PA-LR

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Please incorporate these revised AMR questions into the Q & A audit data base.

CC: Jacob Zimmerman; James Davis; Jonathan Rowley; Kenneth Chang ; Michael Morgan; Ram Subbaratnam

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AMR Review Questions for VYNPS

Question No.	Question
3.1.1-01-P-01	Generic Question 1: VY LRA identified that cracking fatigue credits TLAA – metal fatigue for almost all the components in RCS (Section 3.1). In Appendix C, BWRVIP applicant's action items (AAIs) identified that there is no plant-specific TLAAs. Please clarify the difference between AMR and AAIs. Note: This question applied to all Sections (3.1 thru 3.6). If TLAA was credited in the LRA, the TLAA analysis should be available to support the AMR.
3.1.1-02-P-01	Generic question 2: When bolting integrity AMP is added, many AMR Table 2 items need to be revised. Will VY provide bolting integrity program to manage bolts?
3.1.1-13-P-01	In many cases (e.g. page 3.1-67 piping& fitting), loss of material is managed using Water chemistry control – BWR alone. Please confirm that the VYNPS Water Chemistry - BWR AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M2, "Water Chemistry."
3.1.1-14-P-02	On page 3.1-53, the component type 'weld SLC nozzle to safe end weld (N10)' is managed using BWR vessel internals, Water chemistry control - BWR. Please explain how the BWR Vessel Internal program manage loss of material for SLC Nozzle to SE weld (N10) and provide either document or inspection plan to support this AMR.
3.1.1-17-P-01	On page 3.1-39, the component type 'reactor vessel shell, intermediate beltline shell' is managed using reactor vessel surveillance and TLAA - neutron fluence. Please confirm that the neutron fluence at the LPCI and RHR injection nozzle will remain <1E17 n/cm2 (E>1MeV) through the end of the period of extended operation.
3.1.1-19-P-01	On page 3.1-67, the component type 'piping and fittings <4" NPS' is managed using water chemistry control - BWR, One-time inspection. Why VY does not credit ISI program?

Question No.	Question
3.1.1-29-P-01	On page 3.1-62, the component type 'steam dryers' is managed using BWR vessel internals. The AMR indicates that cracking of the steam dryers will be managed using the BWR VI program, yet they are not listed in the scope of the program. Please provide a plant-specific AMP as recommended by GALL or ensure that each of the 10 attributes of an acceptable management program are to be addressed.
3.1.1-40-P-01	On page 3.1-40, the component type 'CRD stub tubes' is managed using BWR Vessel Internals, water chemistry control – BWR. For this item, GALL recommends the use of a program consistent with XI.M8, "BWR Penetrations." No exception was taken to the scope of VYNPS AMP B.1.4, "BWR Penetrations Program. It would also seem appropriate to assign Note E to this item unless the AMP assigned is changed.
3.1.1-41-P-01	On page 3.1-72, the component type 'restrictors (ms)' is managed using water chemistry control - BWR, One-time inspection. Please provide the basis for excluding this component from the BWR Stress Corrosion Cracking program. Is restrictor (ms) weld inspection part of ISI also?
3.1.1-41-P-03	on page 3.1-47, the component type 'flanges, head nozzle flanges (N6, N7), blank flanges (N6)'; instrumentation (N11, N12)'; and on page 3.1-52, the component type 'thermal sleeves , feedwater inlets (N4)' are managed using inservice inspection, water chemistry control - BWR. Please confirm these nozzles are less than 4 NPS. Please clarify how to manage feedwater inlets thermal sleeve with ISI program.?
3.1.1-43-P-01	On page 3.1-56, the component type 'control rod guide tubes, bases' is managed using BWR vessel internals, water chemistry control - BWR. The component type appears to be described by the structure and/or component column in GALL Table IV.B1. Please clarify the basis for assigning Note D.
3.1.1-44-P-01	On page 3.1-52, the component type 'thermal sleeves recirc inlet (N2) core spray (N5)' is managed using BWR vessel internals and water chemistry control - BWR. Please confirm that for the recirc inlet nozzle thermal sleeve, Note B would apply. Please clarify how BWR Vessel Internal Program manages recir inlet thermal sleeves?
3.1.1-47-P-01	In many cases (beginning on page 3.1-56), component types are managed using water chemistry control – BWR alone for loss of material. Please provide the basis for excluding them from the ISI program.

Question No.	Question
3.1.1-48-P-02	On page 3.1-73, the component type 'tank (CRD accumulator)' is managed using water chemistry control - BWR, One-time inspection. It is not clear that the tank is <NPS4, so ISI would seem a more appropriate AMP for verification (and a different GALL item may be a more useful reference).
3.1.1-48-P-03	On page 3.1-63, the component type 'condensing chambers' is managed using water chemistry control - BWR, One-time inspection. Please confirm that this component is <NPS4
3.1.1-49-P-01	On page 3.1-62, the component type 'shroud support, ring, cylinder, and legs, access hole cover' is managed using BWR vessel internals, water chemistry control - BWR. For the access hole cover plate, GALL recommends ISI and water Chemistry. Please identify the specific inspection(s) for this component under the RVI program.
3.1.1-52-P-01	On page 3.1-36, the component type 'incore housing bolting, flange bolts, flange nut and washer' is managed using inservice inspection. Please confirm that the new Bolting Integrity AMP will be applied to this item, and identify a more appropriate GALL item.
3.1.1-55-P-01	On page 3.1-71, the component type 'pump casing and cover (RR)' is managed using inservice inspection. On page 3.1-75, the component type 'valve bodies <4" NPS' is managed using one-time inspection. On page 3.1-79, the component type 'valve bodies >=4" NPS' is managed using inservice inspection. Please clarify the basis, in each case, for asserting that the AMP used is different from the one suggested by GALL.
3.1.1-57-P-01	On page 3.1-72, the component type 'restrictors (ms)' is managed using one-time inspection. Please describe how OTI satisfies the recommendations of GALL AMP XI.M12, Thermal Aging Embrittlement of CASS.
3.3.1-03-K-01	On page 3.3-91, the component type 'heat exchanger (tubes)' is managed using water chemistry control - BWR. Please confirm that the VYNPS Water Chemistry - BWR AMP addresses fouling in heat exchanger tubes.

Question No.	Question
3.3.1-05-K-01	On page 3.3-74, the component type 'heat exchanger (tubes) ' is managed using water chemistry control - BWR. GALL recommends a plant-specific program. Please clarify how this component is addressed by a purely preventive program.
3.3.1-13-K-01	On page 3.3-92, the component type 'neutron absorber (boral)' is managed using water chemistry control - BWR. GALL recommends a plant-specific program. Please clarify how this component is addressed by a purely preventive program.
3.3.1-14-K-01	In many cases, beginning on page 3.3-61 for auxiliary systems, component types exposed to oil are managed using the oil analysis program. Please confirm that the VYNPS Oil Analysis AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M39, "Lubricating Oil Analysis."
3.3.1-20-K-01	Beginning on page 3.3-166, many component types are managed using the diesel fuel monitoring program. Please confirm that the VYNPS Diesel Fuel Monitoring AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M30, "Fuel Oil Chemistry."
3.3.1-21-K-01	On page 3.3-106, the component type 'heat exchanger (bonnet)'; on page 3.3-141, the component type 'heat exchanger (shell)'; and on page 3.3-78, the component type 'heat exchanger (shell)' are managed using the oil analysis program. Please confirm that the VYNPS Oil Analysis AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M39, "Lubricating Oil Analysis."
3.3.1-23-K-01	Beginning on page 3.3-221, component types exposed to treated water are managed using water chemistry control - BWR. Please confirm that the VYNPS Water Chemistry - BWR AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M2, "Water Chemistry."
3.3.1-25-K-01	On page 3.3-65, the component type 'heat exchanger (tubes)' and on page 3.3-129, the component type 'heat exchanger (tubes)' are managed using service water integrity. GALL recommends a plant-specific program. Please clarify how service water integrity program manages this item..
3.3.1-26-K-01	Beginning on page 3.3-80, the components exposed to lube oil are managed using the Oil Analysis program. Please confirm that the VYNPS Oil Analysis AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M39, "Lube Oil Chemistry."

Question No.	Question
3.3.1-27-K-01	On page 3.3-69, the component type 'suction barrel' is managed using service water integrity. GALL recommends a plant-specific program. Please clarify how each of the attributes of SRP-LR Appendix A1 is addressed for this item.
3.3.1-28-K-01	On page 3.3-102, the component type 'valve body' is managed using instrument air quality. Please clarify how the effectiveness of the IAQ program is to be verified.
3.3.1-30-K-01	Beginning on page 3.3-61, the component types exposed to treated water are managed using water chemistry control - BWR. Please confirm that the VYNPS Water Chemistry - BWR AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M2, "Water Chemistry."
3.3.1-31-K-01	On page 3.2-50 in ESF and page 3.3-146 in auxiliary systems, component types exposed to treated water are managed using water chemistry control - BWR. Please confirm that the VYNPS Water Chemistry - BWR AMP is consistent with GALL XI.M32, "One-Time Inspection," as well as with XI.M2, "Water Chemistry."
3.3.1-51-K-01	On page 3.3-131, the component type 'humidifier housing' and on page 3.3-132, the component type 'piping' are managed using water chemistry control - auxiliary systems. Please confirm that GALL v2 item VII.F1-8 is intended (not VIII.F1-8).
3.4.1-M-01	In LRA Table 3.4.1, Item Number 3.4.1-22, the applicant states that their existing "System Walkdown Program",..."manages the loss of material for steel bolting through the use of visual inspections...". How does the applicant intend to address the potential loss of bolting material for subject bolting (normally flange bolting) that cannot be readily seen – "visually inspected" – since most such bolting is usually covered by insulation/flashing material? Note: See generic question 2.

Question No.	Question
3.4.1-M-03	The staff has recently discovered – during the April VYNPS AMP audit – that plant main condenser tubing contains an admiralty brass-type of material which contains copper & zinc. Such material – copper & zinc - has been known to leach out of condenser tubing via either by direct raw water erosion of the inside of the condenser tubes and/or by way of phenomena known as "de-zincification." Recent third-party chemistry control audits of VYNPS have presented evidence that both copper and zinc ions are currently leaching out of the main condenser tubing and have been leaching out at a measurable rate for the last five (5) years. However; as noted in VYNPS LRA Table 3.4.1, Item Number 3.4.1-35, the applicant stated that; "....there are no copper alloy components subject to selective leaching in the steam and power conversion systems...". What does the applicant intend to do to reduce and/or eliminate the apparent measurable and continued leaching out of copper and zinc ions from the main condenser tubing? What does the applicant intend to do to eliminate and/or mitigate the introduction of these ions (primarily the copper ions) into the reactor core areas of the plant?
3.4.2-M-01	The staff has recently discovered, in the applicant's LRA, "Auxiliary Systems - Miscellaneous Systems" Tables 3.3.2-13-02 and 3.3.2-13-13, that the applicant intends to use their existing Water Chemistry Control (BWR) Program to control loss of material in their condensate and feedwater systems; i.e., loss of material in carbon steel piping subjected to steam temperatures >220 degrees F. For these systems, the GALL recommends the implementation of both a Water Chemistry Control AND a One-Time Inspection Program to identify and mitigate loss of material in system piping. Does the applicant intend to implement a One-Time Inspection Program as well as their existing Water Chemistry Control Program to both identify and mitigate the loss of material in their condensate and feedwater systems? If yes, does the applicant intend to formally produce a commitment to implement both programs? If the applicant does not intend to implement both a One-Time Inspection and Water Chemistry Control Program, why not?

Question No.	Question
3.4.2-M-02	The staff has recently discovered, in the applicant's LRA, Table 3.4.2-1; "Main Condenser and MSIV Leakage Pathway – Heat Exchanger Tubes," that the applicant intends to use their existing Water Chemistry Control (BWR) Program to control any loss of material in stainless steel (SS) condenser tubes; i.e., loss of material in SS piping (tubing) subjected to steam temperatures >270 degrees F. For these systems and any future modified systems, the GALL recommends implementation of both a Water Chemistry Control AND a One-Time Inspection Program to identify and mitigate loss of material in system piping (tubing). Does the applicant intend to implement a One-Time Inspection Program as well as their existing Water Chemistry Control Program to both identify and mitigate loss of material from any future modified heat exchanger tubing that could contain stainless steel that could be subjected to steam (or high temperature and high pressure water) temperatures >270 degrees F? If yes, does the applicant intend to formally produce a commitment to implement both programs? If the applicant does not intend to implement both a One-Time Inspection and Water Chemistry Control Program for future, modified condensers, why not?
3.4.2-M-03	The staff has recently discovered, in the applicant's LRA, "Table 3.3.2-13-9; "Circulating Water System," that the applicant intends to use their existing Periodic Surveillance and Periodic Maintenance (PSPM) Program to control loss of material in their circulating water condenser tubing (interior); i.e., loss of material in copper alloy material (>15% zinc) subjected to raw water conditions. For this system, the GALL recommends the implementation of an Open-Cycle Cooling Water Control Program to identify and mitigate loss of material in system piping. Does the applicant intend to implement only the PSPM Program to both identify and mitigate loss of material in the main condenser tubes rather than a "GALL-recommended" Open-Cycle Cooling Water Control Program? If yes, does the applicant intend to formally produce a commitment to modify and implement the PSPM Program for control of material loss from the main condenser tubing? If the applicant does not intend to implement both a PSPM and "GALL-recommended" Open-Cycle Cooling Water Control Program, why not?
3.5.1-13-W-1	In Table 3.5.2-1 on Page 3.5-50 of the LRA, for component Bellows (reactor vessel and drywell, one of the AMPs shown is CII-IWE, which is a plant-specific AMP. A Note C has been assigned to this AMR line item, component is different, but consistent with material, environment, aging effect, and aging management program for NUREG-1801 line item. AMP is consistent with NUREG-1801 AMP description. Provide drawings showing how the LRA line item bellows are different from the GALL Table 1 Line Item 3.5.1-13 bellows. Explain how the plant-specific VYNPS CII-IWE AMP is consistent with the GALL specified AMP.

Question No.	Question
3.5.1-16-W-1	In Table 3.5.2-1 on page 3.5-54 of the LRA for component Drywell floor liner seal, the AMP shown is Structures Monitoring. The applicant is asked to verify that the CII-IWE AMP will not be used instead to manage the aging of the moisture barrier.
3.5.1-44-W-1	In Table 3.5.2-6 on Page 3.5-80 of the LRA, for component seals and gaskets (doors, manways and hatches), material rubber in a protected from weather environment; the aging effects are cracking and change in material properties. One of the aging management programs shown is Structures Monitoring. The GALL line item referenced is III.A6-12 and the Table 1 reference is 3.5.1-44. The note shown is E, different AMP than shown in GALL. However, GALL Line Item III.A6-12 and Table 1 Line Item 3.5.1-44 both specify the Structures Monitoring Program. Explain why the note shown is not A instead of E for the lower half of this AMR line item.
3.5.1-45-W-1	In Table 3.5.2-5 on Page 3.5-67 of the LRA, for component Vernon Dam external walls above/below grade, material concrete in an exposed to fluid environment; the AMP shown is Vernon Dam FERC Inspection. The referenced GALL line item for all three environments is III.A6-7. GALL Line Item III.A6-7 states the following under AMP: Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC/US Army Corp of Engineers dam inspections and maintenance programs. Since one of the AMPs under this GALL line item is FERC dam inspections, explain why the note assigned to the LRA AMR line item is E instead of A; consistent with GALL.
3.5.1-47-W-1	In Table 3.5.2-5 on Page 3.5-66 of the LRA, for component Vernon Dam structural steel, material carbon steel in an exposed to weather, protected from weather, and exposed to fluid environment; the AMP shown is Vernon Dam FERC Inspection. The referenced GALL line item for all three environments is III.A6-11. GALL Line Item III.A6-11 states the following under AMP: Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC/US Army Corp of Engineers dam inspections and maintenance programs. Since one of the AMPs under this GALL line item is FERC dam inspections, explain why the note assigned to the three LRA AMR line items is E instead of A; consistent with GALL.

Question No.	Question
3.5.1-58-W-1	In Table 3.5.2-6 on Page 3.5-71 of the LRA, for component conduit, material galvanized steel in a protected weather environment; the aging effect is none. The GALL line item referenced is III.B2-5, which is for the following components: Support members; welds; bolted connections; support anchorage to building structure. Explain why the LRA AMR line item has a Note A shown instead of a Note C, different component with respect to the GALL line item. Or as an alternative, a letter Note A with a number note explaining that the component is different.
3.5.1-58-W-2	In Table 3.5.2-6 on Page 3.5-72 of the LRA, for component electrical and instrument panels and enclosures, material galvanized steel in a protected from weather environment; the aging effect is none. The GALL line item referenced is III.B3-3, which is for the following components: Support members; welds; bolted connections; support anchorage to building structure. Explain why the LRA AMR line item has a Note A shown instead of a Note C, different component with respect to the GALL line item. Or as an alternative, a letter Note A with a number note explaining that the component is different.
3.5.1-58-W-3	In Table 3.5.2-6 on Page 3.5-73 of the LRA, for component flood curb, material galvanized steel in a protected from weather environment; the aging effect is none. The GALL line item referenced is III.B5-3, which is for the following components: Support members; welds; bolted connections; support anchorage to building structure. Explain why the LRA AMR line item has a Note A shown instead of a Note C, different component with respect to the GALL line item. Or as an alternative, a letter Note A with a number note explaining that the component is different.
3.5.1-8-W-1	In Table 3.5.2-1 on Page 3.5-53 of the LRA for component Torus shell with the aging effect cracking-fatigue, the note assigned is E. Note E is consistent with NUREG-1801 material, environment, and aging effect but a different aging management program is credited. Explain why this note is E when the AMP shown for this line item is TLAA and the referenced GALL Line Item II.B1.1-4 also specifies a TLAA.
3.5.2-2-W-1	In Table 3.5.2-2 on Page 3.5-57 of the LRA, for component Spent fuel pool storage racks, material stainless steel in an exposed to fluid environment; the aging effect is loss of material. Explain by what aging mechanism loss of material occurs and why the aging effect is not cracking.

Question No.	Question
3.5.2-4-W-1	In Table 3.5.2-4 on Page 3.5-61 of the LRA, for component Blowout or blow-off panels, material aluminum in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-4-W-2	In Table 3.5.2-4 on Page 3.5-61 of the LRA, for component Steel Piles, material carbon steel in an exposed to weather environment; the aging effect is none. Note 504 discusses steel piles driven into soils (a soil environment, not a weather environment) with no significant effects due to corrosion. Explain how the soil environment relates to the weather environment to justify no aging effect.
3.5.2-5-W-1	In Table 3.5.2-5 on Page 3.5-65 of the LRA, for component N2 tank steel supports, material stainless steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-5-W-2	In Table 3.5.2-5 on Page 3.5-65 of the LRA, for component Transmission towers, material galvanized steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-5-W-3	In Table 3.5.2-5 on Page 3.5-67 of the LRA, for component Vernon Dam external walls, floor slabs and interior walls, material concrete in a protected from weather environment; the aging effect shown is none with the AMP shown as Vernon Dam FERC Inspection. VYNPS discusses throughout its LRA Section 3.5 further evaluations that VYNPS concrete does not have aging effects because the quality of the concrete used during construction was to the standards of ACI-318 and ACI 201.2R. Vernon Dam is a very old structure and was not built by the owners of VYNPS. Provide documentation and justification that the quality of the concrete used at Vernon Dam is also to the standards of ACI-318 and ACI 201.R such that the AMR statement None for aging effects of the Dam concrete is justified.
3.5.2-6-W-1	In Table 3.5.2-6 on Page 3.5-71 of the LRA, for component conduit, material galvanized steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.

Question No.	Question
3.5.2-6-W-2	In Table 3.5.2-6 on Page 3.5-71 of the LRA, for component conduit support, material galvanized steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-3	In Table 3.5.2-6 on Page 3.5-72 of the LRA, for component electrical and instrument panels and enclosures, material galvanized steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-4	In Table 3.5.2-6 on Page 3.5-75 of the LRA, for component Vents and louvers, material aluminum in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-5	In Table 3.5.2-6 on Page 3.5-76 of the LRA, for component Anchor bolts, material stainless steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-6	In Table 3.5.2-6 on Page 3.5-78 of the LRA, for component structural bolting, material stainless steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-7	In Table 3.5.2-6 on Page 3.5-78 of the LRA, for component structural bolting, material galvanized steel in an exposed to weather environment; the aging effect is none. Reference question A-W-13 and explain how this component is protected from constant wetting and drying conditions.
3.5.2-6-W-8	In Table 3.5.2-6 on Page 3.5-80 of the LRA, for component water stops, material PVC in a protected from weather environment; the aging effect is none. By definition the component stops water, so it could be exposed to water. In LRA Table 3.5.2-4 on Page 3.5-64 for component Cooling tower fill, material PVC, environment exposed to fluid environment, the aging effects listed are cracking and change in material properties. Provide a technical basis why PVC water stops do not have any aging effects which need aging management when they could be exposed to a fluid environment also. Provide the specification that called for PVC water stops during construction instead of rubber.

Question No.	Question
3.5.2-6-W-9	In Table 3.5.2-6 on Page 3.5-78 of the LRA, for component Fire proofing, material Pyrocrete in a protected from weather environment; the aging effect is none. Provide a technical basis why Pyrocrete does not have any aging effects in the environment listed.
A-W-01	LRA Table 3.5.1, Item Number 3.5.1-5, has the following statement under the discussion column: The drywell steel where the drywell shell is embedded is inspected in accordance with the Containment Inservice Inspection (IWE) Program and Structures Monitoring Program. This is an impossible inspection. Change this discussion statement to agree with LRA Section 3.5.2.2.1.4 that states: The drywell steel shell and the moisture barrier where the drywell shell becomes embedded in the drywell concrete floor are inspected in accordance with the Containment Inservice Inspection (IWE) Program and Structures Monitoring Program.
A-W-02	LRA Table 3.5.1, Item Number 3.5.1-9, has the following statement under the discussion column: Not applicable. See Section 3.5.2.2.1.6. However, the following statement is made in LRA Section 3.5.2.2.1.6: "Fatigue TLAAs for the steel drywell, torus, and associated penetrations are evaluated and documented in Section 4.6." The components associated with LRA Table 3.5.1, Item Number 3.5.1-9 are: penetration sleeves, penetration bellows; suppression pool shell, unbraced downcomers. Explain how Item number 3.5.1-9 is not applicable when a fatigue TLAA has been performed for the torus and penetrations. Explain why the vent line, vent header and vent line bellows are not listed in LRA Sections 3.5.2.2.1.6 and 4.6 as referenced in Table 3.5.1, Line Item 3.5.1-8.
A-W-03	LRA Table 3.5.1, Item Number 3.5.1-12, under the discussion column, does not make reference to LRA Section 3.5.2.2.1.8 for further evaluation. Explain why this link is not made to the further evaluation section. Explain the need for augmented ultrasonic exams to detect fine cracks since a CLB fatigue analysis does exist.
A-W-04	LRA Table 3.5.1, Item Number 3.5.1-13, under the discussion column, does not make reference to LRA Section 3.5.2.2.1.8 for further evaluation. Explain why this link is not made to the further evaluation section. Explain the need for augmented ultrasonic exams to detect fine cracks since a CLB fatigue analysis does exist.

Question No.	Question
A-W-05	LRA Table 3.5.1, Item Number 3.5.1-16, under the discussion column, states that seals and gaskets are not included in the Containment Inservice Inspection Program at VYNPS. One of the components for this item number is moisture barriers. Explain how VYNPS seals the joint between the containment drywell shell and drywell concrete floor if there is no moisture barrier. Explain why the inspection of this joint is not part of the Containment Inservice Inspection Program at VYNPS.
A-W-06	LRA Table 3.5.1, Item Number 3.5.1-17, under the discussion column, states that locks, hinges, and closure mechanisms are active components and are therefore not subject to an aging management review. Provide any license renewal regulatory guidance document or previous LRA NRC SER that has ever stated that locks, hinges, and closure mechanisms are active components. If locks, hinges, and closure mechanisms are active components at VYNPS, provide an itemized list of these active components with their qualified life or specified time period of replacement. Explain how VYNPS tracks the active life of these components before replacement.
A-W-07	LRA Table 3.5.1, Item Number 3.5.1-21, under the discussion column, states that VYNPS plant operating experience has not identified fretting or lock up due to mechanical wear for the drywell head and downcomers. Plant operating experience does not find fretting or lock up due to mechanical wear, inspections do. Explain if VYNPS does not currently inspect for wear of the drywell head and downcomer pipes under the CLB using the Containment Inservice Inspection Program. If VYNPS does currently inspect these components for wear, justify not performing these same inspections during an extended license period. If required, provide drawings showing the special distance between components such that fretting cannot occur.
A-W-08	LRA Table 3.5.1, Item Number 3.5.1-11, under the discussion column, states that cracking due to stress corrosion cracking for stainless steel vent line bellows is not applicable. Explain if the VYNPS Containment Inservice Inspection Program and Containment Leak Rate Program are used currently to detect cracking of stainless steel vent line bellows by inspection and testing. Explain why it is not more appropriate to take credit for these two programs to detect cracking without the need for additional enhanced examinations then to say not applicable.

Question No.	Question
A-W-09	LRA Table 3.5.1, Item Number 3.5.1-26, under the discussion column, states that freeze-thaw is not an applicable aging mechanism for these groups of structures at VYNPS. Provide documentation showing the weathering conditions (weathering index) for VYNPS and the specification requiring concrete to have an air content of 3% to 6% and water to cement ratio of 0.35 to 0.45.
A-W-10	For LRA Table 3.5.1, Item Number 3.5.1-27, provide documentation showing that inaccessible areas concrete was constructed in accordance with the recommendations in ACI 201.2R-77.
A-W-11	For LRA Table 3.5.1, Item Number 3.5.1-33, provide the maximum temperatures that concrete experiences in Group 1 through 5 structures.
A-W-12	LRA Table 3.5.1, Item Number 3.5.1-41, under the discussion column, states that no vibration isolation elements at VYNPS are in scope and subject to aging management review. Explain the lack of vibration isolation elements for HVAC system components, the emergency diesel generator and miscellaneous mechanical equipment.
A-W-13	LRA Table 3.5.1, Item Number 3.5.1-50, under the discussion column, states that loss of material due to pitting and crevice corrosion of groups B2 and B4 galvanized steel, aluminum, and stainless steel components in an outdoor air environment is not applicable at VYNPS. NUREG-1833 on Page 93 for Item TP-6 states an approved precedent exists for adding this material, environment, aging effect, and program combination to the GALL Report. As shown in RNP SER Section 3.5.2.4.3.2, galvanized steel and stainless steel in an outdoor air environment could result in loss of material due to constant wetting and drying conditions. Aluminum would also be susceptible to a similar kind of aging effect in the outdoor environment. Provide a discussion of the actual group B2 and B4 galvanized steel, aluminum, and stainless steel VYNPS components which are within the scope of license renewal and exposed to an outdoor air environment. Discuss the location of these components at VYNPS and how they are protected from constant wetting and drying conditions.

Question No.	Question
A-W-14	LRA Table 3.5.1, Item Number 3.5.1-52, under the discussion column, states that loss of mechanical function due to the listed mechanisms is not an aging effect. Proper design prevents distortion, overload, and fatigue due to vibratory and cyclic thermal loads. Explain how loss of mechanical function due to corrosion is not an aging effect which needs to be managed for the period of extended operation. If proper design prevents distortion, overload, and fatigue due to vibratory and cyclic thermal loads, explain if there has never been a component failure at VYNPS due to any of these conditions. Explain if there has never been a component failure in the nuclear industry due to any of these conditions. Explain where sliding support bearing and sliding support surfaces are used in component groups B2 and B4 at VYNPS and provide the environment they are exposed to.
A-W-15	LRA Table 3.5.1, Item Number 3.5.1-54, under the discussion column, states that loss of mechanical function due to the listed mechanisms is not an aging effect. Proper design prevents distortion, overload, and fatigue due to vibratory and cyclic thermal loads. Explain how loss of mechanical function due to corrosion is not an aging effect which needs to be managed for the period of extended operation. If proper design prevents distortion, overload, and fatigue due to vibratory and cyclic thermal loads, explain if there has never been a component failure at VYNPS due to any of these conditions. Explain if there has never been a component failure in the nuclear industry due to any of these conditions. Explain what VYNPS inspects for during VT-3 visual examinations of groups B1.1, B1.2 and B1.3 components under its Inservice Inspection Program during its current license and also anticipated VT-3 visual examinations during its possible extended license period.
A-W-16	LRA Table 3.5.1, Item Number 3.5.1-10, under the discussion column, states that cracking due to stress corrosion cracking for stainless steel penetration sleeves and penetration bellows is not applicable. Explain if the VYNPS Containment Inservice Inspection Program and Containment Leak Rate Program are used currently to detect cracking of stainless steel penetration sleeves and penetration bellows by inspection and testing. Explain why it is not more appropriate to take credit for these two programs to detect cracking without the need for additional enhanced examinations then to say not applicable.
A-W-17	LRA Table 3.5.1, Item Number 3.5.1-34, under the discussion column, does not make reference to LRA Section 3.5.2.2.2.4 (1) for further evaluation. Explain why this link is not made to the further evaluation section.

Question No.	Question
A-W-18	LRA Table 3.5.1, Item Number 3.5.1-35, under the discussion column, does not make reference to LRA Section 3.5.2.2.2.4 (2) for further evaluation. Explain why this link is not made to the further evaluation section. Provide a copy of ACI-301 as listed under the discussion.
A-W-19	LRA Table 3.5.1, Item Number 3.5.1-36, under the discussion column, does not make reference to LRA Section 3.5.2.2.2.4 (3) for further evaluation. Explain why this link is not made to the further evaluation section. The statement: "See Section 3.5.2.2.2.1 (5) for additional discussion" needs further clarification that this section is for Groups 1-5, 7-9, however it would apply to accessible Group 6 concrete. Explain why LRA Section 3.5.2.2.2.4 (3) lists cracking of concrete due to Stress Corrosion Cracking (SCC).
A-W-20	LRA Table 3.5.1, Item Number 3.5.1-37, under the discussion column, states not applicable and makes reference to Section 3.5.2.2.2.4(3). Section 3.5.2.2.2.4(3) discusses inaccessible areas only. Explain why VYNPS under the discussion section for Item Number 3.5.1-37 does not state: "Nonetheless, the Structures Monitoring Program will confirm the absence of aging effects requiring management for VYNPS Group 6 concrete components." This would apply to above grade concrete, like in Line Item 3.5.1-36 for accessible concrete.
A-W-21	LRA Table 3.5.1, Item Number 3.5.1-40, under the discussion column, states: "Plant experience has not identified reduction in concrete anchor capacity or other concrete aging mechanisms. Nonetheless, the Structures Monitoring Program will confirm absence of aging effects requiring management for VYNPS concrete components." The project team cannot find an AMR line item in Table 2 for this component (Building concrete at locations of expansion and grouted anchors; grout pads for support base plates). Provide the Table 2 number, LRA page number, and component for where this AMR line item is evaluated and shown.