S. Plant Modifications and Items to be Completed During Implementation

Table S-1, Plant Modifications, provided below includes a description of the modifications along with the following information:

- A problem statement,
- Risk ranking of the modification,
- An indication if the modification is currently included in the FPRA,
- Compensatory measure in place, and
- A risk-informed characterization of the modification and compensatory measure.

The following ranking legend should be used when reviewing the table:

- High = Modification which would have an impact on FPRA and affect multiple Fire Areas.
- Med = Modification which would have an impact on FPRA and affect individual Fire Areas, or include IN 92-18 modifications.
- Low = Modification which would have no or insignificant impact on risk.

Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-1	Med (PRA)	2	In Fire Area HH, a separation issue was identified on the EFW valves 2CV-1026-2 and 2CV-1076-2. During a fire induced circuit failure the feedwater valves may be impacted by a fire in Fire Zone 2096-M. LAR Source: Attachment C (NEI-04-02 Table B-3) Section for EFW Valves 2CV-1026-2 and 2CV-1076-2 in Fire Area HH Risk Summary	ANO plans to relocate interposing relays and affected cables associated with 2CV-1026-2 and 2CV-1076-2 from Fire Area HH, Fire Zone 2096-M, to the adjacent room in Fire Area G, Fire Zone 2098-C. Circuits for 2CV-1026-2 and 2CV-1076-2 are currently routed through Fire Area G and no new impacts will be generated by this modification.	Yes	Yes	This modification is specifically credited from a PRA perspective. Modification reduces the risk in Fire Area HH of a fire induced circuit failure for EFW valves 2CV-1026-2 and 2CV-1076-2 in Fire Zone 2096-M. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-2	High (PRA)	2	In Fire Area JJ, a separation issue was identified that impacts the DC power cables control wiring on both trains. If a fire event occurred, this could result in the loss of equipment that would otherwise be available. Additional considerations are potential spurious operations at switchgear 2A-3 that may result in a loss of power to the safety bus. LAR Source: Attachment C (NEI-04-02 Table B-3) Switchgear/ EFW Valves — VFDR(s) 2A-3 — JJ-04 2A-308 — JJ-04 2A-309 — JJ-04 2CV-1036-2 — JJ-01 2CV-1075-1 — JJ-01 Attachment C (NEI-04-02 Table B-3) Fire Area JJ Risk Summary components: 2A-3, 2A-308, 2A-309, 2A-310, 2B-6, 2CV-1036-2, 2CV-1075-1, 2CV-4816, and 2CV-4817.	ANO plans to modify the circuits as described to eliminate impacts in Fire Area JJ associated with these components. 2A-3, 2A-308, 2A-309, and 2A-310 – The red train 125V DC panel 2D-23 that supplies control power for 2A-3 and 2B-5 is planned for relocation to Fire Area MM from Fire Area JJ. Control power cables are planned to be rerouted using embedded conduits from Fire Area MM to Fire Area II to avoid Fire Areas JJ and SS. This allows post-fire control of 2A-3 bus from the control room. 2CV-1036-2 – Auxiliary relays 2CR1036A, B, C, and D are currently installed in MCC 2B-61 and are planned to be relocated to MCC 2B-63. This would eliminate cables that are routed through Fire Area JJ associated with this valve. This eliminates a loss of 2CV-1036-2 due to a fire in Fire Area JJ and does not add an impact elsewhere. *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective and affects multiple fire areas. The modification limits the risk of a potential spurious operation and a loss of DC power to safety bus for switchgear 2A-3 due to a fire induced circuit failure. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-2				2CV-1075-1 – The reroute of DC control power to bus 2A-3 and load-center 2B-5 listed above assures MCC 2B-53 remains available to power this valve. Control cables from 2C-17 to MCC 2B-53 are planned to be rerouted using an embedded conduit between Fire Area G and II to avoid Fire Areas JJ, SS, and TT. New dedicated fuses are planned to be installed in 2C-17 for 2CV-1075-1 control relays so that failure of cables in scheme 2S113 will not impact 2CV-1075-1. 2B-6 – Cables are planned to be rerouted to control room panel 2C33-2 from 2B-6 using an embedded conduit between Fire Zone 2100-Z to the cable spreading room Fire Area G. This eliminates an impact in Fire Area JJ. 2CV-4816 & 2CV-4817 – A reroute of cable 2I016N is planned by using embedded conduit C4080 that is located between Fire Area G (cable spreading room) to Fire Area EE-L. Cable 2I016N is also planned to be separately fused in panel C-09 to prevent failure due to a loss of cable 2I016P. This eliminates circuit impacts in Fire Areas TT, JJ, and EE-U.			

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-3	High (PRA)	2	Fire induced circuit failure could impact DC power cables feeding circuit breakers at switchgear 2A-1, 2A-2, 2H-1, and 2H-2. The failure of 2A-1 and 2A-2 could prevent alignment to an offsite power source. The failure of 2H-1 and 2H-2 could prevent tripping the reactor coolant pumps (RCPs) from the control room. LAR Source: Attachment C (NEI-04-02 Table B-3) Switchgear — VFDR(s) 2A-1 — JJ-04 2H-1 — JJ-03, MM -04, SS-03 2H-2 — JJ-03, MM -04, SS-03 Attachment C (NEI-04-02 Table B-3) is globally credited in the performance based Risk Summary for all fire areas.	ANO plans to install backup DC control power to switchgear 2A-1, 2A-2, 2H-1 and 2H-2 with automatic transfer capability in the event the normal DC control power source is lost. The new backup DC power source will be located completely within Fire Area B-2 in proximity to the switchgear either on elevation 372' or below at elevation 354'. This eliminates impacts to switchgear DC control power due to a fire in any other ANO-2 fire area and allows tripping of the RCPs in those areas. Inclusive in this modification will be changes to the control power circuits for switchgear 2H-1 and 2H-2 to allow tripping the RCPs in a scenario where a fire originates internally to a switchgear cubicle. This design will prevent fire damage to a load cubicle from disabling the ability to trip the line breakers and remove power to the RCPs. The opposite scenario where fire damages the line breakers would not prevent the RCP load breakers from being tripped. This modification will require the line and load breakers be separately fused and fed as described: *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective and affects multiple fire areas. Modification to install an alternate DC power source reduces the risk of a fire induced circuit failure to the DC power cables feeding RCP circuit breakers 2H-1 and 2H-2 which could prevent tripping the RCPs from the control room. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-3				2H-1 – Internal DC control wiring jumpers will be removed to isolate the line and load cubicles. The DC control power for line breakers 2H-13, 2H-14, and 2H-15 will be isolated from the DC control power for the load breakers 2H-10, 2H-11, and 2H-12. 2H-2 – Internal DC control wiring jumpers will be removed to isolate the line and load cubicles. The DC control power for line breakers 2H-23, 2H-24, and 2H-25 will be isolated from the DC control power for the load breakers 2H-20, 2H-21, and 2H-22.			

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-4	High (PRA)	2	In Fire Area TT, a separation issue was identified that impacts the power cables for EFW, chemical and volume control system (CVCS), and service water (SW) components 2B-5, 2CV-0789-1, 2CV-1036-2, 2CV-1075-1, 2CV-4816, 2CV-4817, and 2P-7B in the fire PRA model. EFW/ CVCS/SW Components / LAR Source: Attachment C (NEI-04-02 Table B-3) VFDR(s) 2CV-1036-2 — TT-01 2CV-1075-1 — TT-01 2P-7B — TT-01 2CV-0789-1 — TT-01 2CV-4816 — TT-02 2CV-4817 — TT-02 2B-5 — TT-03 Note: This modification is also discussed in Item S1-2 for Fire Area JJ. Modification resolves impacts in both fire areas.	ANO plans to modify the circuits as described to eliminate impacts in Fire Area TT associated with these components. 2CV-1036-2 – Auxiliary relays 2CR1036A, B, C, and D are currently installed in MCC 2B-61 and are planned to be relocated to MCC 2B-63. This would also eliminate cables that are routed through Fire Area TT associated with this valve. This eliminates a loss of 2CV-1036-2 due to a fire in Fire Area TT. 2CV-1075-1 – Cables for this valve between panels 2C-39 to 2C-17 that are currently routed through Fire Area TT are planned to be rerouted to remain exclusively in the cable spreading room. Control cables from 2C-17 to MCC 2B-53 are planned to be rerouted using an embedded conduit between Fire Area G and II to avoid Fire Areas JJ, SS, and TT. New dedicated fuses are planned for installation in 2C-17 for 2CV-1075-1 control relays so that failure of cables in scheme 2S113 will not impact 2CV-1075-1. *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective and affects multiple fire areas. The modification reduces the risk of a fire induced circuit failure for EFW/CVCS/SW components and power cables (2B-5, 2CV-0789-1, 2CV-1036-2, 2CV-1075-1, 2CV-4816, 2CV-4817, and 2P-7B) in Fire Area TT. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-4				2P-7B – Cables for this pump between panels 2C-39 to 2C-17 that are currently routed through Fire Area TT are planned to be rerouted to remain exclusively in the cable spreading room. New conduits are also planned to be installed. 2CV-0789-1 – Cables for this valve between panels 2C-39 to 2C-17 that are currently routed through Fire Area TT are planned to be rerouted to remain exclusively in the cable spreading room. Control cables from 2C-17 to MCC 2B-53 are planned to be rerouted using an embedded conduit between Fire Area G and II to avoid Fire Areas JJ and SS. 2CV-4816 & 2CV-4817 – A reroute of cable 2I016N is planned by using embedded conduit C4080 that goes between Fire Area G (cable spreading room) to Fire Area EE-L. Cable 2I016N is also planned to be separately fused in panel C-09 to prevent failure due to a loss of cable 2I016P of cable. This eliminates circuit impacts in Fire Areas TT, JJ, and EE-U. *(continued)*			2B-5 – Cables for this load center between panels 2C-39 to 2C-33-1 that are currently routed through Fire Area TT are planned to be rerouted to remain exclusively in the cable spreading room.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-4				2B-5 – Cables for this load center between panels 2C-39 to 2C-33-1 that are currently routed through Fire Area TT are planned to be rerouted to remain exclusively in the cable spreading room.			
S1-5	High (PRA)	2	In Fire Area SS, a fire induced circuit failure could impact the DC power on both trains resulting in the loss of the following components. LAR Source: Attachment C (NEI-04-02 Table B-3) Switchgear — VFDR(s) 2A-3 — SS-01 Attachment C (NEI-04-02 Table B-3) Fire Area SS Risk Summary components 2A-4, 2A-409, 2B-6, 2A-308, 2A-309, 2A-310, 2CV-0789-1, 2CV-1040-1, 2D-27, 2K-4A, 2P-16A, 2P-36A, 2PIS-0789-1, 2SV-0724-1, 2SV-2809-1, 2SV-2810-1, and 2SV-2811.	ANO plans to modify the circuits as described to eliminate impacts in Fire Area SS associated with these components. 2A-3 and 2A-310 – The red train 125V DC panel 2D-23 that supplies control power for 2A-3 and 2B-5 is planned to be relocated from Fire Area JJ to Fire Area MM. Control power cables are planned to be rerouted using embedded conduits from Fire Area MM to Fire Area II to avoid Fire Areas JJ and SS. This allows post-fire control of 2A-3 bus from the control room. 2A-4, 2A-409, & 2B-6 – Cables are planned to be rerouted to control room panel 2C33-2 from 2A-4 and 2B-6 using an embedded conduit between Fire Zone 2100-Z to the cable spreading room Fire Area G. This eliminates an impact in Fire Zone 2097-X and Fire Area JJ. *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective and affects multiple fire areas. The modification reduces the risk of a fire induced circuit failure that could result in the loss of DC power for both trains. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-5				The 125V DC control power from 2D-24 to 2A-4 is planned to be rerouted using a new conduit to avoid an impact against cables G2D2404A and B in Fire Zone 2097-X. 2CV-0789-1 & 2PIS-0789-1 – The power cable for 2PIS-0789-1 (for 2CV-0789-1) is planned to be re-routed using an embedded conduit from Fire Area G to Fire Area II to avoid Fire Area SS. 2CV-1040-1 – This valve is not directly impacted but is failed due to a loss of AC. The red train 125V DC panel 2D-23 that supplies control power for 2A-3 and 2B-5 is planned to be relocated from Fire Area JJ to Fire Area MM. Control power cables are planned to be routed using embedded conduits from Fire Area MM to Fire Area II to avoid Fire Areas JJ and SS. This assures 2CV-1040-1 will have a source of power and eliminates an impact in Fire Area SS. *(continued)*			

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-5				2A-308, 2A-309, 2D-27, 2K-4A, 2P-16A, 2P-36A, 2SV-0724-1, 2SV-2809-1, 2SV-2810-1, and 2SV-2811 – The cables associated with these components are planned to be re-routed to avoid Fire Area SS by using embedded conduits and as required the installation of a new raceway in Fire Area B-2 directly under Fire Area SS on elevation 372'. The new raceway in Fire Area B-2 is planned to be installed above the vertical zone of influence for any postulated fire source. This eliminates impacts for 2A-308, 2A-309, 2D-27, 2K-4A, 2P-16A, 2P-36A, 2SV-0724-1, 2SV-2809-1, 2SV-2810-1, and 2SV-2811 in Fire Area SS.			
S1-6	Med (92-18)	2	Motor Operated Valves (MOVs) listed below will be modified to meet requirements per IN 92-18. The NPO assessment determined that any one of the RCS drop line valves can fail in a closed and unrecoverable position resulting in a loss of SDC. MOVs (IN 92-18) / LAR Source: Attachment D (NEI-04-02 Table F-1) VFDR(s) 2CV-5038-1 NPO-RCS-SDC 2CV-5084-1 NPO-RCS-SDC 2CV-5086-2 NPO-RCS-SDC	ANO plans to modify the control circuit for 2CV-5038-1 to prevent spurious closure. This is planned to be similar to the inhibit circuit modification on CV-1275 for ANO-1. Procedural controls to secure power by opening breakers are planned to be implemented for 2CV-5084-1 and 2CV-5086-2.	No	Yes	The NPO modification reduces the risk of fire induced MOV circuit failures (hot shorts, open circuits and short to ground). This MOV modification can prevent a non-recoverable position failure resulting in the loss of shutdown cooling. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-7	Med (PRA)	2	MOVs listed below will be modified to meet requirements per IN 92-18. The four EFW discharge valves and two EFW pump steam supply valves can fail in a closed and unrecoverable position. LAR Source: Attachment C (NEI-04-02 Table B-3) Section for EFW MOVs 2CV-1075-1, 2CV-1076-2, 2CV-1036-2, 2CV-1039-1, 2CV-0340-2, and 2CV-0205-2 in Fire Area G Risk Summary	ANO plans to modify the control circuit for MOVs 2CV-1075-1, 2CV-1076-2, 2CV-1036-2, 2CV-1039-1, 2CV-0340-2, and 2CV-0205-2 to prevent fire induced spurious closing from the main control room, Fire Area G. This will be accomplished by separating the cable conductors, inclusive of internal panel wiring, that can cause spurious valve closing and protecting them with grounded metallic raceway and the use of grounded metallic barriers. This will prevent contact with potentially energized conductors from both intracable and intercable hot shorts. MOV 2CV-1075-1 control cables R2B53J2C and R2B53J2N that enter panel 2C-17 or 2C-39 from floor penetrations have been identified as the cables of concern applicable to this modification. MOV 2CV-1076-2 control cables G2D26C1D, G2D26C1E, and G2D26C1L that enter panel 2C-16 or 2C-40 from floor penetrations have been identified as the cables of concern applicable to this modification. *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective. The modification reduces the risk of fire induced MOV circuit failures (hot shorts, open circuits and short to ground). This MOV modification can prevent a non-recoverable position failure. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-7				MOV 2CV-1036-2 control cable G2B63H1E that enters panel 2C-40 from a floor penetration has been identified as the cable of concern applicable to this modification. MOV 2CV-1039-1 control cable R2D27B2E that enters panel 2C-39 from a floor penetration has been identified as the cable of concern applicable to this modification. MOV 2CV-0340-2 control cable G2D26B1E that enters panel 2C-16 from a floor penetration has been identified as the cable of concern applicable to this modification. MOV 2CV-0205-2 control cables G2D26C2C, G2D26C2E, and G2D26C2F that enter panel 2C-16 or 2C-18 from floor penetrations have been identified as the cables of concern applicable to this modification.			

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-8	Med (PRA)	2	In Fire Area B-3, spurious opening of MOV 2CV-4698-1 pressurizer low temperature – overpressure (LTOP) relief can result from a fire in motor control center (MCC) 2D-27. LAR Source: Attachment C (NEI-04-02 Table B-3) Section for Fire Area B-3 Risk Summary	ANO plans to modify the control circuit for 2CV-4698-1 to prevent fire induced spurious opening in Fire Area B-3. This will be accomplished by separating the cable conductors, inclusive of internal panel wiring, that can cause spurious opening and protecting the conductors with a grounded metallic raceway and the use of grounded metallic barriers. This will prevent contact with potentially energized conductors from both intracable and intercable hot shorts. Control cable R2D27A3J that enters MCC 2D-27 from a floor penetration has been identified as the cable of concern applicable to this modification.	Yes	Yes	This modification is specifically credited from a PRA perspective. The modification in Fire Area B-3 to install flexible metallic conduit protects the valve control cable in MCC 2D-27 which reduces the risk of fire induced circuit failures (such as spurious opening). This modification can prevent a non-recoverable position failure. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.
S1-9	Med (PRA)	2	In Fire Area G, spurious opening of valves 2CV-1002 (in cabinet 2C02), 2CV-1052 (in cabinet 2C02), 2CV-0714-1 (in cabinet 2C17), and 2CV-4698-1 (in cabinet 2C09) can result from a fire in the control room. LAR Source: Attachment C (NEI-04-02 Table B-3) Section for MOVs 2CV-1002, 2CV-1052, 2CV-0714-1, and 2CV-4698-1 in Fire Area G Risk Summary	ANO plans to modify the control circuit for MOVs 2CV-1002, 2CV-1052, 2CV-0714-1, and 2CV-4698-1 to prevent fire induced spurious opening in the main control room, Fire Area G. This will be accomplished by separating the cable conductors, inclusive of internal panel wiring, that can cause spurious valve opening and protecting the conductors with a grounded metallic raceway and the use of grounded metallic barriers. *(continued)*	Yes	Yes	This modification is specifically credited from a PRA perspective. The modification in Fire Area G to install flexible metallic conduit protects the valves control cable which reduces the risk of fire induced circuit failures (such as spurious opening). This modification can prevent a non-recoverable position failure. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-9				This will prevent contact with potentially energized conductors from both intracable and intercable hot shorts. MOV 2CV-1002 control cable G2B63A3D that enters panel 2C-02 from a floor penetration has been identified as the cable of concern applicable to this modification. MOV 2CV-1052 control cable R2B53D3D that enters panel 2C-02 from a floor penetration has been identified as the cable of concern applicable to this modification. Valve 2CV-0714-1(2SV-0714-1) control cable R2S066E that enters panel 2C-17 from a floor penetration has been identified as the cable of concern applicable to this modification. MOV 2CV-4698-1 control cable R2D27A3J that enters panel 2C-09 from a floor penetration has been identified as the cable of concern applicable to this modification.			

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-10	Med (PRA)	2	In Fire Area B-4 an incipient fire detection system is not installed in control element drive mechanism (CEDM) room panels 2C-70, 2C-71, 2C-72, 2C-73, and 2C-80. However an early warning fire detection system in accordance with NFPA 72, Fire Alarm Detection Code, is required by the PRA in accordance with FRE CALC-09-E-0008-05. LAR Source: Attachment C (NEI-04-02 Table B-3) Section for CEDM Room Panels 2C-70, 2C-71, 2C-72, 2C-73, and 2C-80 in Fire Area B-4 Risk Summary	ANO plans to provide a modification in the CEDM room in Fire Area B-4 to install incipient detection in cabinets 2C-70, 2C-71, 2C-72, 2C-73, 2C-80, and 2C-409. Fire detection signal cable is planned to be routed from each air sampling detector to the control room fire panel 2C-343-3.	Yes	Yes	This modification is specifically credited from a PRA perspective. The early warning fire detection system modification in Fire Area B-4 reduces the risk of a fire induced circuit and equipment failures that could result in the loss of CEDM room panels 2C-70, 2C-71, 2C-72, 2C-73, 2C-80, and 2C-409. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.
S1-11	High (PRA)	2	At ANO the availability of feedwater to ANO-2 SGs was identified as an issue by PRA. Also identified by PRA was ANO's inability to perform high risk and time sensitive actions, such as control of auxiliary feedwater (AFW), outside of the ANO-2 Control Room. LAR Source: Attachment C (NEI-04-02 Table B-3) Fire Area G Risk Summary and VFDR G-01	ANO plans to install a new AFW pump in ANO-1 capable of feeding one of the ANO-2 SGs. The AFW would be designed to meet or exceed the flow requirements of ANO-2 Emergency Feedwater (EFW) Pump 2P-7B (380 gpm @ 1100 psig). The new pump, controls and motor operated valves would be designed to be installed in ANO-1. The preferred source of suction for the new pump is planned to be from ANO-1. *(continued)*	Yes	Yes	The AFW modification is specifically credited from a PRA perspective to provide a reliable additional source of feedwater. The local control panel modification is specifically credited from a PRA perspective to provide an alternate means to perform required actions outside the ANO-2 Control Room. This modification reduces the risk of not being able to perform necessary operator actions to shutdown the plant, if either Control Room can't be manned. *(continued)*

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-11				The discharge piping is planned to be routed through the ANO-1 and ANO-2 Turbine Buildings to ANO-2 Auxiliary Building Rooms 2081 and 2084 for the tie-ins to the EFW System piping. The AFW tie-ins are planned to discharge into the ANO-2 EFW downstream of all EFW injection valves to ensure a single area fire does not disable AFW. The AFW pump would be designed to have the capability to be operated from the ANO-2 Control Room and locally in ANO-1. The design will ensure electrical isolation from Control Room functions to prevent a fire in the ANO-2 Control Room from affecting local control of AFW components. The AFW pump and associated motor operated valves would be designed to be powered by diverse ANO-1 non-safety related power sources to prevent a single failure from disabling equipment operation. The AFW pump would be designed to include controls and monitoring instrumentation to ensure proper water flow to the SGs. The local controls and monitoring instrumentation are planned to be located in ANO-1, powered from ANO-1 sources and have backup DC power.			Also, the local control panel modification reduces the risk of availability issue with of feedwater supply to the ANO-2 SGs. Manual actions are credited in fire areas that contain redundant safe shutdown equipment. These actions have been demonstrated feasible and are therefore considered adequate compensatory measures until compliance can be achieved by transitioning to a 10CFR50.48(c) licensing basis.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-12	Med (PRA)	2	In Fire Area B-3, excessive temperatures have been identified in Fire Zone 2091-BB following a loss of ventilation. LAR Source: Attachment C (NEI-04-02 Table B-3) Fire Area B-3	ANO plans to modify the control wiring for fans 2VEF-63 and 2VEF-64 to isolate the control room and allow the local controls to override a "stop" signal generated from within Fire Area G, either from handswitch positioning or fire-induced circuit damage. This eliminates fire impacts in Fire Area G and assures either 2VEF-63 or 2VEF-64 will remain available except for a fire in Fire Area B-3, Fire Zone 2091-BB.	Yes	No	This modification supports a basic assumption from a PRA perspective.
S1-13	Med (PRA)	2	In Fire Area MM, excessive temperatures have been identified in Fire Zone 2099-W following a loss of ventilation. LAR Source: Attachment C (NEI-04-02 Table B-3) Fire Area MM	ANO plans to provide a modification to fire door DR 265 to allow normally open positioning with automatic closure features in the event of a fire. This allows natural circulation to prevent long term room overheating impact on equipment located in Fire Zone 2099-W, West DC Equipment Room, by allowing an opening to Fire Zone 2109-U, Corridor, in Fire Area JJ.	Yes	No	This modification supports a basic assumption from a PRA perspective.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-14	Low (Code)	C	With regard to NFPA 50A, Gaseous Hydrogen Systems, code non-compliance issues were identified in the Hydrogen Gas Bottle Storage Room related to inadequate vent piping and room ventilation. The hydrogen storage room light switch was identified as not meeting Article 501 for Class I, Division II locations of the National Electric Code (NEC). LAR Source: Attachment A (NEI-04-02 Table B-1) Section 3.3.7.1	ANO plans to provide a modification to move the hydrogen bottles and manifold from the Hydrogen Gas Bottle Storage Room to a concrete slab located outside this room and open to atmosphere. This addresses hydrogen ventilation concerns and eliminates the need for electrical upgrades.	No	No	The subject hydrogen gas system bottle storage area is not credited by the PRA. This modification will be completed to meet NFPA 805 code requirements.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-15	Med (PRA)	C	NFPA 805 non-compliance issues were encountered when smaller fire areas were defined such that multiple walls, dampers, penetration seals, and doors were credited and used in the PRA model as rated fire barriers in the NRC regulatory basis for NFPA 805. Multiple walls and doors barriers will require upgrading to comply with NFPA 805. LAR Source: Attachment A (NEI-04-02 Table B-1) Section 3.11.2	ANO plans to provide an adequate-for-the-hazard evaluation and if necessary a modification to upgrade fire barrier walls, dampers, penetration seals, and doors to rated barriers for those barriers credited for deterministic compliance and subsequently credited in the Fire PRA analysis. These barriers have been previously identified as NRC regulatory basis to ensure compliance with NFPA 805 and have compensatory measures established. The barriers to be addressed as identified by EC-1956 are 2005-2, 2005-3, 2067-4, 2082-3, 2091-1, 2091-2, 2091-3, 2091-4, 2107-4, 2110-2, 2110-4, 2110-7, 2112-2, 2112-8, 2112-10, 2133-5, 2133-6, 2147-8, 2148-4, 2148-5, 2149-5, 2152-2, 2154-2, 2154-3, 2154-5, 2158-10, 2224-2, 2224-3, 2228-10, 2239-4, 2239-5, 2256-4, 2256-5, 2256-6, 2256-8, 2134-1, and 2155-1.	Yes	Yes	This modification will be completed to meet NFPA 805 code requirements. In accordance with station directives, compensatory measures per OP-1003.014 have been established as appropriate.

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Table S-1 Plant Modifications

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S1-16	Low (Code)	C	NFPA 10 non-compliance issues (such as incorrect number of fire extinguishers for travel distance, incorrect type and size for the hazard area) were identified with ANO portable fire extinguishers. LAR Source: Attachment A (NEI-04-02 Table B-1) Section 3.7	ANO plans to provide a modification to resolve the NFPA 10 code deficiencies identified in CALC-ANOC-FP-09-00009. In general, this modification would involve portable fire extinguisher physical relocation, substitution of existing extinguishers, and documentation updates to reflect these plant changes. The results will ensure the proper number of fire extinguishers to meet travel distance requirements in coverage areas, adequately sized fire extinguishers, and the correct type of extinguisher that is rated for the fire hazard in each area.	No	No	The subject fire extinguishers are not credited in the FPRA. This modification will be completed to meet NFPA 805 code requirements.

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