



Safety Related Equipment
Downgrade Checklist (SREDC)
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STD-GN-0003

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| Station [] North Anna [X] Surry | Mark Numbers of Affected Components (Attach additional pages if necessary). See Page 4 |
| Primary Document for Implementing the Downgrade (Check One) <input checked="" type="checkbox"/> EDSCR - <input type="checkbox"/> OTHER - If "OTHER" is checked, list the following information for the primary document (such as a DCP, Technical Specification Change Request or other document which requires a Safety Evaluation be performed) to be used for implementing the downgrade: Document Number _____ Document Type _____ Document Title _____ | |
| DIRECTIONS A Safety Related Equipment Downgrade Checklist (SREDC) is required to be completed for every EDSCR which involves a downgrade of safety related equipment. This applies to legitimate downgrades and not for corrections to obvious Q-List input errors, etc. The SREDC (1) supplements the Component QCAs performed for the components and (2) contains those questions which must be addressed in order to confirm whether the SR components can be legitimately downgraded. When the primary document for implementing the downgrade is the EDSCR, then the questions shall be answered "yes" or "no" relevant to the component's current design basis functions. If all the questions are answered "no", then the downgrade(s) may proceed based on the EDSCR as supported by this checklist and the applicable QCA(s). If a "yes" answer is obtained to any of the questions, then a Safety Evaluation must be prepared and approved in accordance with VPAP-3001 prior to proceeding with the downgrade. When the primary document for implementing the downgrade is something OTHER than an EDSCR (such as a DCP), then the questions shall be answered "yes" or "no" relevant to the component's design basis functions which will exist once the change is implemented. If all the questions are answered "no", then the downgrade(s) may proceed under the cognizance of the document implementing the change. If a "yes" answer is obtained to any of the questions, then a Safety Evaluation must be prepared and approved in accordance with VPAP-3001 prior to proceeding with the downgrade. | |
| Prepared By (Print Name): R. W. Olney | Signature: (See Note 1 below.) Date: |
| Reviewed By (Print Name): B. R. Hall | Signature: (See Note 1 below.) Date: |

Note 1 - Either the Preparer or the Reviewer of the Checklist shall be an authorized Safety Evaluation Preparer.

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| SECTION A - GENERAL SAFETY RELATED CRITERIA | | |
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| 1. | Is any function (active or passive) of this component required to ensure the integrity of the reactor coolant pressure boundary is maintained within the normal reactor coolant makeup capability? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. | Is this component required to function or resist failure in order to shut down the reactor within accident analysis limits and maintain it in a safe shut down condition? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. | Is this component required to function or resist failure in order to provide the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposure of 10 CFR 100.11? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| SECTION B - SPECIFIC SAFETY RELATED | | |
| 1. | Is the component a system pressure boundary part of or a component which could cause a break of the reactor coolant pressure boundary in the form of pressure vessels, piping, pumps, valves, instruments or like components? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. | Is this component part of instrumentation systems beyond the normally open root valve and connected to the reactor coolant pressure boundary or other safety related fluid system wherein a failure of the component would result in the loss of fluid inventory beyond the safety related makeup capability of the system? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. | Has credit been taken for this component in the UFSAR Accident Analysis to actively respond or passively remain functional in a design basis accident or transient in order to meet the General Safety Related Criteria (Section A)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 4. | Is this component required to maintain sufficient inventory or cooling for the spent fuel pool? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. | Is this component required to provide heating, cooling, ventilating or air filtration in order to provide an acceptable environment for safety related equipment in order to remain within their design basis environmental qualification (normal, mild or harsh environments) and thereby remain functional during or following design basis accidents and transients as defined within the UFSAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 6. | Is this component required to provide air, heating, cooling, ventilation or filtration to areas containing safety related equipment that require the presence of personnel during or following a design basis accident or transient? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 7. | Is this component required to control or limit environmental conditions (i.e., humidity, pressure, radiation, temperature) resulting from or normally present during a design basis accident or transient to ensure environmental qualifications of safety related equipment subject to 10 CFR 50.49 are not exceeded? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. | Is this component required to provide electrical power or the protection of electrical power necessary for safety related equipment to accomplish their safety related function? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 9. | Is this component required to ensure auxiliary services such as cooling water, compressed air, diesel fuel, lubricating oil, freon etc. are provided to safety related equipment in order for them to perform their safety related function? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 10. | Is this component an instrument or part of an instrument loop that is required to initiate or control any safety related function? This includes instrumentation that provides information to operating personnel to take specific manually controlled actions for which the accident analyses have taken credit and for which no automatic controls are provided? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

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| 11. | Is this component within a safety related system functional boundary however it specifically does not perform an active safety function but could potentially fail and prevent other safety related equipment from accomplishing their safety related function? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 12. | Is this component a support, support device, cabinet, rack, fastener, etc., which is required for a safety related component to perform its safety related function? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 13. | Is this component a structure, panel, cabinet, enclosure, vault or other equipment required for the protection of safety related equipment against design basis accidents and transients or to which safety related equipment is attached? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 14. | Does this component provide the interface barrier (mechanical, electrical or structural) between a safety related and non-safety related system or component wherein it is the means by which the integrity and continued operation of the safety related system is ensured to be available during all design basis accidents and transients? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 15. | Is this component required to control hydrogen concentration in the primary containment atmosphere to acceptable limits? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| SECTION C - PROGRAMMATIC SAFETY RELATED CRITERIA | | |
| 1. | Is this component part of instrumentation loops required to Monitor Reg. Guide 1.97 Category I Type A, B, C, D or E variables that are required to provide information or controls to allow the control room operator to take pre-planned manual actions for which no automatic control is provided and that are required for safety systems to accomplish and maintain safe plant shutdown for design basis accidents and transients? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. | Is this component designated as a spare which could be used in a safety related application? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| SECTION D - UNREVIEWED SAFETY QUESTION SCREENING | | |
| 1. | Could any subsequent activities, which would be based on the downgraded classification, increase the probability of occurrence of an accident previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. | Could any subsequent activities, which would be based on the downgraded classification, increase the consequences of an accident previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. | Could any subsequent activities, which would be based on the downgraded classification, increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 4. | Could any subsequent activities, which would be based on the downgraded classification, increase the consequences of a malfunction of equipment important to safety previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. | Could any subsequent activities, which would be based on the downgraded classification, create the possibility of an accident of a different type than previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 6. | Could any subsequent activities, which would be based on the downgraded classification, create the possibility of a different type of malfunction of equipment important to safety than any previously evaluated in the SAR? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 7. | Could any subsequent activities, which would be based on the downgraded classification, reduce the margin of safety as defined in the basis for any technical specification? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. | Does the SAR (UFSAR, Technical Specifications, Licensing Commitments, etc.) explicitly state that the component proposed for downgrade is "Safety Related?" | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

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SECTION E - BASIS FOR THE DOWNGRADE

Explain the basis for proceeding with the downgrade and include a discussion to document the reasoning behind the previous answers, citing references as appropriate to allow an independent reviewer to reach the same conclusion. References should include applicable sections of the UFSAR, Technical Specifications, drawings, inputs from other groups, licensing correspondence, NRC Safety Evaluation Reports, SDBDs, etc. Be sure that the comments clearly correlate with the applicable mark numbers and above responses provided for this SREDC. Attach additional pages if necessary in order to complete your comments. Indicate whether or not the proposed downgraded classification would create classification conflicts with other documents (UFSAR, drawing, SDBD, etc.); if yes document how the conflict will be resolved.

Mark Numbers: Components shown with a shaded classification on the referenced EDSCR at the bottom of this SREDC.

References: PPR 95-016, dated 6/13/95
ET NAF-970214, Rev 0, dated 9/23/97
CQCA - 15, dated 12/18/97
Tech Report SE-0001, dated 8/5/87
ME-0218, dated 4/19/89
NRC letter NUREG-0737, dated 7/13/82
WCAP 10541, Rev 2, dated 12/10/86
10CFR50 Appendix R Report, dated 11/97
Level 1 Report, Spent Fuel Pool Design Basis Review, dated 7/31/95
NRC SPS Safety Evaluation Report, Section 3.2.5.4, dated 2/23/71
Surry CC DBD revision 1, to be issued
QCRC minutes 12/15/99

Basis: This SREDC documents the downgrading of components in the Surry CC system. As a result of utilizing the references listed above it has been determined that there are no Safety Related cooling functions of the CC system. The functions of previously classified Safety Related components outside of the containment isolation valves are downgraded to NSQ for cooling requirements, seismic requirements or for Appendix R, or downgraded to non-safety related, as noted in this EDSCR.

Mark numbers with NSQ or NS classifications shown shaded on the EDSCR number referenced in this SREDC represent those components downgraded.

Note: Safety Evaluation Report 97-158 approved by Surry SNSOC on 12/8/97 details the requirements for downgrading the spent fuel pool cooling to NSQ. Hence the answer to question 4 in Section B (page 2) of this SREDC is checked "No."

This SREDC was presented and approved at the 12/15/99 QCRC meeting as part of PEC 99048.

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PEC 99048
Component Cooling Water System – Unit 1 and 2
Surry Power Station

References: PPR 95-016, dated 6/13/95
ET NAF-970214, Rev 0, dated 9/23/97
CQCA - 15, dated 12/18/97
Tech Report SE-0001, dated 8/5/87
ME-0218, dated 4/19/89
NRC letter NUREG-0737, dated 7/13/82
WCAP 10541, Rev 2, dated 12/10/86
10CFR50 Appendix R Report, dated 11/97
Level 1 Report, Spent Fuel Pool Design Basis Review, dated 7/31/95
NRC SPS Safety Evaluation Report, Section 3.2.5.4, dated 2/23/71
Surry CC DBD revision 1, to be issued

Discussion:

This PEC is written to present justification for a global downgrading of components in the Surry CC system. As a result of utilizing the references listed above it has been determined that there are no Safety Related cooling functions of the CC system. The only Safety Related functions will be containment isolation, containment pressure boundary and anything required to be in compliance with Regulatory Guide 1.97 Category I variables. The functions of previously classified Safety Related components outside of the containment isolation valves will be downgraded to NSQ for cooling and seismic requirements or for Appendix R for the closed loop components, or downgraded to non-safety related for components that can be isolated from the closed loop

Inside containment pipe - closed loop SR for CTPB - 5.1.3, SYPB - 5.2.30
Outside containment pipe - NSQ for SEIS - 5.2.26.A, SYPB - 5.2.30 for seismic portions of the piping as documented during the 79-14 project.

SREDCs will be developed and reference this PEC but will not be submitted for QCRC approval for the Phase 3 EDSCRs being worked for the system. The SREDC will become part of the EDSCR that will be sent to records. The attached SREDC is an example of the standard we will use.