UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

March 19, 2024

EA-22-131

Brad Kapellas, Site Vice President
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION – AMENDED INTEGRATED INSPECTION REPORT 05000416/2022004 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Brad Kapellas:

On December 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Grand Gulf Nuclear Station. On January 5, 2023, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The U.S. Nuclear Regulatory Commission (NRC) identified the need to reissue NRC inspection report 05000416/2022004, dated February 1, 2023, (ADAMS Accession Number ML23026A095). Specifically, in section 71124.05 – Radiation Monitoring Instrumentation, the inspection report incorrectly and fully credited four inspection samples to 03.02: Calibration and Testing Program. These four samples should have been credited as partial samples since they were still under review and were later fully credited as samples in a separate inspection report, that documented a preliminary White finding. This was documented in NRC inspection report 05000416/2023090, dated May 18, 2023, (ADAMS Accession Number ML23122A163). The preliminary White finding was finally dispositioned as a Green notice of violation (NOV) in inspection report 05000416/2023091, dated July 28, 2023, (ADAMS Accession Number ML23201A252). As a result, the NRC has reissued the report (2022004) in its entirety, with a total of twenty-one (21) fully credited samples for IP 71124.05.

Four findings of very low safety significance (Green) are documented in this report. Four of these findings involved violations of NRC requirements one was determined to be Severity Level IV. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC Resident Inspector at Grand Gulf Nuclear Station.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC Resident Inspector at Grand Gulf Nuclear Station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Signed by Josey, Jeffrey
on 03/19/24

Jeffrey E. Josey, Chief
Reactor Projects Branch C
Division of Operating Reactor Safety

Docket No. 05000416
License No. NPF-29

Enclosure:
As stated

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GRAND GULF NUCLEAR STATION – AMENDED INTEGRATED INSPECTION REPORT
05000416/2022004 AND EXERCISE OF ENFORCEMENT DISCRETION
DATED MARCH 19, 2024

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000416
License Number:	NPF-29
Report Number:	05000416/2022004
Enterprise Identifier:	I-2022-004-0012
Licensee:	Entergy Operations, Inc.
Facility:	Grand Gulf Nuclear Station
Location:	Port Gibson, MS
Inspection Dates:	October 1, 2022, to December 31, 2022
Inspectors:	D. Antonangeli, Health Physicist N. Greene, Senior Health Physicist R. Lanfear, Physical Security Specialist W. Schaup, Senior Project Engineer A. Smallwood, Sr Resident Inspector T. Steadham, Senior Resident Inspector
Approved By:	Jeffrey E. Josey, Chief Reactor Projects Branch C Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Grand Gulf Nuclear Station, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

Failure to Control Transient Combustibles in Accordance with Site Procedures			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000416/2022004-01 Open/Closed	[H.5] - Work Management	71111.05
The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of Facility Operating License Condition 2.C(41), "Fire Protection Program," for the failure to implement all provisions of the approved fire protection program. Specifically, the licensee failed to control transient combustible materials per procedure EN-DC-161, section 7.5, in a Level 1 combustible control zone.			

Failure to Obtain a License Amendment for Changes Associated with Auxiliary Building Railroad Bay Door 1A319A			
Cornerstone	Significance/Severity	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green Severity Level IV NCV 05000416/2022004-02 Open/Closed	None (NPP)	71111.15
The inspectors identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Tests and Experiments," section (c)(2) when the licensee failed to submit and obtain NRC authorization for a change to the facility that would have required a license amendment. Specifically, the change to door 1A319A resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of the auxiliary building during a tornado and constituted a departure from a method of evaluation as described in the Updated Final Safety Analysis Report.			

Failure to periodically calibrate radiation monitors as required by 10 CFR 20.1501(c)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Occupational Radiation Safety	Green NCV 05000416/2022004-03 Open/Closed	[P.5] - Operating Experience	71124.05
The inspectors identified a Green, non-cited violation of 10 CFR 20.1501(c) for failure to periodically calibrate area radiation monitor equipment used to perform dose rate measurements. Specifically, since at least April 2018, the licensee discontinued periodic calibration of 34 area radiation monitors distributed throughout the plant. The calibration frequency of these monitors was changed to "as required."			

Failure to Comply with the Terms of the Certificate of Compliance for a Package Delivered to a Carrier for Transport			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Public Radiation Safety	Green NCV 05000416/2022004-04 Open/Closed	[H.7] - Documentation	71124.08
The inspectors reviewed a self-revealed, Green non-cited violation (NCV) of 10 CFR 71.17 for the licensee's failure to comply with the terms of the Certificate of Compliance (CoC) for a package delivered to a carrier for transport. On October 9, 2018, the licensee delivered to a carrier for transport licensed material that failed to comply with terms of the certificate for the packaging of the shipment. Specifically, the licensee failed to use adequate load plans during the 2018 spent fuel pool cleanup campaign, resulting in sending six shipments of irradiated hardware offsite to a waste processing facility with inaccurate shipping paperwork. One of the six shipments was later confirmed, on October 17, 2022, to contain greater than 10.0 curies per kilogram of cobalt-60 (Co-60), which exceeded the CoC limit for the package.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
EDG	EA-22-131	Enforcement Discretion for a Minor Violation of 10 CFR 37.11(c) for Failure to Comply with Exemptions for the Monitoring, Detecting, and Assessment of a Robust Structure	71124.08	Closed
NOV	05000416/2021092-01	Failure to Use the Work Control Process to Adjust Hand Geometry Unit EA-21-110	92702	Closed
NOV	05000416/2021092-02	Falsified Information Regarding a Condition Adverse to Quality EA-21-096	92702	Closed
NOV	05000416/2020016-01	Exam Proctor Provided Inappropriate Assistance During Engineering Qualification Exams EA-20-125	92702	Closed

PLANT STATUS

Grand Gulf Nuclear Station, Unit 1, began the inspection period at full rated thermal power (RTP). On October 22, 2022, operators began a slow power decrease in response to decreased service water margin. Power was ultimately reduced to 51 percent RTP on October 30, 2022, when operators increased power to 89 percent RTP upon recovery of some service water margin. On November 7, 2022, operators began raising power after restoration of service water margin. The unit reached 100 percent RTP on November 9, 2022. On December 19, 2022, operator's shutdown the unit due to a loss of main feedwater flow. On December 21, 2022, operators began a plant startup after completing repairs. On December 26, 2022, the unit reached 100 percent RTP where it remained at or near for the remainder of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed activities described in IMC 2515, Appendix D, "Plant Status," observed risk significant activities, and completed on-site portions of IPs. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) division 1 control room heating ventilation and air conditioning on October 18, 2022
(2) division 2 standby service water on November 8, 2022
(3) secondary containment on November 18, 2022

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated system configurations during a complete walkdown of the 125 Vdc distribution system on November 9, 2022.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) standby service water trains A and B pump rooms and valve rooms on November 7, 2022
(2) standby diesel generator building during fire protection dry pipe replacement on November 22, 2022
(3) remote shutdown panel room and auxiliary building, 119-foot general elevation, on December 12, 2022

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Sample)

(1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam administered from November 17, 2022, to December 15, 2022.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) condition report CR-GGN-2022-04731, evaluate control room heating, ventilation, and air conditioning for 10 CFR 50.65(a)(1) status on November 16, 2022
(2) condition report CR-GGN-2022-07146, steam leakage into reactor core isolation cooling turbine on November 21, 2022
(3) Grand Gulf cycle 21 maintenance rule 10 CFR 50.65(a)(3) assessment on December 12, 2022

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following SSC remains capable of performing its intended function:

(1) quality control for parts and commodities used on work order 52948976, maintenance on standby liquid control pump B, on December 12, 2022

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

(1) maintenance risk assessment for work order 587571, turbine dump manifold valve isolations on November 16, 2022
(2) maintenance risk assessment of fire protection piping replacement in standby diesel generator building on November 21, 2022

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) condition report CR-GGN-2022-09363, auxiliary building structural support not fully welded to baseplate on October 3, 2022
(2) condition report CR-GGN-2022-09683, combustible gas control system hydrogen igniter on November 16, 2022
(3) condition report CR-GGN-2022-09584, reactor core isolation cooling steam leakage past turbine governor valve effect on oil quality on November 18, 2022
(4) condition report CR-GGN-2022-10327, secondary containment door 1A319 on November 18, 2022

71111.18 - Plant Modifications

Severe Accident Management Guidelines (SAMG) Update (IP Section 03.03) (1 Sample)

(1) The inspectors verified the site Severe Accident Management Guidelines were updated in accordance with the boiling-water reactor generic severe accident technical guidelines and validated in accordance with NEI 14-01, “Emergency Response Procedures and Guidelines for Beyond Design Basis Events and Severe Accidents,” revision 1.

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the following post-maintenance testing activities to verify system operability and/or functionality:

(1) work order 587571, turbine dump manifold valve isolations on November 16, 2022
(2) work order 53014939, main steam line 1/2 isolation instrumentation troubleshooting on November 21, 2022
(3) work order 52948976, drain, flush, and replenish oil in standby liquid control pump C41C001B on November 25, 2022

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated forced outage 24-04 activities from December 19, 2022, through December 22, 2022. The inspectors completed inspection procedure sections 03.01.b and 03.01.d. on December 22, 2022.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance testing activities to verify system operability and/or functionality:

Surveillance Tests (other) (IP Section 03.01) (1 Sample)

(1) work order 00575709, diesel-driven fire pump B low pressure start test on December 29, 2023

RADIATION SAFETY

71124.05 - Radiation Monitoring Instrumentation

Walkdowns and Observations (IP Section 03.01) (9 Samples)

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

(1) gamma exit monitor located at the Unit 2 133-foot elevation exit
(2) gamma exit monitor located at the security island
(3) gamma exit monitor located at dosimetry
(4) personal contamination monitor located at the radwaste control room
(5) personal contamination monitor located at the Unit 2 radiological controlled area exit
(6) portable frisker staged for use at the radiologically controlled area exit
(7) portable ion chamber staged for used within the radiologically controlled area
(8) TelePole instrument staged for used within the radiologically controlled area
(9) area radiation monitors located within the fuel handling building

Calibration and Testing Program (IP Section 03.02) (10 Samples 4 Partials)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

(1) GEM-5, plant I.D: GEM-008
(2) GEM-5, plant I.D: GEM-005
(3) GEM-5, plant I.D: GEM-009
(4) ARGOS, plant I.D: Zeus-002
(5) ARGOS, plant I.D: Argos-015
(6) Model 9-3, plant I.D: CHP-DR-656
(7) TelePole II, plant I.D: CHP-TEL086
(8) Ludlum-177 frisker, plant I.D: CHP-CR-224
(9) main steam line 'A' area radiation monitor, plant I.D: 1D17K610A
(10) Ludlum-177 frisker, plant I.D: CHP-CR-162
(11) (Partial)
drywell high range area monitor, plant I.D: 1D21K648A
(12) (Partial)
drywell high range area monitor, plant I.D: 1D21K648D
(13) (Partial)
containment high range area monitor, plant I.D: 1D21K648B

(14) (Partial)
containment high range area monitor, plant I.D: 1D21K648C

Effluent Monitoring Calibration and Testing Program Sample (IP Sample 03.03) (2 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

(1) component cooling water radiation monitor, plant I.D: 1D17-RITS-K607
(2) service water radiation monitor 'A', plant I.D: 1D17K604

71124.08 - Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation

Radioactive Material Storage (IP Section 03.01) (3 Samples)

The inspectors evaluated the licensee's performance in controlling, labeling, and securing the following radioactive materials:

(1) Source 92-588, Cs-137
(2) Source 93-088, Cs-137
(3) The inspectors walked down areas of the 136-foot elevation radwaste yard, the unit 2 turbine building, the warehouse, and the north laydown yard.

Radioactive Waste System Walkdown (IP Section 03.02) (2 Samples)

The inspectors walked down the following accessible portions of the solid radioactive waste systems and evaluated system configuration and functionality:

(1) the waste compactor, the mobile solidification system, and the resin drying processing system.
(2) the radwaste control room to assess the operability of the radwaste system equipment and to verify configuration.

Waste Characterization and Classification (IP Section 03.03) (3 Samples)

The inspectors evaluated the following characterization and classification of radioactive waste:

(1) 2022 - 2023 10 CFR 61 waste stream analysis for dry active waste
(2) 2022 - 2023 10 CFR 61 waste stream analysis for mechanical filters
(3) 2022 - 2023 10 CFR 61 waste stream analysis for reactor water cleanup system

Shipment Preparation (IP Section 03.04)

During an inspection on March 7, 2022, inspectors observed the preparation of LSA-II radioactive shipment GGN-2022-0212.

Shipping Records (IP Section 03.05) (5 Samples)

The inspectors evaluated the following non-excepted radioactive material shipments through a record review:

(1) GGN-2018-0906; UN2916, radioactive material, type B(U), fissile-excepted, RQ; irradiated hardware; October 9, 2018
(2) GGN-2021-0113; UN3321, radioactive material, low specific activity (LSA-II), 7; one metal cask of bead resin; January 28, 2021
(3) GGN-2022-0107; UN2916, radioactive material, type B(U), fissile-excepted, RQ; one metal cask of dewatered resin; January 19, 2022
(4) GGN-2022-0201; UN2916, radioactive material, type B(U), fissile-excepted, RQ; one metal cask of dewatered resin (RWCU); February 9, 2022
(5) GGN-2022-1007; UN3321, radioactive material, low specific activity (LSA-II), 7; one metal cask of resin/sludge; October 27, 2022

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS09: Residual Heat Removal Systems (IP Section 02.08) (1 Sample)

(1) October 1, 2021, through September 30, 2022

MS10: Cooling Water Support Systems (IP Section 02.09) (1 Sample)

(1) October 1, 2021, through September 30, 2022

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

(1) condition report CR-GGN-2022-07617, lifted water rod on fuel assembly on November 4, 2022
(2) condition report CR-GGN-2022-08534, corrective actions in response to NCV 05000416/2022002-01, "Failure to Secure Loose Items Prior to Impending Severe Weather," on December 22, 2022

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends in reactor core isolation cooling room temperatures that might be indicative of a more significant safety issue.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Follow up (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated the licensee's response to a manual scram due to loss of feedwater on December 20, 2022.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

92702 - Follow-Up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, and Orders

The inspectors reviewed the licensee's response to the NOVs listed below and determined that the reason, corrective actions taken and planned to address recurrence, and the date when full compliance will be achieved for these violations is adequately addressed and captured on the docket.

Follow-Up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, and Orders (3 Samples)

(1) NOV 05000416/2021092-01, Failure to Use the Work Control Process to Adjust Hand Geometry Unit
(2) NOV 05000416/2021092-02, Falsified Information Regarding a Condition Adverse to Quality
(3) NOV 05000416/2020016-01, Exam Proctor Provided Inappropriate Assistance During Engineering Qualification Exams

INSPECTION RESULTS

Failure to Control Transient Combustibles in Accordance with Site Procedures			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000416/2022004-01 Open/Closed	[H.5] - Work Management	71111.05
The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of Facility Operating License Condition 2.C(41), "Fire Protection Program," for the failure to implement all provisions of the approved fire protection program. Specifically, the licensee failed to control transient combustible materials per procedure EN-DC-161, section 7.5, in a Level 1 combustible control zone.			
Description: On September 28, 2022, the inspectors toured fire zone 1A222, which contains a risk-significant combustible materials exclusion zone separating division 1 and division 2 safe shutdown components. The inspectors observed a temporary cable installed between load bus 21BD4 and motor control center 11B41 extending through the Level 1 combustible control zone in fire zone 1A222 as described in the Updated Final Safety Analysis Report (UFSAR), section 9A.5.6.3.e. The inspectors reported the transient combustible material to work control. The licensee documented the condition in the corrective action program in condition report CR-GGN-2022-09361. The licensee evaluated the temporary cable as a transient combustible using station procedure EN-DC-161, "Control of Combustibles," revision 25, and determined that a continuous fire watch was required to be stationed until the cable was removed. The licensee			

removed the cable on October 7, 2022, per work order (WO) 580235-01.

The cable was installed as part of temporary modification (EC 92348) to provide temporary power during a bus 11HD outage during refueling outage 23. The licensee's work control process indicated that the cable was installed on March 30, 2022, and removed on April 20, 2022, under WO 560299.

UFSAR, section 9A.5.6.3.(e), states the following:

- Fire zone 1A222 contains both division 1 and 2 safe shutdown components. All division 1 safe shutdown components are located south of column line 9.5. In addition, all division 2 safe shutdown components are located north of column line 11.4. Therefore, division 1 and 2 safe shutdown components in fire zone 1A222 are separated horizontally by more than 28 feet. This separation distance does not contain any intervening combustibles and an automatic sprinkler system is installed not only within this separation distance but extending north to column line 12.2 and south to column line 8.4. Therefore, a fire originating in fire zone 1A222 will not affect, or propagate to affect, more than one train of safe shutdown in this fire zone.

Procedure EN-DC-161, a procedure that implements provisions of the approved fire protection program, states the following:

- fire zone 1A222 is designated as a Level 1 combustible control zone in attachment 2

- step 7.1.3 requires, in part, that prior to placing non-exempt transient combustible materials in the plant, the fire marshal shall be consulted for aggregate impacts and he completion of a transient combustible evaluation and posting of a transient combustible permit shall be conducted first

- step 7.5.2.c.(3), Level 1, states, “The aggregate threshold limit for Transient Combustibles in Level 1 areas is (0) Zero.”

- step 7.5.2.e.(2), requires, IF the aggregate (total) of ALL transient combustibles in the plant area exceeds the limits determined in section 7.5.2.c, THEN the aggregate transient combustible threshold limits have been exceeded; the following applies:

A TCP (transient combustibles permit) shall be completed utilizing section 7.6 of this procedure.

- step 7.5.2.f.(1), states, determine IF completion of a Transient Combustible Evaluation (TCE), AND additional compensatory measures are required as follows:

[Appendix R Plants – GGNS and RBS] A TCE shall be processed prior to the introduction of any (non-exempt) transient combustible materials into plant areas designated as a LEVEL 1 area AND / OR compensatory actions shall be established.

Based on the above information the inspectors determined that since the cable remained installed after the temporary modification was closed, the cable remained installed without adequate combustible material controls in place as required by procedure EN-DC-161. Specifically, no transient combustible permit was processed and posted, no transient combustible evaluation was performed, and the cable was neither continuously monitored nor had compensatory actions been established prior to September 28, 2022.

Corrective Actions: Operations stationed a continuous fire watch until the cable was removed on October 7, 2022, per WO 580235-01.

Corrective Action References: condition report CR-GGN-2022-09370 and WO-GGN-00580235-01, CR-GGN-2022-09370, and CR-GGN-2022-09372

Performance Assessment:

Performance Deficiency: The inspectors determined that the failure to implement all provisions of the approved fire protection program was a performance deficiency. Specifically, the licensee failed to control transient combustible materials in accordance with procedure EN-DC-161.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the performance deficiency resulted in a potential fire path connecting division 1 and division 2 safe shutdown components separated by the combustible material exclusion zone in fire zone 1A222 of the auxiliary building.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix F, “Fire Protection and Post - Fire Safe Shutdown SDP.” The finding was determined to be within the Fire Prevention and Administrative Controls area using attachment 1 and attachment 2 as having a high degradation rating for failing to ensure the location was free of combustibles. The inspectors assessed the significance of the finding using IMC 0609.04, “Initial Characterization of Findings,” and IMC 0609, appendix F, attachment 1, and determined the finding to be of very low safety significance (Green) because the fire adversely affected an area with adequate automatic detection and suppression.

Cross-Cutting Aspect: H.5 - Work Management: The organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority. The work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities. Specifically, the licensee's work control process failed to identify the need for a combustible materials evaluation, combustible materials permit, or establish a fire watch. In addition, the licensee work control process that installed this temporary modification failed to properly remove this temporary modification when the work was closed.

Enforcement:

Violation: License Condition 2.C(41) requires, in part, that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR as approved in the Safety Evaluations dated August 23, 1991, and September 29, 2006.

Grand Gulf UFSAR, section 9B.1, states, in part, that the GGNS fire protection program is described in appendix 9B of the UFSAR.

Grand Gulf UFSAR, section 9B.6, states, in part, that “Administrative controls have been established…and include procedures to…govern the handling of and limit transient fire loads in buildings containing safety-related systems or equipment during all phases of operation

and especially during maintenance, modification, or refueling operations."

The licensee established Procedure EN-DC-161, "Control of Combustibles," revision 25, in part, to govern the handling of and limit transient fire loads in fire zone 1A222.

Contrary to the above, from April 20 to September 28, 2022, the licensee failed to maintain in effect all provisions of the approved fire protection program. Specifically, no transient combustible permit was processed and posted, no transient combustible evaluation was performed, the cables were not continuously monitored, and no compensatory actions were established for the temporary cables associated with EC 92348 in fire zone 1A222.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to Obtain a License Amendment for Changes Associated with Auxiliary Building Railroad Bay Door 1A319A

Cornerstone	Significance/Severity	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green Severity Level IV NCV 05000416/2022004-02 Open/Closed	None (NPP)	71111.15

The inspectors identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Tests and Experiments," section (c)(2) when the licensee failed to submit and obtain NRC authorization for a change to the facility that would have required a license amendment. Specifically, the change to door 1A319A resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of the auxiliary building during a tornado and constituted a departure from a method of evaluation as described in the Updated Final Safety Analysis Report.

Description: On October 20, 2022, the licensee was performing surveillance Procedure 06-OT-1T48-R-0002, "Standby Gas Treatment 'A' Logic and Vacuum Test," revision 119, on the alternate secondary containment boundary with external railroad bay door 1A319A opened. During performance of the test, operators were unable to maintain secondary containment pressure requiring them to declare secondary containment inoperable. The surveillance test was secured, and secondary containment was restored to operable by shutting external railroad bay door 1A319A. This configuration of secondary containment, with the external railroad door closed, previously passed all surveillance requirements on April 29, 2022, as documented in work order 52931041. The licensee documented the failed surveillance test in the corrective action program as condition report CR-GGN-2022-10468. Additionally, the licensee reported the loss of secondary containment safety function to the NRC as required by 10 CFR 50.72.

In February 2004, the licensee implemented design change ER 2000-0072-001 which installed a new external railroad bay door 1A319A as part of extending the secondary containment boundary to include a railroad bay. Design change ER-2000-0072-001, attachment 9.1, 50.59 review form, section B, to this design change states the door is "not designed for tornado depressurization."

UFSAR, section 1.2.2.2 states, in part, that the auxiliary building shown in figures 1.2-2 through 1.2-8 is a seismic category 1 structure. The railroad bay, including door 1A319A, is

shown on UFSAR, figure 1.2-4, and is therefore a seismic category 1 structure.

UFSAR, section 3.3.2, states that the effects of tornado loadings on seismic category 1 structures are evaluated per section 3.0 of Bechtel Topical Report BC-TOP-3A and that the auxiliary building is designed for a 3-psig pressure drop due to tornado depressurization.

The new external door 1A319A formed a portion of the auxiliary building, requiring the door to be designed and evaluated for tornado depressurization. The method of analysis that the licensee used to approve the design change for door 1A319A did not apply the depressurization condition as outlined in Bechtel Topical Report BC-TOP-3A. The licensee's evaluation of door 1A319A used a 0.25 psig pressure differential based on operating parameters of the standby gas treatment system; therefore, the evaluated pressure differential was twelve times lower than required by the UFSAR.

The inspectors concluded that the licensee's depressurization analysis in design change ER 2000-0072-001 changed the elements of the method described in the UFSAR and the results of that analysis was neither conservative nor essentially the same. Additionally, the licensee did not utilize a method of evaluation that had been approved by the NRC for the intended application. Door 1A319A was neither designed nor evaluated for tornado depressurization and the inspectors concluded that the change would result in more than a minimal increase in the likelihood of occurrence of a malfunction of the auxiliary building as previously evaluated in the UFSAR.

Additionally, 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that design changes, including field changes, be subject to design control measures commensurate with those applied to the original design.

The inspectors concluded that since the licensee did not design the new door to include tornado depressurization as required by the UFSAR, the licensee failed to apply design control measures commensurate with those applied to the original design.

Corrective Actions: The licensee entered this issue into their corrective action program and performed an operability evaluation to provide reasonable assurance that the secondary containment was operable.

Corrective Action References: condition report CR-GGN-2022-10468

Performance Assessment:

Performance Deficiency: The inspectors determined that the licensee's failure to subject a design change to design control measures commensurate with those applied to the original design as required by 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the SSC and Barrier Performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, evaluating the modification without considering the tornado depressurization requirement challenged the physical design of secondary containment without adequate justification for not meeting the requirement.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors determined that the finding was of very low safety significance (Green) because the finding did not represent an actual open pathway in the structural integrity of secondary containment, nor did it involve an actual reduction in function of the hydrogen ignitors in reactor containment.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement: The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address this violation which impedes the NRC's ability to regulate using traditional enforcement to adequately deter non-compliance. The inspectors assessed the severity level using the NRC Enforcement Policy, dated January 13, 2023, section 6.1.d.2, and determined that the violation was Severity Level IV because it was a violation of 10 CFR 50.59 that resulted in conditions evaluated as having very low safety significance (Green) by the significance determination process.

Violation: Title 10 CFR 50.59(c)(2) requires, in part, that a licensee shall obtain a license amendment prior to implementing a proposed change if the change would: (ii) result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure important to safety previously evaluated in the UFSAR; and (viii) result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

Title 10 CFR Part 50, Appendix B, Criterion III, requires, in part, that design changes, including field changes, be subject to design control measures commensurate with those applied to the original design.

Contrary to the above, in February 2004, the licensee failed to obtain a license amendment prior to implementing a proposed change that resulted in a more than a minimal increase in the likelihood of occurrence of a malfunction of a structure important to safety previously evaluated in the UFSAR and departed from a method of evaluation described in the UFSAR, and the licensee performed the design change and failed to subject it to design control measures commensurate with those applied to the original design. Specifically, design change ER 2000-0072-001 modified door 1A319A using a different method than described in UFSAR, section 3.3.2, and the requirement for tornado depressurization was not applied and evaluated.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to periodically calibrate radiation monitors as required by 10 CFR 20.1501(c)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Occupational Radiation Safety	Green NCV 05000416/2022004-03 Open/Closed	[P.5] - Operating Experience	71124.05

The inspectors identified a Green, non-cited violation of 10 CFR 20.1501(c) for failure to periodically calibrate area radiation monitor equipment used to perform dose rate measurements. Specifically, since at least April 2018, the licensee discontinued periodic calibration of 34 area radiation monitors distributed throughout the plant. The calibration frequency of these monitors was changed to “as required.”

Description: During a review of licensee calibration records and self-assessment reports, the inspectors determined that calibration frequencies for a total of 34 area radiation monitors (ARMs) were no longer periodic. Upon further review, the inspectors determined that these detectors were being calibrated at an “as required” frequency. The licensee implemented an “as required” frequency such that the ARMs would not be calibrated unless the monitor had failed. A calibration frequency of “as required” does not meet the requirement of calibrating periodically. Calibration “as required” is an inappropriate maintenance strategy applied to these radiation monitors.

The affected ARMs functions are described in the Grand Gulf Updated Safety Analysis Report chapter 12.3.4.1. This chapter describes one of the roles of these ARMs is to immediately alert plant personnel entering or working in non-radiation or low radiation areas of increasing or abnormally high radiation levels which, if unnoticed, could possibly result in inadvertent over exposures. Additionally, chapter 12.3.4.1.4 describes the ARM system serves to warn plant personal of high radiation levels in various plant areas and designed to operate unattended detecting and measuring ambient gamma radiation. These are functions that require the detectors to accurately measure the radiological dose rates around them.

The method to perform ARM calibrations “as required” was questioned by the licensee’s radiation protection staff in a pre-inspection self-assessment and documented in condition report (CR) 2022-07549. This CR was initiated and assigned to the engineering electrical/I&C department. The CR discusses how there is industry operating experience with calibration frequencies for ARMs and that they need to be calibrated in accordance with 10 CFR 20.1501(c). The CR resulted in no actions taken due to the licensee’s conclusion that 10 CFR 20.1501(c) was not applicable to these ARMs.

Another CR was created two months later by radiation protection management, CR 22-09269, which addresses the previous CR’s conclusion, in which radiation protection questioned the conclusion that the “as required” calibration frequency for these ARMs was acceptable. This CR stated that the previous CR did not involve regulatory assurance or look at 10 CFR 20.1501(c) applicability. The licensee conducted another evaluation of the calibration frequency for the ARMs. Once again, the licensee evaluated and concluded that the current method is in accordance with their (the licensee’s) requirements.

As described in Grand Gulf’s Updated Safety Analysis Report, the function and description of these detectors show that these detectors measure dose rate in the area they monitor, and that this information will be used to alert staff in the area during certain radiological conditions.

Corrective Actions: The licensee entered the issue into the corrective action program to determine appropriate actions.

Corrective Action References: CR-GGN-2022-07549, CR-GGN-2022-09269, CR-GGN-2022-10692

Performance Assessment:

Performance Deficiency: Failure to periodically calibrate radiation monitors as required by 10 CFR 20.1501(c) is a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Program & Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, the licensee's program for calibration of 34 ARMs stated they would be conducted "as required." NRC characterizes this as a maintenance strategy, not a calibration frequency, which does not comply with regulatory requirements. Therefore, the licensee does not have a calibration frequency for these ARMs, and they calibrate them "as required" when parameters of the monitor are out of tolerance, or as the monitor fails.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix C, "Occupational Radiation Safety SDP." The inspectors determined the finding had very low safety significance (Green) because: (1) it was not associated with ALARA planning and work controls, (2) it was not an overexposure, (3) there was no substantial potential for overexposure, and (4) the ability to assess dose was not compromised.

Cross-Cutting Aspect: P.5 - Operating Experience: The organization systematically and effectively collects, evaluates, and implements relevant internal and external operating experience in a timely manner. Specifically, the licensee had multiple opportunities to properly evaluate the external operating experience provided to them. In addition, when an incorrect conclusion was made during the initial evaluation, the licensee's internal staff tried to provide additional information for a more thorough and appropriate conclusion; but the licensee still failed to properly evaluate the relative operating experience.

Enforcement:

Violation: Title 10 CFR 20.1501(c) requires in part; the licensee ensure that instruments and equipment used for quantitative radiation measurements (e.g., dose rate and effluents) are calibrated periodically for the radiation measured.

Contrary to the above, since at least April 2018, the licensee failed to ensure radiation monitors were calibrated periodically for the radiation measured. Specifically, the licensee discontinued the periodic calibrations of 34 ARMs when the calibration of these monitors was changed to "as required."

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to Comply with the Terms of the Certificate of Compliance for a Package Delivered to a Carrier for Transport

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Public Radiation Safety	Green NCV 05000416/2022004-04 Open/Closed	[H.7] - Documentation	71124.08

The inspectors reviewed a self-revealed, Green non-cited violation (NCV) of 10 CFR 71.17 for the licensee's failure to comply with the terms of the Certificate of Compliance (CoC) for a

package delivered to a carrier for transport. On October 9, 2018, the licensee delivered to a carrier for transport licensed material that failed to comply with terms of the certificate for the packaging of the shipment. Specifically, the licensee failed to use adequate load plans during the 2018 spent fuel pool cleanup campaign, resulting in sending six shipments of irradiated hardware offsite to a waste processing facility with inaccurate shipping paperwork. One of the six shipments was later confirmed, on October 17, 2022, to contain greater than 10.0 curies per kilogram of cobalt-60 (Co-60), which exceeded the CoC limit for the package.

Description: During the 2018 spent fuel pool cleanup campaign, the licensee failed to accurately identify all irradiated hardware (control rod blades, velocity limiters, and fuel channels) that was loaded into six of their shipments. These shipping errors occurred because the licensee had inaccurate load plans, which resulted in all control rod blades on the west wall of the spent fuel pool during the 2018 cleanup campaign to be off by one hanger location. Thus, control rod blades that were not planned for shipment were included in these shipments, and others that were planned for shipment remained in the spent fuel pool. The packages of irradiate hardware were then delivered to a carrier for transport with errors in the shipping paperwork.

On October 9, 2018, the licensee delivered to a carrier for transport licensed material (in shipment 2018-0906) that failed to comply with terms of the certificate for the packaging of the shipment. This was revealed during the licensee's preparation for the 2022 spent fuel pool cleanup campaign when discrepancies in the control rod blade serial numbers were found. It was determined that an additional 1300 curies of Co-60 was placed in shipment 2018-0906. Based on the mass of the contents, this additional activity of Co-60 resulted in the package exceeding the CoC limit for the shipment. It was not confirmed that shipment 2018-0906 exceeded its CoC limit until October 17, 2022, when the licensee contracted a vendor to re-characterize the 2018 shipments.

As the licensee reviewed their 2022 load plans, they confirmed that the errors did not impact their loading of control rod blades for the 2022 spent fuel pool cleanup campaign. Additionally, the errors did not result in a failure to properly survey the cask, placard the cask, or exceed any dose limits to the public. Nor did the errors change the characterization or classification of the shipments.

The licensee was also required to submit a written report to the NRC for not following the conditions of the CoC during a shipment. The inspectors confirmed that the licensee submitted this written report to the NRC on November 30, 2022.

Corrective Actions: The licensee documented this issue into their corrective action program in two condition reports. The licensee also contracted a vendor to re-characterize their 2018 shipments and confirmed that their 2022 load plan was accurate prior to completing loading of all shipments.

Corrective Action References: CR-GGN-2022-09835 and CR-GGN-2022-10103

Performance Assessment:

Performance Deficiency: The licensee's failure to comply with the terms of the CoC for a package delivered to a carrier for transport is a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Program & Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective to ensure adequate

protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. Additionally, per IMC 0612, appendix E, example 7(l), the performance deficiency is more than minor based on the error exceeding 20 percent of the activity within the shipment.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix D, "Public Radiation Safety SDP." In accordance with IMC 0609, appendix D, the finding is Green if it involves a documentation deficiency related to maintenance or use of an NRC-approved package and does not involve the failure to perform a required action. It states the finding is Green if it involved a failure to meet a CoC criteria for cask contents that did not adversely impact the following: temperature, pressure, geometry, weight, burn-up, enrichment, or moderator specification nonconformance. Specifically, the six shipments involved had inaccurate shipping paperwork based on the incorrect irradiate hardware contents, but only one of the six shipments exceeded the CoC limits for a non-fissile material curie content (Co-60), as specified in the CoC.

Cross-Cutting Aspect: H.7 - Documentation: The organization creates and maintains complete, accurate and up-to-date documentation. Specifically, the licensee had inaccurate load plans for their 2018 spent fuel pool cleanup campaign, which resulted in inaccurate shipping paperwork, and one shipment exceeding its package specifications for its Co-60 activity per mass limit, as certified by the CoC. The inaccurate load plans remained in place until 2022 when discrepancies were identified with their control rod blade serial numbers during the 2022 spent fuel pool cleanup campaign.

Enforcement:

Violation: 10 CFR 71.17(c) requires, in part, that each licensee who delivers licensed material to a carrier for transport shall comply with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of subparts A, G, and H.

Subpart A in 10 CFR Part 71, specifically 10 CFR 71.0(b), states, in part, that the packaging and transport of licensed material are also subject to the regulations of other agencies (e.g., the U.S. Department of Transportation (DOT)).

49 CFR 172.203(d)(3) requires, in part, that a radioactive material shipment must include the maximum activity of the radioactive contents contained in each package during transport in terms of the appropriate SI units (e.g., Becquerels (Bq), Terabecquerels (TBq)). The activity may also be stated in appropriate customary units (e.g., Curies (Ci), milliCuries (mCi), microCuries (uCi)) in parentheses following the SI units.

Contrary to the above, on October 9, 2018, the licensee delivered to a carrier for transport licensed material that failed to comply with terms of the certificate for the packaging of the shipment. This issue was not identified until October 17, 2022. Additionally, the licensee failed to provide accurate shipping paperwork with the correct maximum radioactivity in the package, which included an additional 1300 Curies of Co-60 in a shipment (2018-0906), which based on its mass, exceeded the CoC limit for the shipment. Specifically, the licensee failed to accurately identify all irradiated hardware (control rod blades, velocity limiters, and fuel channels) that was loaded into six packages during the spent fuel pool cleanup in 2018. The packages were then delivered to a carrier for transport with errors in the shipping paperwork. However, the errors did not result in a failure to properly survey the cask, placard

the cask, or exceed any dose limits to the public. Nor did the errors change the characterization or classification of the shipments. Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Enforcement Discretion	Enforcement Action EA-22-131: Enforcement Discretion for a Minor Violation of 10 CFR 37.11(c) for Failure to Comply with Exemptions for the Monitoring, Detecting, and Assessment of a Robust Structure	71124.08
Description: During the licensee's refueling outage in 2012, the licensee removed the large steam dryer from the containment building. The steam dryer was heavy, so it was cut up and stored in three separate shielded boxes with other dryer parts. Each shielded and secured box weighed more than 10,000 lbs. The three boxes were then transferred to a large concrete storage building outside of the protected area, named the North Laydown Yard Mausoleum. Although this waste material exceeded the threshold for a category 2 quantity of radioactivity, it did not contain discrete radioactive sources, ion-exchange resins, or activated material that weighed less than 2,000 kg. Therefore, the steam dryer boxes are considered waste material that is exempt from 10 CFR Part 37, subparts B, C, and D, but must comply with the requirements of 10 CFR 37.11(c). The inspectors observed that some of these requirements were not met. Corrective Actions: The licensee entered this issue into their corrective action program. Corrective Action References: CR-GGN-2022-11272		
Enforcement: Violation: Title 10 CFR 37.11 requires, in part, minimal security requirements for a category 2 quantity of radioactive waste that is exempt from 10 CFR Part 37, subparts B, C, and D. Contrary to the above, from March 19, 2014 (initial compliance date with 10 CFR Part 37) to the present, the licensee has stored a category 2 quantity of exempt waste in a large concrete storage module without meeting all of the security requirements of 10 CFR 37.11(c). Basis for Discretion: This violation met the criteria for Enforcement Discretion as described in Enforcement Guidance Memorandum (EGM) 14-001, "Interim Guidance for Dispositioning 10 CFR Part 37 Violations with Respect to Large Components or Robust Structures Containing Category 1 or Category 2 Quantities of Material at Power Reactor Facilities Licensed Under 10 CFR Parts 50 and 52."		

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On October 20, 2022, the inspectors presented the IP 92702 inspection results to Mr. Russell Williams (GMPO) and other members of the licensee staff.
- On December 16, 2022, the inspectors presented the public radiation safety inspection results to Mr. B. Kapellas, Site Vice President, and other members of the licensee staff.

- On December 22, 2022, the inspectors presented the Debrief of Grand Gulf Annual Operations Requalification Exam Results inspection results to Anthony Watson (Exam Supervisor) and other members of the licensee staff.
- On January 5, 2023, the inspectors presented the integrated inspection results to Brad Kapellas and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents	CR-GGN-	2019-09017, 2020-08196, 2020-10279, 2021-00242, 2022-02858, 2021-05925, 2022-06470, 2022-08860, 2022-08882, 2022-09921, 2022-10294	
	Drawings	E1022	One Line Meter & Relay Diagram 125V DC Bus 11CC 11DE UFSAR Figure 08.3-10B	36
		E1023	One Line Meter & Relay Diagram 125V DC Bus 11DA, 11DB, & 11DC UFSAR Figure 08.3-010	39
		M-0049	P&ID Control Room Heating Ventilation @ Air Conditioning System UFSAR Figure 09.4-001	47
		M-1061A	P&ID Standby Service Water System UFSAR Figure 09.2-001	69
		M-1061B	P&ID Standby Service Water System UFSAR Figure 09.2-002	53
		M-1061C	P&ID Standby Service Water System	38
		M-1061D	P&ID Standby Service Water System	40
	Procedures	04-1-01-L11-1	Plant DC Systems	
		04-1-01-P41-1	Standby Service Water System	
71111.05	Corrective Action Documents	CR-GGN-	2022-09347	
	Fire Plans		Fire Pre-Plan SSW-01	30
	Procedures	EN-DC-161	Control of Combustibles	25
71111.11A	Miscellaneous		Grand Gulf 2022 Annual Ops Test Results	12/21/2022
71111.12	Corrective Action Documents	CR-GGN-	2022-04073, 2022-04109, 2022-04731, 2022-04832, 2022-07146, 2022-09773, 2022-10628	
	Miscellaneous		Commercial Grade Dedication for UTC 639566	
			Commercial Grade Dedication for UTC 668980	
		10538448	Purchase Order	
		10552345	Purchase Order	
		10608490	Purchase Order	
		55899	Receiving Document	
		56634	Receiving Document	
		64413	Receiving Document	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Self-Assessments	Fuel Cycle 21 Periodic Assessment #2		0
71111.13	Work Orders	WO	587571	
71111.15	Calculations	C-H015.3		3
	Corrective Action Documents	CR-GGN-	2002-02594, 2021-02394, 2022-09363, 2022-09584, 2022-09679, 2022-09683, 2022-09844, 2022-10327, 2022-10468, 2022-10474, 2022-10628, 2022-10687	
	Drawings	A-1162		4
		A-1165		2
	Engineering Changes	FCN-A-377		
	Miscellaneous	NRC Form 361	Reactor Plant Event Notification Worksheet #56171	10/20/2022
	Procedures	06-OP-1T48-M-0003	Secondary Containment Integrity Check	115
71111.18	Miscellaneous	Plant Operations Manual 05-S-01-TSTG1	Plant Specific Technical Guidelines Volume 1	0
71111.19	Corrective Action Documents	CR-GGN-	2021-05709	
	Procedures	06-IC-1B21-Q-2006	Main Condenser Low Vacuum (MSLIS) Functional Test, Safety Related	
	Work Orders	WO	565822, 587571, 52948976, 53014939	
71111.22	Procedures	06-OP-SP64-A-0046	Fire Pumps Low Pressure Start Functional Test	106
	Work Orders	575709		
71124.05	Calibration Records	ARGOS-015	Calibration data for ARGOS monitor	06/13/2022
		CHP-AMSD-025	Calibration data for AMS-4 detector	11/01/2021
		CHP-CR-162	Calibration data for Ludlum-177 frisker	12/14/2021
		CHP-CR-224	Calibration data for Ludlum-177 frisker	12/07/2021
		CHP-DR-589	Calibration data for model 9-3 detector	12/06/2021
		CHP-DR-656	Calibration data for model 9-3 detector	11/16/2022
		GEM-005	Calibration data for GEM-5 passive monitor	09/27/2022
		GEM-008	Calibration data for GEM-5 passive monitor	06/22/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		GEM-009	Calibration data for GEM-5 passive monitor	06/10/2022
		ZEUS-002	Calibration data for ZEUS monitor	10/18/2022
	Corrective Action Documents	CR-GGN-	2017-00612, 2020-11288, 2020-11394, 2021-04225, 2021-04904, 2021-05260, 2021-08760, 2022-00186, 2022-01096, 2022-03094, 2022-07549, 2022-09269, 2022-10690, 2022-10709	
	Procedures	06-IC-01D17-A-0013	GE Radioactive Gaseous Effluent Monitor Calibration	107
		06-IC-1D21-R-1002	Containment/Drywell High Range Area Radiation Monitor Calibration	107, 108, 113
		07-S-53-D21-1	Area Radiation Monitors	22
		08-S-07-100	Canberra Fastscan Whole Body Counter System Operation and Calibration	0
		08-S-07-99	Operation and Calibration of the ZEUS Personnel Contamination Monitor	2
		10-S-01-1	Emergency Plan Procedure	126
		10-S-01-39	Grand Gulf Equipment important to Emergency Response	7
		EN-RP-315	Operation and Calibration of the CRONOS Contamination Monitor	3
		EN-RP-317-05	Calibration of Extendable Dose Rate Instruments	1
		EN-RP-317-07	Calibration of Portable Count Rate Instruments	3
		EN-RP-317-10	Calibration of Portable Dose Rate Instruments	3
	Self-Assessments	LO-GLO-2021-00090	Self-assessment for pre-NRC inspection: radiation monitoring instrumentation assessment (71124.05)	08/30/2022
	Work Orders	WO-	00531503, 00542468, 00542472, 52802197, 52842051, 52842512, 52897026, 52917458, 52934418, 52941573, 52946030, 52956678, 52959927, 52978368, 52981922, 52986782	
71124.08	Corrective Action Documents	CR-GGN-	2021-00059, 2021-01916, 2021-05603, 2021-05747, 2021-06664, 2022-00481, 2022-01698, 2022-02749, 2022-03617, 2022-07481, 2022-07483, 2022-08059, 2022-08582, 2022-09835, 2022-10103	
	Corrective Action Documents	CR-GGN-	2022-10627, 2022-10629, 2022-10662, 2022-10698	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Resulting from Inspection			
	Miscellaneous		Grand Gulf Nuclear Generating Station Updated Final Safety Analysis Report (UFSAR), Chapter 11.4 - Solid Radwaste System	4
		21-107F	WMG Report: 2018 Fuel Pool Shipments Re-Characterization	10/20/2022
		GIN-2022-00001	2022 - 2023 10 CFR 61 Waste Stream Analysis for CFFF Mechanical Filters	01/04/2022
		GIN-2022-00025	2022 - 2023 10 CFR 61 Waste Stream Analysis for RWCU-A_2-2022	02/03/2022
		GIN-2022-00136	2022 - 2023 10 CFR 61 Waste Stream Analysis for Dry Active Waste	07/12/2022
		GNRO-2019/00024	Grand Gulf Nuclear Station Annual Radioactive Effluent Release Report (ARERR) - 2018	04/30/2019
		GNRO-2021/00015	Grand Gulf Nuclear Station Annual Radioactive Effluent Release Report (ARERR) - 2020	04/28/2021
		GNRO-2022-00018	Grand Gulf Nuclear Station Annual Radioactive Effluent Release Report (ARERR) - 2021	04/28/2022
		GNRO-2022-00034	Grand Gulf Nuclear Station Report Pursuant to 10CFR71.95(b) to report a failure to comply with conditions of Certificate of Compliance during a shipment	11/30/2022
		WMG Project 10-075E	Preliminary Characterization and Classification of the Grand Gulf Steam Dryer	08/23/2010
	Procedures	EN-RP-108	Radiation Protection Posting	23
		EN-RP-121	Radioactive Material Control	18
		EN-RP-143	Source Control	14
		EN-RW-101	Radioactive Waste Management	3
		EN-RW-102	Radioactive Shipping Procedure	20
		EN-RW-104	Scaling Factors	14
		EN-RW-105	Process Control Program	5
		EN-RW-106	Integrated Transportation Security Plan	7
	Radiation Surveys	GG-1205-0988	Mausoleum	05/16/2012
		GGN-2208-00292	133-foot Onsite RAM Storage Area Northwest	08/07/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		GGN-2209-00521	Northwest Laydown Area	09/29/2022
		GGN-2210-00017	133-foot Turbine Building Truck Bay	10/02/2022
		GGN-2211-00022	133-foot Aux Truck Bay	11/01/2022
		GGN-2211-00092	93-foot Radwaste Hallway	11/07/2022
	Self-Assessments	LO-GLO-2021-0091	Pre-NRC Inspection Module 71124.08, Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	08/11/2022
		LO-GLO-2022-0079	GGNS Self-Assessment: Source Control	09/14/2022
		QA-14-15-2021-GGNS-1	Combined Radiation Protection and Radwaste	10/25/2021
	Shipping Records	GGN-2018-0906	UN2916, radioactive material, type B(U), fissile-excepted, RQ; irradiated hardware	10/09/2018
		GGN-2021-0113	UN3321, radioactive material, low specific activity (LSA-II), 7; one metal cask of bead resin	01/28/2021
		GGN-2022-0107	UN2916, radioactive material, type B(U), fissile-excepted, RQ; one metal cask of dewatered resin	01/19/2022
		GGN-2022-0201	UN2916, radioactive material, type B(U), fissile-excepted, RQ; one metal cask of dewatered resin (RWCU)	02/09/2022
		GGN-2022-1007	UN3321, radioactive material, low specific activity (LSA-II), 7; one metal cask of resin/sludge	10/27/2022
	Work Orders	WO 52989503	Leak Test of Sealed Sources	05/13/2022
71152A	Corrective Action Documents	CR-GGN-	2022-03776, 2022-07617, 2022-07719, 2022-08534	
	Miscellaneous		Grand Gulf Cycle 24 Raised Water Rod Evaluation	
			Responses to Grand Gulf NRC Resident PRC 22-04	
		Engineering Report ECH-NE-22-00019	Lifted Water Rod on Fuel Assembly	
71153	Corrective Action Documents	CR-GGN-	2019-01757, 2019-01833, 2021-01451, 2021-01536, 2021-02950, 2022-07146, 2022-09773, 2022-10127	
	Miscellaneous	10462339	Purchase Order	02/04/2016
		10472129	Purchase Order	02/17/2016
		10537921	Purchase Order	02/07/2018

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		10619352	Purchase Order	08/25/2020
		2021-001-00	Licensee Event Report	05/14/2021
		55636	Receiving Inspection Report	05/22/2018
	Procedures	EN-LI-108-01	10 CFR 21 Evaluations and Reporting	13
		EN-LI-108-01	10 CFR 21 Evaluations and Reporting	14
	Work Orders	WO	558041, 52782092, 52839101, 52884887	
92702	Corrective Action Documents		CR-GGN-2020-08268,	
		Adverse Condition Analysis - Confidential - CR-HQN-2019-02641	Inappropriate Proctoring Behaviors	0
		Adverse Condition Analysis - Confidential - CR-GGN-2019-06074	Nantel Exam Compromise	0
		CR-GGN-2019-07343	Address event in CR-GGN-2019-06440 which was improperly closed	09/06/2019
		CR-GGN-2020-05448	While working on a flange, workers did not use proper verification behaviors	04/22/2020
		CR-GGN-2020-05564	MSIV 1B21F022B will not open when the hand switch is placed in Auto	04/25/2020
		CR-GGN-2020-05570	Material found blocking flow upstream flange	04/26/2020
		CR-GGN-2020-08108	Drive fleet of extent of condition from CR-GGN-2020-05564 and 05570	07/13/2020
		CR-HQN-2019-02641	Drive evaluation of extent of condition/cause and organizational and programmatic factors related to CR-GGN-2019-06074	11/14/2019
		CR-HQN-2019-02904	Drive evaluation of fleet extent of condition, fleet organizational and programmatic and if needed fleet extent of cause related to CR-GGN-2019-07343	12/19/2019
		CR-HQN-2020-	Trend in exam administration related issues	01/09/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		00033		
		CR-HQN-2020-00269	Trend in willful misconduct in the fleet	02/06/2020
		LO-HQNLO-2020-00020	Effectiveness reviews for CR-HQN-2020-00269	03/13/2020
	Corrective Action Documents Resulting from Inspection		CR-GGN-2022-09938	10/20/2022
		CR-GGN-2019-06074	Rewrite of CR-GGN-2019-05674	07/26/2019
		CR-GGN-2022-09940	NRC inspector identified that maintenance did not follow EN-MA-125 Troubleshooting Control of Maintenance Activities	10/22/2022
	Miscellaneous	2020-01083	Internal Investigation	09/17/2020
		ICI-2020-00969	Fact Finding Summary	05/05/2020
		Internal Investigation 2019-01079	Exam proctor integrity was called into question	07/29/2019
		LM-0311 Qualification Matrix		October 2022
	Procedures	Cyber Security Configuration and Change Management	EN-IT-103-12	3
		EN-MA-125	Troubleshooting Control of Maintenance Activities	25
		EN-PL-100	Nuclear Excellence Model	0
		EN-TQ-201-04	SAT - Implementation Phase	10
		EN-TQ-216	Training and Qualification Curriculum	7
		EN-TQ-217	Examination Security	10
		FFAM-TRNI-NONCBTPROC	Proctor Familiarization Guide (Non-CBT)	0
		TQF-217-EXAMPROCT	Exam Proctor Checklist	5
		TQF-217-INBR	Exam Integrity Briefing	6
		TQF-217-PRAP	NANTel Proctor Qualification Approval	3
		TQF-217-PROBS	NANTeL Proctor Observation Form	5

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		TQF-217-PROBS-NONCBT	Non-CBT Proctor Observation Form	2
		Work Request Generation, Screening and Classification	EN-WM-100	18