is considered complete when the item is designated for use as a basic component (as defined in 10CFR21).

Deficiency - The characteristic of an item or document that makes it nonconforming with the original criteria and is reported as audit findings, supplier deficiencies, event reports, significant defects, nonconformance reports, corrective action reports, or other procedurally controlled mechanisms.

Design - Technical and management processes which commence with identification of design input and which lead to and include the issuance of design output documents.

Design Control - Design control is the process used to verify that the design drawings, design calculations and specifications, including fabrication and inspection procedures for both shop and field, meet the project requirements.

Design Input - Those criteria, parameters, bases, or other design requirements upon which a detailed final design is based.

Design Output - Documents such as drawings, specifications, and other documents defining technical requirements of structures, systems, and components.

Document Review - The process of appraisal of documentation to determine the adequacy of the document with respect to quality/technical requirements.

Drawing - A document which depicts the geometric configuration of an item, or the function of an item.

Equivalency Evaluation - A technical evaluation performed to confirm that an alternative item, not identical to the original item, will satisfactorily perform its intended function once in service. This term is synonymous with "Equal-to-or-Better-Than Evaluation".

Examination - An element of inspection consisting of investigation of materials, components, supplies, or services, to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gaging, and measurement.

Handling - An act of physically moving items by hand or mechanical means but not including transport modes.

Hold Point - A preselected step in any procedure or work process that identifies a portion or portions of the procedure or work process which requires inspection due to the complexity, safety considerations, and/or inaccessibility of the activity and beyond which work may not progress until the required inspection is performed.

In-Service Inspection - The inspection performed generally during a reactor refueling outage or plant shutdown which assures that the nuclear equipment, vessels, and materials are of sufficient integrity to provide protection of public health and safety.

Inspection - Examination or measurement to verify whether an item or activity conforms to specific requirements.

Item - Any level of unit assembly, including structures, system, subsystem, subassembly, component, part, or material.

Material - A substance or combination of substances forming components, parts, pieces, and equipment items. (Intended to include such as machinery, castings, liquids, formed steel shapes, aggregates, and cement.)

Nonconformance - A deficiency in characteristic, documentation, or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformance include: physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed processing, inspection, or test procedures.

Notification Point - A preselected step established by Quality Control in any procedure or work process which identifies a discretionary inspection point which may be waived based on the availability of Quality Control personnel and other activities of a more critical nature.

Nuclear Fuel - Uranium ore, converted uranium, enriched uranium, fabricated fuel, pins and assemblies.

Package - A wrapping or container including its contents of material or equipment.

Part - An item which has work performed on it and which is attached to and becomes part of a component before completion of the component.

Plant Modification - A planned physical change to a plant structure, system or component as described in design documents.

Preventive Maintenance - Preventive, periodic and planned maintenance actions taken to maintain a piece of equipment within design operating conditions and extend its life and is performed prior to equipment failure. This includes technical specification surveillances, inservice inspections and other regulatory forms of preventive maintenance.

Procedure - A document that specifies or describes how an activity is to be performed. It may include methods to be employed, equipment, or materials to be used and sequence of operations.

Procurement - Interdisciplinary function by which equipment, materials, or services are acquired.

Procurement Documents - Purchase requisitions, purchase orders, drawings, contracts, specifications or instructions used to define requirements for purchase. (ANSI N45.2.13)

Proposal - A document, which describes the equipment, material, or services which the vendor, proposes to furnish. The proposal should include commercial information and a statement of any exceptions to the provisions of the inquiry.

Purchase Order (or Contract) - A document authorizing a vendor to provide equipment, material or services in accordance with the terms and conditions established in the purchase order or contract.

Qualification (Personnel) - The characteristics or abilities gained through training or experience or both that enable an individual to perform a required function.

Qualified Procedure - A procedure which incorporates all applicable codes and standards, manufacturer's parameters, and engineering specifications and has been proven adequate for its intended purpose.

Quality Assurance - All those planned or systematic actions necessary to provide adequate confidence that an item or facility will perform satisfactorily in service.

Quality Control - Those quality assurance actions, which provide a means to control and measure the characteristics of an item, process, or facility to, established requirements.

Quality-Related - Those activities or items required to be included in the Operations QA program by the UFSAR, Federal Codes, other regulatory licensing requirements or management directive. The term quality-related encompasses safety-related activities or items.

Quality-Related Item - A structure, system, or component identified in UFSAR Section 3.2 as requiring applicable quality oversight during the operations phase of STPEGS.

Receiving - Taking delivery of an item at a designated location.

Records - Those records, physical or electronic media, which furnish documentary evidence of the quality of items and of activities affecting quality. A document is considered a quality assurance record when the document has been completed.

Reference Standard - Standards (that is, primary, secondary and working standards, where appropriate) used in a calibration program. These standards establish the basic accuracy limits for that program.

Repair - The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safety is unimpaired even though the item still may not conform to the original statement.

Replacements - Spare and renewal components, appurtenances and subassemblies or parts of a component or system. Replacements also include the addition of components but do not include the addition of complete systems.

Review - A deliberately critical examination, including observation of plant operation, evaluation of audit results, procedures, certain contemplated actions, and after-the-fact investigations of abnormal conditions.

Rework - The process by which a nonconforming item is made to conform to a prior specified requirement by completion, remachining, reassembling, or other corrective means.

Safety-Related - Those plant features necessary to assure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safely shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in off-site exposures comparable to the guideline exposure of NRC Regulations 10CFR100.

Special Process - A process, the results of which are highly dependent on the control of the process or the skill of the operators, or both, and in which the specified quality cannot be readily determined by inspection or test of the product.

Specification - A concise statement of a set of requirements to be satisfied by a product, material, or process indicating, whenever appropriate, the procedure by means of which it may be determined whether the requirements given are satisfied. (Specifications may also be used to describe technical services to be provided.)

Standard - The result of a particular standardization effort approved by a recognized authority.

Stop Work - The suspension of an activity.

Storage - The act of holding items at the construction site or in an area other than its permanent location in the plant.

Surveillance/Quality Performance Monitoring - The act of observing real time activities and/or reviewing documentation to verify conformance with specified requirements and industry good practices, and to evaluate their adequacy and effectiveness.

Surveillance Testing - Periodic testing to verify that safety-related structures, systems, and components continue to function or are in a state of readiness to perform their function.

Survey - An activity performed in a vendor's facility to determine the adequacy and implementation of a vendor's quality assurance program. This activity is normally done prior to award of a purchase order.

System - A group of subsystems united by some interaction or interdependence, performing duties but functioning as a single unit.

Testing - The determination or verification of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions.

Use-as-is - A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse conditions and that the item under consideration will continue to meet all engineering functional requirements including performance, maintainability, fit, and safety.

Verification - An act of confirming, substantiating, and assuring that an activity or condition has been implemented in conformance with the specified requirements.

1.0 PURPOSE

1.1 The purpose of this chapter is to describe the organizational structure as related to quality assurance and to establish the responsibilities of organizations for the South Texas Project Electric Generating Station (STP).

2.0 SCOPE

2.1 STP Nuclear Operating Company (STPNOC), as licensee, has the Quality responsibility for design, engineering, procurement, fabrication, modification, maintenance, repair, in-service inspection, refueling, testing, and operation of the STP.

3.0 DEFINITIONS

3.1 None

4.0 REFERENCES

4.1 None

5.0 RESPONSIBILITIES

5.1 The STPNOC is comprised of Generation, Engineering & Technical Services, Business Services, and Safety and Quality Concerns Program. The senior management of these groups report to the President and Chief Executive Officer.

5.1.1 The President and Chief Executive Officer has overall responsibility for the implementation of the Operations Quality Assurance Program and approving the Operations Quality Assurance Plan (OQAP) and revisions thereto.

5.1.2 The Vice President, Generation is responsible for implementing quality program requirements applicable to staffing STP with qualified personnel and acquiring and coordinating the assistance of internal and external organizations for the following functions including: plant general management, generation business support, projects, steam generator replacement, and generation support. The senior management of these functions report to the Vice President, Generation.

5.1.2.1 The Plant General Manager has prime responsibility for the safe operations of the units. The plant staff, under the direction of the Plant General Manager, develop detailed procedures and instructions for testing, operation, modification, and maintenance of the STP.

5.1.3 The Vice President, Engineering & Technical Services (E&TS) is responsible for implementing quality program requirements applicable to the following functions: nuclear engineering, quality & licensing, operating experience, risk management & industry relations, and training functions. The senior management of these functions report to the Vice President, E&TS.

The Vice President, E&TS is responsible for the development, maintenance, and independent verification of implementation of the STP Quality Program; making periodic reports on its effectiveness; review of selected documents which control activities within its scope; and preparation, control, and approval of the OQAP and revisions thereto.

The Vice President, E&TS is responsible for implementing quality program requirements applicable to corrective action, licensing, and independent oversight activities, and administration of the Nuclear Safety Review Board (NSRB).

The Vice President, E&TS has the authority to identify, initiate, recommend, or provide solutions to quality-related problems and verify the implementation and effectiveness of the solutions. This position has the independence to conduct Quality activities without undue pressure of cost or schedule.

5.1.3.1 The NSRB Administrator is responsible for the administrative activities related to the NSRB functions. The NSRB functionally reports directly to and advises the President and Chief Executive Officer.

5.1.3.2 The senior management of the Quality & Licensing function is responsible for independent oversight activities, including audits, independent assessments, evaluations, surveillances, performance monitoring, inspections and independent oversight of NDE examinations.

5.1.3.3 The senior management of the Quality & Licensing function, at his discretion, reports directly to the President and Chief Executive Officer. During performance of independent oversight of activities relating to Licensing, the management of the Plant Support function, at his discretion, may report to the President and Chief Executive Officer.

5.1.3.4 The senior management of the Quality & Licensing function has the authority to stop work for cause. This authority has been granted by the President and Chief Executive Officer. The Quality organization, including the inspection staff, is based upon the anticipated Quality involvement in operations, modification, and maintenance activities.

5.1.3.5 The senior management of the Risk Management & Industry Relations function is responsible for activities related to the Comprehensive Risk Management Program, including oversight of Probabilistic Safety Assessment activities. The senior management of the Risk Management & Industry Relations function also serves as the Graded Quality Assurance Expert Panel chairperson.

5.1.4 The Vice President, Business Services is responsible for implementing quality program requirements applicable to the following functions: human resources, planning & controls, information systems, plant protection, records management services and administration, and purchasing and material management for STP. The senior management of these functions report to the Vice President, Business Services.

5.1.5 The Manager, Safety Quality Concerns Program is responsible for implementing quality program requirements applicable to this function.

6.0 REQUIREMENTS

6.1 The fundamental responsibility for implementing quality program requirements is assigned to all personnel performing activities affecting the safe and reliable operation of the STP. These personnel and their management are responsible for implementing through approved procedures and other work documents, the quality assurance program controls described in the OQAP.

6.2 Attachment 1 depicts the organizational structure of the STP as it relates to the implementation of the Operations Quality Assurance Plan. The structure reflects the reporting alignment for key functions. Line organizational details and responsibilities are further described in STP UFSAR Chapter 13.1.

7.0 DOCUMENTATION

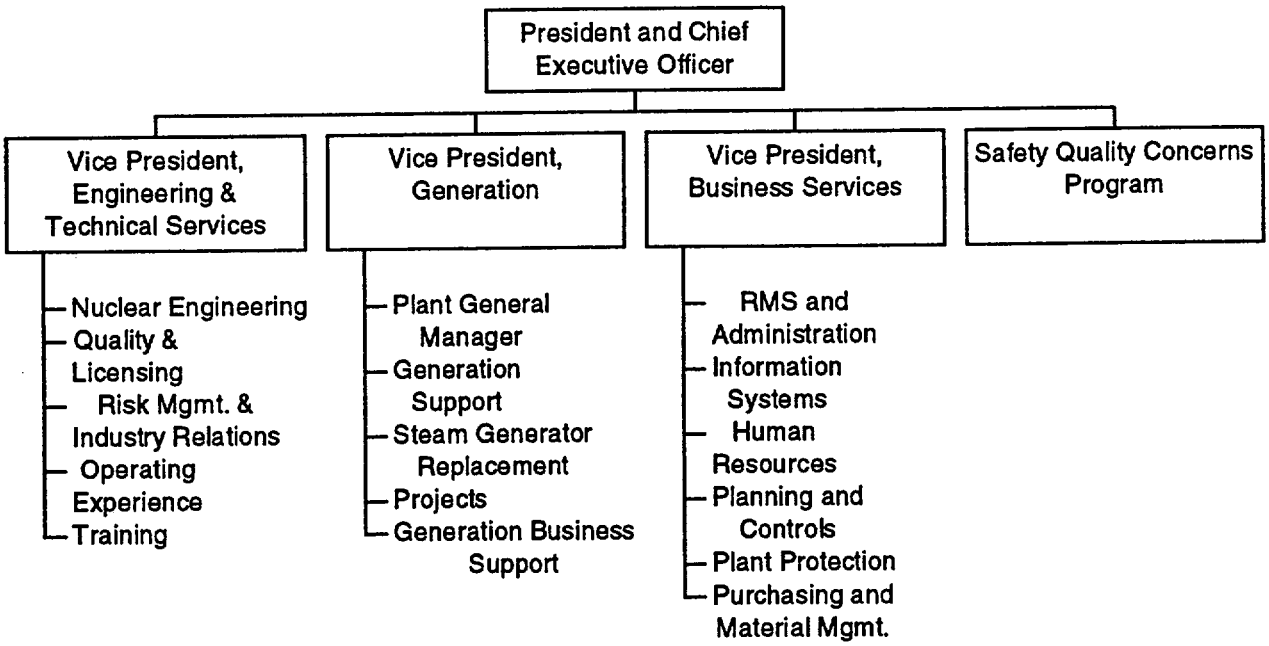
7.1 None

8.0 ATTACHMENTS

8.1 Attachment 1 - STPNOC Organization

ATTACHMENT 1

STPNOC ORGANIZATION



1.0 PURPOSE

1.1 The purpose of this chapter is to define criteria and establish administrative controls for implementation of the Quality Assurance (QA) Program for the South Texas Project Electric Generating Station (STP).

2.0 SCOPE

2.1 The QA Program is implemented and controlled in accordance with the Operations Quality Assurance Plan (OQAP) and is applicable to structures, systems, and components to an extent consistent with their importance to safety, and complies with the requirements of 10CFR50, Appendix B and other program commitments as appropriate.

2.2 The QA Program will also extend, as applicable and/or determined by STP management, to programs including 10CFR71, Subpart H (except design and fabrication of NRC certified radioactive waste shipping casks), ASME Boiler and Pressure Vessel Code, Sections III and XI; and to quality-related areas as defined herein including the Fire Protection Program, Emergency Plan, Radiological Environmental Monitoring Program, Radwaste Management Program, Computer Program Verification and Control, Seismic and Environmental Equipment Qualification Programs, Radiation Protection Program, and Station Blackout (SBO) systems and equipment.

3.0 DEFINITIONS

3.1 Comprehensive Risk Management - A process by which the change in risk to station personnel, the public's health and safety are evaluated as a result of changes in commitments, processes, activities, and human and equipment performance.

3.2 Graded Quality Assurance - The process by which risk-based methodology [i.e., Probabilistic Safety Assessment (PSA)] and deterministic and performance-based information analyses are combined to establish appropriate levels of programmatic controls for SSCs and appropriate levels of first line and independent oversight needed to provide the necessary assurance that SSCs will operate safely.

3.3 Full program controls - The highest levels of controls and oversight applied to safety-related SSCs categorized as High Safety Significant (HSS), as prescribed in Table I to this chapter and throughout individual OQAP chapters.

3.4 Basic program controls – Levels of control and oversight, lower than in the Full Program, applied to safety-related SSCs categorized as Medium Safety Significant (MSS), as prescribed in Table I to this chapter and throughout individual OQAP chapters.

3.5 Targeted program controls - Selected program controls applied to certain non-safety-related SSCs categorized as either HSS or MSS.

3.6 Limited program controls – Limited controls applied to safety-related SSCs categorized as either Low Safety Significant (LSS) or Non-Risk Significant (NRS).

4.0 REFERENCES

4.1 10CFR50, Appendix B

4.2 10CFR71, Subpart H

4.3 ASME B&PV Code

4.4 OQAP Chapter 14.0, Records Control

4.5 10CFR50.63, Loss of All Alternating Current Power

4.6 10CFR50.54(a)

4.7 Updated Final Safety Analysis Report

4.8 Safety Evaluation Report XXXXX

5.0 REQUIREMENTS

5.1 General Program Requirements

5.1.1 The OQAP shall be prepared and maintained to prescribe the STP QA Program. The OQAP reflects the quality program policies to be implemented. The OQAP describes the organization and responsibilities for attainment of quality objectives and verification of conformance to established requirements. The QA Program shall be in effect throughout the operating life of the STP.

5.1.2 The President and Chief Executive Officer has overall responsibility for quality assurance. The Vice President, Engineering & Technical Services (E&TS), is responsible for the development and maintenance of the OQAP.

5.1.3 The operations phase of the STP includes design, procurement, fabrication, repair, testing, operation, maintenance, refueling, inspection, independent oversight, modification, and other activities as discussed Table I to this chapter and throughout the OQAP. STP and its vendors are required, as appropriate, to comply with the criteria established by 10CFR50, Section 50.55a; 10CFR50, Appendix A, General Design Criterion (GDC) 1; 10CFR50, Appendix B, and 10CFR71, Sub-Part H (except design and fabrication of NRC certified radioactive waste shipping casks). These regulations are not applicable to LSS and NRS safety-related components, to the extent that the Nuclear Regulatory Commission has granted STP an exemption from the regulations as described in Reference 4.8.

STP will implement, as specified, the Regulatory Guides (RG) and implementing American National Standards Institute (ANSI) standards contained in Table I of this chapter.

5.1.4 STP shall maintain the OQAP as an effective and meaningful document to provide programmatic direction for the station. Changes to the OQAP shall be accomplished as prescribed by 10CFR50.54(a). When changes are made in the OQAP to the organizational elements only, appropriate notification will be made to the NRC within 30 days of implementation.

5.2 Organizational Independence

5.2.1 The reporting arrangement utilized by the Quality organization ensures that those personnel performing independent oversight have the organizational freedom to:

5.2.1.1 Identify quality problems.

5.2.1.2 Initiate, recommend, or provide solutions.

5.2.1.3 Verify implementation of solutions.

5.2.2 Personnel verifying compliance with quality requirements do not have direct responsibility for the performance of or directly supervise the activity being verified.

5.3 Graded Quality Assurance

5.3.1 Graded Quality Assurance (GQA) is fundamental to the STP QA Program. It is described in more detail in the implementing procedure for the STP Comprehensive Risk Management (CRM) Program.

5.3.2 GQA is a process by which risk-based methodology [i.e., Probabilistic Safety Assessment (PSA)], deterministic insights, and performance-based information are combined and analyzed to determine what levels of programmatic controls are needed for structures, systems, and components (SSCs) and what levels of first line and independent oversight are needed to provide assurance that items will operate safely and activities are accomplished as prescribed.

5.3.3 Selected systems are evaluated, at the component level, by a cross-discipline Expert Panel comprised of high level station management. Initial evaluations are performed by the Working Group.

5.3.4 These recommendations are developed in consideration of the risk significance of system functions, components' contribution to core damage frequency and large early release frequency, components' critical attributes (needed to support risk significant system functions), performance, regulatory/QA requirements, and other deterministic considerations as prescribed in the Comprehensive Risk Management procedures.

5.3.5 Program control recommendations are developed by the Working Group and ultimately approved by the Expert Panel and forwarded to the site for implementation. Controls are implemented in four graded applications (i.e., "Full", "Basic", "Targeted", and "Limited").

5.3.6 "Full" program controls are applied to safety-related SSCs categorized as HSS. These "Full" levels of controls and oversight are designed to provide a high degree of confidence that SSCs perform safely and activities are performed as expected. Table I to the OQAP chapter prescribes the program commitments applicable to "Full" program activities.

5.3.7 "Basic" program controls are applied to safety- related SSCs categorized as MSS. These are lower levels of control and oversight, designed to maintain/preserve those identified critical attributes of SSCs needed to support risk significant system functions. These controls are intended to reflect economical and efficient business practices. Table I to the OQAP chapter prescribes the program commitments applicable to "Basic" program activities.

5.3.8 "Limited" program controls are applied to safety-related SSCs categorized as either LSS or NRS. Only specific program controls related to the activities listed in the following subparagraphs are applicable to these SSCs. The other chapters of the OQAP are not applicable to safety-related LSS and NRS SSCs. Instead, the treatment processes applicable to these SSCs are described in the Updated Final Safety Analysis Report Section 13.7.3.3 and implementing procedures:

5.3.8.1 Those elements in Chapter 1.0 that are needed to implement and control the activities described above;

5.3.8.2 Applicable requirements in this Chapter;

5.3.8.3 Modification/design activities as described Chapter 6.0; and

5.3.8.4 Corrective action as described in Chapter 13.0.

5.3.9 "Targeted" program controls are applied to non-safety related SSCs, for which 10CFR50, Appendix B is not applicable, categorized as HSS or MSS. Specific program controls consistent with applicable portions of the "full" and "basic" program controls are applied to those items in a selected manner, "targeted" at those characteristics or critical attributes that render the SSC risk significance.

5.3.10 Safety-related Components that are highly reliable, yet whose failure would result in a significant increase in risk, will receive Full program coverage, or will be evaluated based on their risk significance to ensure that Full program controls are applied to their critical attributes.

5.3.11 SSCs governed by the OQAP shall retain their current program coverage until such time as prescribed risk-informed, performance-based analyses are completed and approved, and they are placed into the graded program categories (i.e., "Full", "Basic", "Targeted", or "Limited") as appropriate.

5.3.12 A vital element of the GQA program is the "feedback" loop. On a periodic basis, and as prescribed in the Comprehensive Risk Management procedure, the GQA Working Group and Expert Panel shall review any changes to the PSA information and performance/operating experience that could result in recategorization of an SSC. These reviews are also used to assess the effectiveness and appropriateness of in-place quality program controls. Adjustments shall be made as determined necessary.

5.4 Delegation of QA Functions

5.4.1 The OQAP may be executed in whole or part by subcontract personnel. However, STP will retain responsibility for the total quality assurance program, and Quality organization personnel will perform appropriate oversight activities of subcontracted activities.

5.5 Identification of Safety Significant Structures, Systems, and Components

5.5.1 The program described herein is applied to activities affecting the safety functions of those structures, systems, and components which prevent, or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The structures, systems, and components controlled are listed in UFSAR Section 3.2, along with their associated fire protection systems. UFSAR Section 3.2 also identifies those structures, systems, and components which may not represent a safety significant/risk important concern but to which the STP OQAP is applied.

5.5.2 The fire protection QA Program is part of the overall STP Operations QA Program. Fire protection QA Program criteria are implemented as part of the Operations QA Program.

5.5.3 Expendable or consumable items necessary for the functional performance of structures, systems, and components are subjected to quality assurance requirements as specified in written procedures. These procedures include provisions for review and control in accordance with industry standards and specifications.

5.6 QA Program Documents

5.6.1 The QA Program shall be implemented with documented instructions, procedures, and drawings which include appropriate quantitative and qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. Procedures shall include the control of the sequence of required inspections, tests, and other operations when important to quality. To change these controls, the individual procedure must be changed and shall require the same level of review and approval given to the original procedure. Such instructions, procedures, and drawings are reviewed and approved for compliance with requirements appropriate to their safety significance by individuals qualified to do so.

5.7 Personnel Indoctrination and Training

5.7.1 General indoctrination and training programs shall be provided for site personnel to assure that they are knowledgeable regarding quality programs and requirements. The training requirements for STP personnel are described in UFSAR Section 13.2. Personnel performing complex, unusual, or potentially hazardous work shall be instructed in special indoctrination or briefing sessions. Emphasis shall be on special requirements for safety of personnel, radiation control and protection, unique features of equipment and systems, operating constraints, and control requirements in effect during performance of work. Where required by codes and standards, personnel are trained, qualified, and certified according to written procedures in the principles and techniques of performing specific activities.

5.8 Policies and Goals

5.8.1 STP policy is to assure that the design, procurement, construction, testing, and operation of the STP are in conformance with specifications, procedures, codes, commitments and Nuclear Regulatory Commission (NRC) regulations to the extent not exempted. The responsibility of each organization supporting the STP is to ensure that the requirements stated in this QA Program are incorporated into procedures. Adherence to those procedures is mandatory for all STP organizations and contractors or vendors providing items or services covered by the QA Program.

5.8.2 The OQAP identifies activities and establishes requirements for procedures which identify, report, and verify the resolution of quality problems. The implementing procedures call for the resolution of quality problems at the lowest possible authorized level. However, if a dispute is encountered in the resolution of a quality problem which cannot be resolved at lower levels, the Vice President, Engineering & Technical Services or senior management of the Quality & Licensing function shall present the problem to the President and Chief Executive Officer for resolution.

5.9 Control of Activities

5.9.1 The OQAP requires Quality department review and/or approval of procedures which control selected activities. These procedures shall require the use of the proper equipment, completion of prerequisites for starting an activity, and suitable environment for performing the activity. Procedures will comply with the appropriate standards.

5.9.2 STP personnel attend planning, scheduling, and status meetings as necessary to assure adequate quality coverage and program application exists.

5.10 Management Review

5.10.1 The implementation of both line and OQAP requirements shall be verified through independent oversight activities. The Quality organization shall conduct independent oversight activities of the operating plant and of the interfacing organizations' activities.

5.10.2 Independent oversight of implementation of the OQAP is conducted under the cognizance of the Nuclear Safety Review Board and results are transmitted to appropriate line and senior management, including the President and Chief Executive Officer for review and/or action.

5.10.3 STP may use the services of architect-engineer firms, Nuclear Steam Supply System (NSSS) suppliers, fuel fabricators, constructors, and others which provide or augment STP efforts during operations. As applicable, the QA programs of such contractors or consultants shall be subject to review, evaluation, and acceptance by the Quality organization before initiation of activities affected by the program.

5.11 Computer Code Programs

5.11.1 The development, maintenance, and use of computer code programs will be controlled. Prior to use of a computer code program, the appropriateness of the program shall be verified. In addition, all such programs shall be appropriately certified for use.

6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.4.

7.0 ATTACHMENTS

7.1 Table I - Program Commitments

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
R.G. 1.8, rev. 1 (9/75)	No exceptions taken.	No exceptions taken.
ANSI N18.1, 1971	4.2.2-The Operations Manager requirements regarding holding a Senior Reactor Operator license are met by the Unit Operations Managers.	Same as full.
R.G. 1.28, rev. 0 (6/72)	This R.G. is not applicable to operations phase activities.	Same as full.
ANSI 45.2, 1971	This standard is not applicable to operations phase activities.	Same as full.
R.G. 1.33, rev. 2 (2/78)	C.2 - the specific revisions of the listed standards to which STP is committed are in this table and are not necessarily the "latest" revision. C.4 – Chapter 15.0 of the STP OQAP describes the audit program at STP that meets the intent of R.G. 1.33, rev. 2, position C.4 regarding frequency of audits C.4.a.b.c – STP performs these audits in accordance with a nominal biennial frequency.	Same as full. Same as full. Same as full.
ANSI NI8.7 – 1976/ANS 3.2	3.4.2 – refer to R.G. 1.8 regarding Operations Manager holding a Senior Reactor Operator license. 4.5 – refer to R.G. 1.33 coverage regarding audit frequency. 5.2.6 (5th paragraph) – independent verification may be concurrent with (same time as) work performance.	Same as full. 3.4.2 refer to R.G. refer to R.G. 1.5.8 regarding use of personnel not qualified in accordance with ANSI N45.2.6. Same as full. Same as full.

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
ANSI N18.7/ANS 3.2 (cont'd)	5.2.7 (1st paragraph) – STP will use current approved design bases as opposed to original design bases.	Same as full. 5.2.7 – STP will perform inspection as deemed necessary, based on the relative complexity of the work.
	5.2.7.1 (5th paragraph) – STP takes exception to use of the word "promptly" with regard to determining, evaluating and recording the causes of malfunctions. The STP Corrective Action Program includes the elements with regard to timeliness of action associated with causal analyses.	Same as full. 5.2.7.2 – refer to table coverage of ANSI N45.2.11, 1974. 5.2.13 (1st paragraph) – refer to table coverage of ANSI N45.2.13, 1976. 5.2.13.1 (1st paragraph) – refer to table coverage of ANSI N45.2, 1971. 5.2.13.4 (5th paragraph) – refer to table coverage of ANSI N45.2.2, 1972.
	5.2.15 (4th paragraph) – Chapter 8.0 of the OQAP describes the requirements for control and issuance of documents, which meets the intent of R.G. 1.33, rev. 2. The intent of the biennial review is accomplished by other controls that assure that procedures are appropriately reviewed and revised to incorporate information based on plant operations, design changes, regulatory requirements, industry experience and other conditions that may impact plant procedures.	Same as full.

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
		5.2.17 (3rd paragraph) – STP may not implement the requirement for conduct of inspections in a manner similar to that associated with construction phase activities (i.e., regarding use of personnel not qualified to ANSI N45.2.6)
R.G. 1.38, rev. 2 (5/77)	No exceptions taken.	No exceptions taken.
ANSI N45.2.2, 1972	2.4 – Audit personnel are qualified in accordance with STP's commitment to R.G. 1.146/ANSI 45.2.23.	Same as full.
		2.4 – Offsite oversight of vendors of items in the Basic category will only be performed as deemed necessary.
R.G. 1.58, rev. 1 (9/80)	C.2 – STP is committed to ASNT-TC-1A, 1980. STP treats the recommendation ("should") of the 1980 edition as requirements ("shall").	Same as full.
ANSI N45.2.6, 1978		1.2 (1st paragraph) – with the exception of receipt inspection, personnel may perform inspections, examinations and tests provided they are experienced, task qualified journeymen, or supervisors, who did not perform or directly supervised the activity being inspected, examined or tested. These individuals shall also receive training to the applicable inspection procedure,

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
ANSI N45.2.6, 1978		processes, methods in accordance with a Quality approved training program; and Quality will provide periodic oversight of the inspection activities.
	1.2 (3rd paragraph) – refer to table coverage of R.G. 1.28.	Same as full.
	1.4.4 – refer to table coverage of R.G. 1.74/ANSI N45.2.10.	Same as full.
R.G. 1.64, rev. 2 (6/76)	No exceptions taken.	C.2 – STP may implement the requirement regarding design verification as prescribed in ANSI N45.2.11, 1974, 6.1, second paragraph/second sentence, as opposed to R.G. wording.
ASNI N45.2.11, 1974	No exceptions taken.	3.2 (1st paragraph) – STP will require personnel to consider items 1 through 28, but a documented checklist may not be required. 6.3 – Verification and checking of design may be accomplished through supervisory or management review/approval as provided for in 6.1 Personnel will be required to consider items 1 through 19, but a documented checklist may not be required.
R.G. 1.74 (2/74)	Not applicable to STP. STP uses ANSI/ASME NQA-1-1983 for Quality Assurance Terms and Definitions.	Same as full.

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
ANSI N45.2.10, 1973	Same as R.G. 1.74 above.	Same as full.
R.G. 1.88, rev. 2 (10/76)	No exceptions taken.	Same as full.
ANSI N45.2.9, 1974	Section 5.6 – supplement the provisions of this section by providing for alternate temporary storage of records. Allow the use of 1-hour fire rated cabinets to store records that are awaiting processing (e.g., processing into Optical Disk Storage). Storage of these records in 1-hour fire rated cabinets will be controlled by procedure which specify a maximum allowable time limit. Cabinets housing these records shall be controlled for access and shall be located in an area protected by sprinklers.	Same as full.
R.G. 1.123, rev. 1 (7/77)	C.6.b.and e. – The referenced section of ANSI N45.2.13 will be implemented as written.	
ANSI N45.2.13, 1976	Various sections refer to ANSI N45.2. Refer to table coverage of R.G. 1.28 and ANSI N45.2. 5.3 and 5.4 – Provision are established for, in special cases and with management approval, completion of these activities after award of contract. 9.0 – This section will be implemented based on the scope, complexity and safety significance of the items being procured.	Same as full. Same as full. Same as full. 10.3.1 – This section will only be implemented as deemed necessary. 12 – This section will only be implemented as deemed necessary for audits of suppliers.

TABLE I

PROGRAM COMMITMENTS

R.G./ANSI STANDARD	FULL PROGRAM	BASIC PROGRAM
R.G. 1.144, rev. 1 (9/80)	C.1 – refer to table coverage of R.G. 1.28 and ANSI N45.2.	Same as full.
	C.3a(1) – refer to table coverage of R.G. 1.33 regarding audit frequency.	Same as full.
		c.3.b STP will audit vendors only as deemed necessary. STP will perform biennial evaluations.
ANSI N45.2.12, 1977	No exceptions taken.	STP will audit vendors only as deemed necessary. These audits will be conducted as unplanned/unscheduled audits.
R.G. 1.146, rev. 0 (8/80)	C.1 – refer to table coverage of R.G. 1.28 and ANSI N45.2. Refer to table coverage of R.G. 1.74 and ANSI N45.2.10	Same as full.
ANSI N45.2.23, 1978	1.2 – refer to table coverage of R.G. 1.28. 1.4 – refer to table coverage of R.G. 1.74. 2.21 – refer to table coverage of R.G. 1.28. 2.3.3.1 – refer to table coverage of R.G 1.28.	Same as full. Same as full. Same as full. Same as full.

For Regulatory Guides addressed by the table, and unless specific clarification or exception is indicated, STP will implement the Regulatory Guide positions, including recommendations.

For ANSI Standards addressed by this table, and unless specific clarification or exception is indicated, STP will treat ANSI requirements (i.e., "shall") as such – except in instances where the standard itself provides options or requires a graded approach – this notwithstanding the general applicability statements found in many standards (i.e., section 1.0)

1.0 PURPOSE

1.1 The purpose of this chapter is to establish the requirements and responsibilities for design and modification control of structures, systems, or components at the South Texas Project Electric Generating Station (STP).

2.0 SCOPE

2.1 This chapter applies to the design and modification activities associated with the preparation and review of design documents including the translation of applicable Code of Federal Regulation requirements and design bases into design documents.

3.0 DEFINITIONS

3.1 None

4.0 REFERENCES

4.1 STP Technical Specifications

4.2 OQAP Chapter 5.0, Maintenance, Installation of Modifications, and Related Activities

4.3 OQAP Chapter 14.0, Records Control

4.4 10CFR50.59, Changes, Tests and Experiments

4.5 OQAP Chapter 13.0, Control of Conditions Adverse to Quality

4.6 OQAP Chapter 2.0, Table I

5.0 REQUIREMENTS

5.1 Measures shall be established to document selection of design inputs. Changes to specified design inputs, including identification of their source, shall be identified and documented. As the design evolves, unreviewed safety question evaluations shall be performed as required by Reference 4.4.

5.2 Measures shall be established to control design activities to assure design inputs are translated into design documents such as specifications, drawings, procedures, or instructions.

5.2.1 Design activities involving reactor physics; stress, thermal, hydraulic, and accident analysis; materials compatibility; and accessibility for maintenance, inservice inspection, and repair will be performed according to approved procedures by appropriately qualified individuals. Results of analyses will be appropriately verified and documented.

5.2.2 Design documents shall include appropriate quality standards. If an alternate quality requirement is used (e.g., other than the originally specified quality standard) the change shall be documented and approved.

5.2.3 Design analyses shall be sufficiently detailed as to purpose, method, assumptions, design input, references, units, and status (preliminary or final) such that a technically qualified person can review and understand the analyses and verify the adequacy of the results without recourse to the originator.

5.2.4 A review for application suitability of materials, parts, equipment, and processes essential to the functions of structures, systems, and components is done as part of the design document preparation and review process. The procedures, which govern the preparation and review of design documents, require that valid industry standards and specifications be used for this review. Review of standard off-the-shelf commercial materials, parts, and equipment for suitability of application with structures, systems, and components will be conducted before selection.

5.3 Measures shall be established to identify and control design interface among participating organizations (internal and external).

5.4 Measures shall be established to verify adequacy of design and design changes.

5.4.1 The design process shall include verification by qualified persons to assure that the design is adequate and meets specified design input. Design control procedures shall specify requirements for the selection and performance of design verification methods. Design verification shall be either by design review, alternate calculation, qualification testing, or a combination of these. The depth of design verification shall be commensurate with the importance of the system or component to plant safety, complexity of the design, and similarity of design to previous designs.

5.4.1.1 If the verification method performed is only through qualification testing, the following are required.

- Procedures shall provide criteria that specify when verification should be by test.
- Prototype, component, or feature testing shall be performed as early as possible before installation of plant equipment, or before the point when the installation would become irreversible.
- Verification by test shall be performed under conditions that simulate the most adverse design conditions as determined by analysis.

5.4.2 Design verification shall be performed by competent individuals or groups other than those who performed the original design.

5.4.3 Design verification should not be performed by individuals that have immediate supervisory responsibility for the individual performing the design; have specified a singular design approach; have ruled out certain design considerations; or have established the design inputs for that particular design aspect. (This paragraph's recommendation does not apply to verification of design for items in the "Basic" program category)

5.4.4 Design verification will normally be performed prior to release for procurement, manufacture, installation, or use by another organization in other design activities. Exceptions shall be justified and documented. Procedures shall control the justification of exceptions and the completion of the verification of all affected design output documents prior to relying on the component, system, or structure to perform its function.

5.5 Measures shall be established to control the approval, issuance, and changes of design documents to prevent the inadvertent use of superseded design information.

5.6 Changes made to design documents are reviewed and approved by the same groups or organization, which reviewed and approved original design documents. If the organization which originally approved a particular design document is no longer responsible, another organization may be designated if competent in the specific design area, has access to pertinent background information and has an adequate understanding of the requirements and intent of the original design.

5.7 Conditions adverse to quality found in approved design documents, including design methods, that could adversely affect structures, systems, or components shall be documented and action taken to correct and prevent recurrence, in accordance with Reference 4.5.

5.8 Measures shall be established for the identification and control of deviations from specified quality standards.

5.9 Measures shall be established which assure that maintenance and modifications associated with design changes which may affect the functioning of structures, systems, or components are performed in a manner to ensure quality at least equivalent to that specified in the UFSAR or current design bases and requirements.

5.10 Measures shall be established to maintain the list of structures, systems, and components current after modifications are made.

5.11 Measures shall be established to assure that only appropriately verified, qualified and controlled computer codes are authorized for use.

5.12 Modifications

5.12.1 Modifications to structures, systems, and components shall be controlled, reviewed, and approved.

5.12.2 Installation and testing of modifications shall be performed in accordance with Reference 4.2 and approved procedures. These procedures shall contain provisions as appropriate to ensure quality of installation and appropriate post modification testing. (This paragraph does not apply to components in the "Limited" program category, unless design verification testing is being performed in accordance with 5.4.1.1.)

5.12.3 Structures, systems, and components shall not be declared operable after a modification until the following provisions are satisfied:

5.12.3.1 Affected procedures are revised and distributed to appropriate users.

5.12.3.2 Appropriate personnel are trained.

5.13 Modifications will be checked against the design change documentation for proper implementation prior to closing out the design change process.

6.0 DOCUMENTATION

6.1 Procedures, which are generated as required by this chapter, shall identify the records, which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.3.

7.0 ATTACHMENTS

7.1 None

1.0 PURPOSE

1.1 The purpose of this chapter is to establish requirements and responsibilities for the identification, documentation, evaluation, resolution, control and reporting of conditions adverse to quality.

2.0 SCOPE

2.1 This chapter applies to conditions adverse to quality discovered in items, services and activities under the scope of the Operations Quality Assurance Plan and the reporting of items to the Nuclear Regulatory Commission (NRC) in accordance with Title 10 Code of Federal Regulations.

3.0 DEFINITIONS

3.1 None

4.0 REFERENCES

4.1 10CFR50, Appendix B

4.2 10CFR21, Reporting of Defects and Noncompliance

4.3 10CFR50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors

4.4 10CFR50.73, Licensee Event Report System

4.5 South Texas Project Electric Generating Station (STP) Technical Specifications

4.6 OQAP Chapter 14.0, Records Control

4.7 OQAP Chapter 2.0, Table I

5.0 REQUIREMENTS

5.1 All personnel working under the jurisdiction of the Operations Quality Assurance Plan are responsible for reporting conditions adverse to quality to appropriate management for resolution in accordance with approved procedures.

5.2 Procedures shall be developed for the control of items, services or activities which do not conform to established requirements. These procedures shall provide for the following:

5.2.1 Identification and documentation of conditions adverse to quality.

5.2.2 Identification of the requirements, source, or reference information being violated.

5.2.3 Notification of responsible management.

5.2.4 Control of conditions adverse to quality by tagging, segregation, administrative controls, or other appropriate means to prevent inadvertent installation, use, or continuation of the activity and removal of such controls when returned to service or availability.

5.2.5 Resolution and/or disposition approved by authorized personnel prior to closing out the documentation and restoring to normal service.

5.2.5.1 Material conditions adverse to quality disposition categories are:

- o "Use-as-is"
- o "Reject"
- o "Rework" in accordance with documented procedures
- o "Repair" in accordance with documented procedures

5.2.5.2 "Use-as-is" and "repair" dispositions shall be approved and justified in writing by Engineering & Technical Services.

5.2.5.3 Evaluations shall be performed to ascertain recurrence control measures.

5.2.6 Documentation of the corrective action taken.

5.2.7 Review and/or verification of the corrective action by the Quality organization, as appropriate.

5.2.8 Repaired and reworked items shall be reinspected in accordance with applicable procedures. Reinspection results are documented on inspection reports or other work process control documents.

5.2.9 Installation of nonconforming material, parts, and components may be performed after the effect of their installation has been evaluated and the installation approved by Plant Management and Engineering & Technical Services. Nonconforming items which may not be installed are those which, because of their makeup and intended use, cannot be repaired or reworked after being installed and those which, if installed and later removed, would degrade that system, structure, or component. Once installed, nonconforming items are not energized, used, or placed in service until the action required by the disposition, including reinspection, has been completed or an engineering evaluation has been prepared to justify the intended use of the nonconforming item.

5.2.10 Conditions adverse to quality identified on installed items will be evaluated for operability.

5.2.11 Disputes over corrective action are normally resolved by Plant Management. Should this resolution not be satisfactory, the parties may elevate the matter to higher management for resolution.

5.3 Procedures shall provide the following administrative controls:

5.3.1 Unique identification and numbering of conditions adverse to quality.

5.3.2 Preparing and maintaining status reporting of conditions adverse to quality.

5.3.3 Actions to be taken to assure timely corrective action on conditions adverse to quality.

5.4 Procedures which identify and track conditions adverse to quality shall require management review of each report to determine if the condition is significant. For significant conditions adverse to quality, the cause of the condition and the corrective action taken to preclude repetition shall be documented and reported to appropriate levels of management.

5.5 Measures shall be established for review and evaluation of conditions adverse to quality for reportability to the NRC as required by References 4.2 (to the extent not exempted), 4.3, and 4.4, as appropriate.

5.6 The authority to stop work has been assigned to the senior management of the Quality & Licensing function for any activity being performed by company personnel or contractors which do not conform to established requirements.

5.7 Measures shall be established for the evaluation and trending of conditions adverse to quality. The results of these reviews and analyses are reported to the affected organization and executive management, and are audited by the Quality organization. Adverse trends shall be evaluated and processed in accordance with controlling procedures.

6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.6.

7.0 ATTACHMENTS

7.1 None

1.0 PURPOSE

1.1 The purpose of this chapter is to establish the requirements for procurement of items and services for the South Texas Project Electric Generating Station (STP).

2.0 SCOPE

2.1 This chapter applies to the procurement of items and services for use at STP which are subject to the controls of this Quality program. These activities include procurement document control, bid evaluation, vendor evaluation, verification of vendor activities and receiving inspection.

3.0 DEFINITIONS

3.1 None

4.0 REFERENCES

4.1 10CFR50, Appendix B

4.2 10CFR21, Reporting of Defects and Noncompliance

4.3 OQAP Chapter 2.0, Table I

4.4 EPRI NP-5652 (NCIG-07), Guideline for the Utilization of Commercial Grade Items in Nuclear Safety Related Application

4.5 OQAP Chapter 4.0, Qualification, Training and Certification of Personnel

4.6 OQAP Chapter 13.0, Control of Conditions Adverse to Quality

4.7 OQAP Chapter 14.0, Records Control

4.8 Generic Letter 89-02, Actions to Improve the Detection of Counterfeit and Fraudulent Marketed Products

5.0 REQUIREMENTS

5.1 Procurement Document Preparation, Review and Control

5.1.1 Responsibility for procurement is a joint effort of all the departments within the STP Nuclear Operating Company (STPNOC). The department requesting the material or service provides technical content and quality requirements. Design Engineering/Nuclear Purchasing & Material Management is responsible to provide input to the requesting department on technical content and quality requirements, as requested. Quality will concur with all changes to quality requirements.

5.1.2 The sequence of preparation, review, approval, and issuance of procurement documents is generally as follows:

5.1.2.1 Purchase Requisitions

- Purchase requisition forms shall be used to initiate the procurement of materials, parts, components, and services. Procurement may be initiated by any STPNOC personnel.
- Purchase requisitions shall include material and component identification requirements, drawings, specifications, standards, inspection and test requirements, and special process instructions as appropriate.
- Purchase requisitions for materials, parts, components, or services shall be reviewed by the cognizant technical organization to verify that adequate technical and quality requirements have been specified.
- The reviews for technical and quality requirements shall be performed by someone other than the originator of the requisition. Quality will concur with all changes to quality requirements.

5.1.2.2 Purchase Orders and Contracts

- Purchase orders and contracts are prepared and issued by Nuclear Purchasing and Material Management and establish for the suppliers the technical and quality requirements which must be met.

- Purchase orders and contracts shall accurately reflect the technical and quality requirements established by the purchase requisition. If, during the bid negotiations with the supplier, it becomes necessary or commercially desirable to change the technical or quality requirements, such changes shall be presented for approval to the cognizant technical organization which approved the original requirements.

5.1.2.3 Change Controls

- Changes to procurement document quality and technical requirements shall require a review and approval equivalent to that of the original document. Commercial consideration changes not affecting the technical or quality requirements do not require review and concurrence by the originator.

5.1.3 For the procurement of spare or replacement parts, equipment, materials, and services, the quality and technical requirements shall be equal to or greater than the design basis requirements for the original part, equipment, materials or services; except where less stringent quality or technical requirements may be established based on specific evaluations and justification. The cognizant technical organization shall document such justification.

5.1.3.1 Items may be procured as Commercial Grade Items (CGIs) if a documented engineering evaluation indicates the CGI will provide equivalent performance. CGI dedication will comply with established procedures designed to satisfy the requirements of References 4.2 and 4.8.

5.1.3.2 The cognizant technical organization shall verify that quality requirements are correctly stated, verifiable, and controllable; that acceptance/rejection criteria are included; and that the documents have been prepared, reviewed, and approved in accordance with STP Quality Program requirements.

5.2 Procurement Document Content

5.2.1 Procurement document control measures shall assure that appropriate regulatory requirements, design bases, and other requirements are included in the procurement process. The following shall be included or invoked by reference in procurement documents as appropriate:

5.2.1.1 Applicable regulatory, code, and design requirements, including material and component identification requirements, drawings, specifications, standards, inspection and test requirements, special process instructions and handling, preservation, cleaning, storage, packaging and shipping requirements. These requirements shall equal or exceed the original requirements (unless changed by established design control processes).

5.2.1.2 Extent that supplier QA program shall comply with 10CFR50, Appendix B or the QA program requirements of other nationally recognized codes and standards, as applicable; or for CGIs to be dedicated for safety related use by STPNOC based on the results of a survey of the vendor's controls, the vendor's STPNOC approved and/or surveyed program.

5.2.1.3 Requirements for supplier documents, such as instructions, procedures, drawings, specifications, inspection and test records, and suppliers' QA records to be prepared, submitted, or be made available for review and/or approval by STP personnel.

5.2.1.4 Requirements for suppliers to maintain the status of required inspections or tests throughout the manufacturing process to preclude inadvertent bypassing of inspections and tests.

5.2.1.5 Requirements for STPNOC's right of access to suppliers' facilities and work documents for inspection and audit.

5.2.1.6 Requirements for extending applicable STP procurement requirements to lower-tier suppliers and subcontractors, including STPNOC's access to facilities and records.

5.2.1.7 Requirements for supplier reporting to STP nonconformances to procurement document requirements and conditions for their disposition.

5.2.1.8 Requirements for the retention, control, and maintenance of supplier QA records that are not maintained by STPNOC. Supplier-furnished records shall include:

- Documentation (e.g., certification) that identifies the purchased item and the specific procurement requirements (e.g., codes, standards, and specifications) met by the item.
- Documentation identifying any procurement requirements that have not been met.
- A description of those nonconformances from procurement requirements dispositioned "accept-as-is" or "repair".

5.2.1.9 Requirement for the supplier to submit a copy of its QA program description (does not apply for CGIs).

5.2.1.10 Requirements for the performance of maintenance and receipt inspection checks where applicable.

5.2.1.11 Applicability of 10CFR21 reporting requirements.

- The reporting requirements of 10CFR21 do not apply to vendors of CGIs to be dedicated for use by STPNOC.

5.3 Bid Evaluation

5.3.1 Bid Evaluations shall be performed to evaluate adherence to technical and quality assurance requirements.

5.4 Supplier Selection

5.4.1 Suppliers of items (for CGIs, when basis for dedication includes commercial grade survey) or services shall be required to submit copies of their QA program description for evaluation prior to the issuance of a purchase order or execution of a contract, and acceptability shall be documented. The process by which suppliers are judged as being a capable procurement source is described as follows:

5.4.1.1 Procurement source evaluation and selection involves Engineering & Technical Services, NPMM, and STP plant personnel, as appropriate. These organizations participate in the qualification evaluation of suppliers in accordance with written procedures.

5.4.1.2 Measures for the evaluation and selection of procurement sources shall be specified in procedures and may vary depending upon the complexity and risk significance of the item or service. When procurement source evaluations are performed, the information to be considered shall include one or more of the following:

- Experience of users of identical or similar products of the prospective supplier, other utility or approved contractor audits/evaluations, audits/evaluations by cooperative utility groups, American Society of Mechanical Engineers (ASME) Certificates of Authorization, STP records accumulated in previous procurement actions, and STP product operating experience may be used in this evaluation. When other utility, contractor or cooperative utility audits/evaluations are used, the documentation will be obtained and reviewed. Supplier history shall reflect recent capability. Previous favorable experience with suppliers may be an adequate basis for judgments attesting to suppliers' capability.

- An evaluation of the suppliers' current quality records supported by documented qualitative and quantitative information which can be objectively evaluated. This may include review and evaluation of the suppliers' QA Program Manual, procedures, and responses to questionnaires, as appropriate.

- A source evaluation of the suppliers' technical and quality capability as determined by a direct evaluation of facilities and personnel (audit, survey, or surveillance) and quality program implementation. Resolution or a commitment to resolve unacceptable technical or quality requirements identified by the bid evaluation or vendor evaluation shall be obtained prior to the award of a purchase order or contract.

5.4.1.3 Procurement source evaluations involve a review of technical and quality considerations to an extent considered appropriate by each participant. Technical considerations include the design or manufacturing capability and technical ability of suppliers to produce or provide the design, service, item or component. Quality considerations include one of the previously stated methods of supplier evaluation and a consideration of a suppliers' current quality program or capabilities.

5.4.1.4 A documented quality assurance evaluation of a vendor's quality program shall be performed to assure it meets the appropriate requirements of 10CFR50 Appendix B, or where applicable, other nationally recognized codes and standards, or, for CGIs, to assure the program provides adequate control over established critical characteristics.

5.4.1.5 Vendors may be placed on the Approved Vendors List after passing this evaluation.

5.4.1.6 A vendor shall not be issued a purchase order or contract unless they have been accepted for placement on the Approved Vendors List or an exception has been approved by the senior management of the Quality & Licensing function.

5.4.1.7 Service organizations which will supply only manpower and no other service are not required to be on the Approved Vendors List or have an STP approved quality assurance program as long as the supplied personnel are trained and work under the auspices of the STP Operations Quality Assurance Plan.

5.4.2 Each vendor on the Approved Vendors List shall be periodically evaluated by Quality as provided by Reference 4.3 (i.e., annually for "Full" program, biennially for "Basic" program).

5.4.2.1 A vendor may be removed from the Approved Vendors List if evaluation determines the vendor is unacceptable, the vendor requests removal or by direction of the senior management of the Quality & Licensing function.

5.4.3 Planning of verification activities to be employed for item or service acceptance shall begin during the purchase requisition or contract preparation and review stage. The extent of the verification activities will vary and be a function of the relative safety significance, complexity of the purchased item or service, and the supplier's past performance. The verification activities may include vendor surveillance, receipt inspection, or post-installation testing. Verification activities are planned to assure conformance to procurement document requirements. Procedures shall establish the organizational responsibilities for identifying required verifications and methods, performing and documenting the verification activities.

5.4.3.1 Verification activities shall be performed using plans developed in accordance with procedures with appropriate input from the cognizant technical organization. The plan shall specify the characteristics or processes to be witnessed, inspected or verified.

5.4.3.2 Specified source inspections may be waived by the senior management of the Quality & Licensing function.

5.4.3.3 Vendor related reports shall be evaluated to determine the effectiveness of the vendor's quality assurance program.

5.5 Receiving Inspection

5.5.1 Received purchased items shall be inspected for shipping damage and the requirements of ANSI N45.2.2 Section 5.2.1 and the applicable attributes of Section 5.2.2.

5.5.2 Receiving inspection shall be coordinated with verification activities. If source inspection is not performed or did not address all applicable attributes, receipt inspection shall be performed and shall include the applicable additional attributes listed in ANSI N45.2.2 Section 5.2.2, except for commercial grade items dedicated by survey which shall be receipt inspected as required by the procurement document.

5.5.3 Receiving inspection checklists shall be developed using the requirements specified in the procurement documents and applicable attributes of ANSI N45.2.2.

5.5.4 Statistical sampling methods may be used for groups of similar items. Sampling shall comply with nationally recognized methods or approved engineering alternates.

5.5.5 Receiving inspections shall be performed by personnel trained and qualified in accordance with Reference 4.5. Technical assistance shall be provided by Generation or Engineering & Technical Services as applicable.

5.5.6 Receiving inspection activities shall include:

5.5.6.1 Identifying materials, parts, and components and their status upon receipt by tagging or other acceptable means of identification, or segregating and controlling items in receiving hold areas separate from the storage facilities for acceptable items. Identification of items shall correspond to the identification required by procurement documents and be noted on receiving documentation.

5.5.6.2 Verification of items for this acceptance, including examination for shipping damage, correctness of identification, and specified quality documentation.

5.5.6.3 Inspecting or testing using approved procedures and calibrated tools, gauges, and measuring equipment for verification acceptance of items, including off-the-shelf items.

5.5.6.4 Items determined to be acceptable for use shall be identified with an "accept" tag or other acceptable means of identification prior to release for storage or use.

5.5.6.5 Received items which do not conform to procurement documents are controlled and segregated (if practical) and processed in accordance with Reference 4.6.

5.5.7 Acceptance by post-installation test may be utilized following one of the preceding verification methods. Post-installation testing may be used for acceptance verification when it is difficult to verify item quality characteristics, the item requires an integrated system checkout or test, or the item cannot demonstrate its ability to perform when not in use. Engineering specifications shall be used for developing post-installation test instruction requirements and acceptance documentation. Post-installation testing is the responsibility of the Plant Manager and is witnessed by Engineering & Technical Services personnel at specified hold points.

5.5.8 Acceptance of Procured Items and Services

5.5.8.1 Acceptance of items and services shall be based on one or more of the following:

Written certifications
(Note: This shall not be the sole method of acceptance for items in the "Basic" program)

Surveillance/Audit of procured service

Source verification

Receiving inspection/testing

Commercial Grade Item dedication

Vendor surveillance

Post-installation test

5.5.9 Documented evidence from the supplier that procured items meet procurement quality requirements, when required, such as codes, standards, or specifications will be maintained at the plant site. Such evidence shall be provided by the supplier, at the time of source or receipt inspection, for review and verification before acceptance. The documented evidence will be retrievable and available at the plant site prior to installation or use of the procured item, unless otherwise controlled in accordance with Reference 4.6.

5.6 Vendor Surveys, Surveillance and Audit

5.6.1 For items in the Full Program, Suppliers Certificates of Conformance, shall be periodically evaluated by audits, independent inspections, surveys, or tests to assure that they are valid and results are documented. When acceptance is based upon source inspection, documented evidence shall be furnished to the plant receiving organization.

5.6.1.1 Acceptance by source inspection may be considered when the item or service is vital to plant safety; or the quality characteristics are difficult to verify after receipt; or the item or service is complex in design, manufacture, inspection, or test. Vendor surveillance/source inspection involves a physical presence to monitor, by observation, designated activities for the purpose of evaluating supplier performance and product acceptance (source inspection only).

5.6.2 The STP survey and audit program provide for periodic scheduled audits or surveys of suppliers, the site procurement program, contractors, subcontractors, and others performing work. The audit and survey schedule is prepared and updated by Quality. Frequency of these surveys and audits is based upon the safety, complexity, and quality requirements, and as a minimum shall be in compliance with Reference 4.3.

6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.7.

7.0 ATTACHMENTS

7.1 None

Attachment 4

Confirmatory item 4.1: STPNOC must confirm to the staff that it will resolve the areas of inconsistency identified by the staff in this safety evaluation. See Sections 4.3.3.2 and 8.4 of this safety evaluation. (To the extent that other sections of this safety evaluation identify inconsistencies, this Confirmatory item applies).

Response:

The following table identifies STPNOC's resolution of the 'areas of inconsistency' identified in the draft safety evaluation (SE):

SE §	Area of Inconsistency	Resolution
4.3.3.2	"However, the licensee's response to staff Question #4 in Attachment 3 to the submittal contains the following statement regarding environmental qualification: Therefore, STP[NOC] believes that engineering analysis, qualification testing, or other specialized efforts to provide empirical evidence or other justifications of an SSC's ability to function in adverse environments is overly burdensome and not necessary for LSS and NRS components (i.e., not commensurate with their safety significance). The staff found the above statement by the licensee to be inconsistent with its statement to perform an engineering evaluation for replacement SSCs and to contradict its statements regarding its Design Control Program."	STPNOC confirms that it will perform an engineering analysis or an engineering evaluation for replacement components. The engineering evaluation may include an equivalency evaluation or a comparison of performance characteristics specified in vendor documentation against STP's technical requirements. UFSAR Section 13.7.3.3.2 has been revised accordingly.
4.3.3.2	"The staff also identified several areas where the licensee's description of how this process would be implemented raises concern that the implementation would not be consistent with the program described in Attachment 1 of the submittal to provide confidence of functionality under design basis conditions. For example, the licensee states on pages 48 and 49 of Attachment 4 of the submittal, in response to staff Question #12, that if a Class 1E component is not fully qualified it would be isolated from Class 1E circuitry without discussing the functional capability of the replaced component. Also, although relating to maintenance, in response to	STPNOC confirms that its processes are designed to provide assurance of functionality under design basis conditions. Proposed UFSAR Section 13.7.3.3.2, which pertains to procurement of LSS and NRS components, has been revised accordingly. Additionally, STPNOC confirms that changes in the functional capability of Class

	staff Question #39(d) on page 148 of Attachment 4 of the submittal, the licensee states that when safety-related LSS and NRS SSCs exceed their qualified life for environmental qualification, the SSCs would be assumed to be capable of functioning and would not be replaced unless necessary for a separate reason. In addition, the licensee states on page 157 of Attachment 3 that "Replacement LSS components are procured to be capable of meeting their design functional requirements (including environmental conditions). These functional requirements will envelope the credible design basis conditions [emphasis added] that the component can be expected to see." In these instances, the staff expects that the licensee will implement its programs as described in Attachment 1 of the submittal and will initiate appropriate corrective actions to address the issues identified by the staff (see Confirmatory item 4.1)."	1E equipment would be evaluated in accordance with STPNOC's design control program and process for implementing 10 CFR 50.59. STPNOC also confirms that when an LSS or NRS component exceeds its qualified life under 10 CFR 50.49, STPNOC will perform an evaluation to determine whether to replace the component or whether there continues to be assurance that the component can perform its functions under applicable design basis conditions.
8.4	"In Attachment 2 of its submittal, the licensee states under the "Scope of Exemption" for 10 CFR 50.49(b) that "LSS and NRS components, as applicable under Section 50.49, would be designed to function in the installed environment. Section 3.3.7 of Attachment 1 [to the submittal] identifies the design and procurement controls that would be applied to LSS and NRS components to achieve this requirement." A similar statement is made in the proposed FSAR Table 13.7-1. However, included within the original design requirements of safety-related LSS and NRS SSCs, as applicable, are the environmental conditions of a design-basis event harsh environment at the end of qualified life. Therefore, the licensee's statement that "to achieve the requirement that they are designed to function in the installed environment," is inconsistent with attributes of the procurement process described in its submittal and inconsistent with condition that LSS and NRS SSCs will remain functional under design basis conditions."	STPNOC confirms that LSS and NRS components subject to 10 CFR 50.49 will continue to be designed to perform their functions under applicable design basis environmental conditions. UFSAR Table 13.7-1 has been revised accordingly. STPNOC also confirms that when an LSS or NRS component exceeds its qualified life under 10 CFR 50.49, STPNOC will perform an evaluation to determine whether to replace the component or whether there continues to be assurance that the component can perform its functions under applicable design basis conditions.
18.4	"The licensee's response to NRC Staff Question # 4 in Attachment 3 to its submittal contains the following statement regarding seismic and environmental qualification: Therefore, STP believes that engineering analyses, qualification testing, or other specialized efforts to provide empirical evidence or other justifications of an SSC's	STPNOC confirms that it will perform an engineering analysis or an engineering evaluation for replacement components. The engineering evaluation may include an equivalency evaluation or a comparison of performance

	ability to function in adverse environments is overly burdensome and not necessary for LSS and NRS components (i.e., not commensurate with their safety significance). The staff finds that this statement may be inconsistent with the licensee's commitment to perform engineering evaluations to provide an appropriate level of assurance that LSS and NRS components will be able to perform their safety-related functions under design basis conditions.	characteristics specified in vendor documentation against STP's technical requirements. UFSAR Section 13.7.3.3.2 has been revised accordingly.
19.4	"However, in this specific request, the licensee is going one step further, in that it is requesting the ability to replace a Class 1E component with a Non-Class 1E component in case the replacement component does not satisfy all of the design and functional requirements applicable to this component. Thus, this request contradicts the assumption that all LSS and NRS components should satisfy all the current design and functional requirements. The staff assumes that the licensee will make a determination that the affected design functional requirement is not needed. However, the licensee has not stated how this determination will be made. If this determination is done in accordance with the STPNOC Design Change Control Process, then the licensee's proposal to isolate the replaced component from the Class 1E circuitry, and the classification of the circuit downstream as Non-Class 1E with proper isolation is acceptable."	STPNOC confirms that changes in the functional capability of Class 1E equipment will be evaluated in accordance with STPNOC's design control program and process for implementing 10 CFR 50.59.

Attachment 5

Confirmatory Item 4.2: STPNOC must confirm its commitment to adhere to the NRC-endorsed NEI guidance on commitment management.

Response:

Changes in special treatment requirements that are not within the scope of the exemption will continue to be controlled by the STPNOC commitment change process. This process satisfies NEI 99-04 'Guidelines for Managing NRC Commitment Changes', which the NRC has endorsed. For changes in special treatment requirements that are granted by the exemption, STPNOC will submit periodic FSAR updates in accordance with 10CFR50.71(e), or will provide an annual report updating its commitments in accordance with NEI 99-04.

Attachment 6

Open item 3.1: The appropriate equation for combining the random and common cause failure modes into a single importance value needs to be addressed by STPNOC.

Revised Response:

STPNOC believes the proposed methodology of dividing the common cause importance value into the individual elements is an innovative approach and is a more technically correct method to account for common cause within a single importance measure. However, due to issues associated with this methodology and the time necessary to gain consensus on this approach, STPNOC will revert back to the recognized conservative approach for PRA risk rankings from the GQA SER.

Reverting back to the GQA SER common cause methodology is documented and tracked under STP's corrective action program as Condition Report 01-497. The corrective actions to address this condition include: revise the risk ranking analysis, and identify if any components require recategorization. STPNOC will continue to work with industry and NRC initiatives to further refine and enhance the methodology to more correctly address the common cause factor.