



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I**  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

April 26, 2013

Mr. Joseph E. Pacher, Vice President  
R.E. Ginna Nuclear Power Plant, LLC  
Constellation Energy Nuclear Group, LLC  
1503 Lake Road  
Ontario, New York 14519

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC - NRC INTEGRATED  
INSPECTION REPORT 05000244/2013002

Dear Mr. Pacher:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your R.E. Ginna Nuclear Power Plant, LLC (Ginna). The enclosed inspection report documents the inspection results, which were discussed on April 12, 2013, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one NRC-identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance, and because it was entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV), consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis of your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Ginna.

J. Pacher

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Daniel L. Schroeder, Chief  
Reactor Projects Branch 1  
Division of Reactor Projects

Docket No. 50-244  
License No. DPR-18

Enclosure: Inspection Report No. 05000244/2013002  
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

J. Pacher

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**U.S. NUCLEAR REGULATORY COMMISSION****REGION I**

Docket No.: 50-244

License No.: DPR-18

Report No.: 05000244/2013002

Licensee: Constellation Energy Nuclear Group, LLC

Facility: R.E. Ginna Nuclear Power Plant, LLC

Location: Ontario, New York

Dates: January 1 through March 31, 2013

Inspectors: N. Perry, Senior Resident Inspector  
D. Dodson, Resident Inspector  
T. Fish, Senior Operations Engineer  
B. Fuller, Operations Engineer  
T. Moslak, Health Physicist

Approved by: Daniel L. Schroeder, Chief  
Reactor Projects Branch 1  
Division of Reactor Projects

Enclosure

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## SUMMARY

IR 05000244/2013002; 01/01/2013 – 03/31/2013; R.E. Ginna Nuclear Power Plant, LLC (Ginna); Operability Determinations and Functionality Assessments.

This report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Inspectors identified one finding of very low safety significance (Green), which was a non-cited violation (NCV). A finding's significance is indicated by a color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP), dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within Cross-Cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated January 28, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

### Cornerstone: Initiating Events

- Green. The inspectors identified a NCV of Ginna Operating License Condition 2.C.(3), "Fire Protection," for failure to implement and maintain in effect all fire protection features described in licensee submittals referenced in and as approved or modified by the NRC's Safety Evaluation Report, dated February 1979 and subsequent supplements. Specifically, Constellation did not identify, account for, or evaluate 250 pounds of non-fire retardant treated plywood that has likely been installed in the screen house building (fire zone SH-2) since original construction and 434 pounds of other combustible material in the screen house. Immediate corrective actions included entering this issue into the corrective action program (CR-2013-001507 and CR-2013-001714). Additional planned corrective actions include revising the combustible loading analysis and replacing the installed plywood with a non-combustible material.

The inspectors determined that the failure to treat all wood with fire retardant and maintain its combustible loading analysis accurate and up-to-date was more than minor, because it was associated with the protection against external factors attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, Constellation did not identify non-fire retardant treated wood and accurately account for the amount of combustibles present in the screen house and was required to recalculate the area's combustible loading to assure the assumptions made in Ginna's exemption request from the technical requirements of Section III.G.3 of 10 CFR 50, Appendix R, were still met. Additionally, this issue is similar to example 3I described in IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors evaluated the finding using IMC Attachment 0609.04, "Initial Characterization of Findings," and IMC 0609 Appendix F, "Fire Protection Significance Determination Process," because the finding involved a failure to adequately implement fire prevention and administrative controls. A low degradation rating was assigned to this finding because the combustible loading of the screen house remained within its current 'LOW' range, and the fire protection program element was expected to display nearly the same level of effectiveness as it would

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have without the degradation. Therefore, the inspectors determined the finding is of very low safety significance (Green). In accordance with IMC 0612, the finding does not have a cross-cutting aspect, because the performance deficiency likely occurred during original plant construction and is not reflective of present plant performance. (Section 1R15)

## REPORT DETAILS

### Summary of Plant Status

R.E. Ginna Nuclear Power Plant, LLC (Ginna) began the inspection period operating at full rated thermal power and operated at full power for the entire period.

## 1. REACTOR SAFETY

### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

#### 1R01 Adverse Weather Protection (71111.01 – 1 sample)

##### Readiness for Impending Adverse Weather Conditions

##### a. Inspection Scope

The inspectors reviewed Constellation's preparations for the onset of cold weather on January 23 and 25, 2013. The inspectors reviewed the implementation of adverse weather preparation procedures before the onset of and during this adverse weather condition. The inspectors walked down areas in the auxiliary building, screen house, turbine building, standby auxiliary feedwater (AFW) building, and the cable tunnel. The inspectors verified that operator actions defined in Ginna's adverse weather procedure maintained the readiness of essential systems. The inspectors discussed readiness and staff availability for adverse weather response with operations and work control personnel. Documents reviewed for each section of this inspection report are listed in the Attachment.

##### b. Findings

No findings were identified.

#### 1R04 Equipment Alignment

#### .1 Partial System Walkdowns (71111.04Q – 5 samples)

##### a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 'A' emergency diesel generator (EDG) during 'B' EDG planned maintenance on February 1, 2013
- Service water (SW) system during 'B' SW motor and pump maintenance on February 20, 2013
- Turbine-driven AFW system during 'B' motor-driven AFW system planned maintenance on February 26, 2013



- 'B' component cooling water (CCW) system during 'A' CCW heat exchanger (HX) maintenance on March 13, 2013
- 'B' EDG during offsite circuit 767 planned maintenance on March 29, 2013

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), work orders (WOs), condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Constellation had properly identified equipment issues and entered them into the corrective action program (CAP) for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On February 26, 2013, the inspectors performed a complete system walkdown of accessible portions of the 'A' AFW system to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, surveillance tests, drawings, equipment line-up check-off lists, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors also reviewed electrical power availability, component lubrication and equipment cooling, hangar and support functionality, and operability of support systems. The inspectors performed field walkdowns of accessible portions of the system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related CRs to ensure Constellation staff appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

## 1R05 Fire Protection

### .1 Resident Inspector Quarterly Walkdowns (71111.05Q – 6 samples)

#### a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Constellation controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Auxiliary building basement floor on January 23, 2013
- Auxiliary building operating floor on January 23, 2013
- 'A' EDG room on January 30, 2013
- 'B' EDG vault on January 30, 2013
- Cable tunnel on March 8, 2013
- Charging pump room on March 25, 2013

#### b. Findings

No findings were identified.

### .2 Fire Protection – Drill Observation (71111.05A – 1 sample)

#### a. Inspection Scope

The inspectors observed a fire brigade drill scenario conducted on February 12, 2013, that involved a fire in the quality assurance storage area. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that Constellation personnel identified deficiencies, openly discussed them in a self-critical manner at the debrief, and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of command and control
- Search for victims and propagation of the fire into other plant areas
- Smoke removal operations
- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

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The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with Constellation's fire-fighting strategies.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program and Licensed Operator Performance

.1 Quarterly Review of Licensed Operator Regualification Testing and Training  
(71111.11Q - 1 sample)

a. Inspection Scope

The inspectors observed licensed operator simulator training on March 12, 2013, which included a steam generator (SG) tube rupture coincident with a loss of normal letdown. The inspectors evaluated operator performance during the simulated event and verified completion of risk-significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the TS action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room  
(71111.11Q - 1 sample)

a. Inspection Scope

The inspectors observed and reviewed operator response in the control room to a feedwater perturbation requiring operators to take manual control of the feedwater system on February 4, 2013. During feedwater flow transmitter calibrations, operators placed the feedwater system in manual control after they noticed feedwater flow perturbations and a rise in SG level. Maintenance personnel identified a flow transmitter manifold block installed incorrectly as the cause of the perturbations. After maintenance personnel corrected the manifold block, operators were able to return the feedwater system to automatic operation. The inspectors verified that operator response was in accordance with abnormal procedure AP-FW.1, "Abnormal Main Feedwater (MFW)

Pump Flow or NPSH," Revision 01801, and Ginna procedures, CNG-OP-1.01-1000, "Conduct of Operations," Revision 00900, and CNG-OP-1.01-2003, "Alarm Response and Control," Revision 00300. Additionally, the inspectors observed crew performance to verify that procedure use, crew communications, and coordination of activities between work groups met established expectations and standards.

b. Findings

No findings were identified.

.3 Biennial Review (71111.11B - 1 sample)

a. Inspection Scope

The following inspection activities were performed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1, and Inspection Procedure Attachment 71111.11, "Licensed Operator Requalification Program and Licensed Operator Performance."

Examination Results

Requalification written exam results were reviewed to determine if pass/fail rates were consistent with the guidance of IMC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process." (Note: Annual requalification operating test results were previously reported in NRC Integrated Inspection Report 05000244/2012005.)

The review verified that the individual pass rate on the written examination was greater than 80 percent (pass rate was 100 percent).

More than 80 percent of the individuals passed all portions of the requalification exam (overall pass rate when combined with previously reported operating test results was 89.7 percent).

Written Examination and Operating Test Quality and Administration

The inspectors reviewed a sample of comprehensive written exams that facility staff administered to the operators in January and February 2013.

The inspectors reviewed the operating test (three scenarios and six job performance measures [JPMs]) associated with the onsite inspection week and an additional operating test (three scenarios and four JPMs) associated with a subsequent examination week.

The inspectors observed facility training staff administer dynamic simulator exams and JPMs during the week of December 3, 2012. These observations included facility evaluations of crew and individual operator performance during the simulator exams and individual performance of JPMs.

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The inspectors assessed whether facility staff properly safeguarded exam material, and whether test item repetition was excessive.

#### Remedial Training and Re-examinations

The inspectors reviewed one remedial training package and its respective re-examination. This review was associated with an operator who had failed a written exam in February 2011.

#### Conformance with License Conditions

The inspectors reviewed a sample of Ginna reactivation records and proficiency watch standing records to ensure that 10 CFR 55.53 license conditions and applicable program requirements were met. The inspectors also reviewed a sample of records for requalification training attendance and a sample of medical examinations for compliance with license conditions and NRC regulations.

#### Simulator Performance

The inspectors reviewed simulator performance and fidelity for conformance to the reference plant control room. A sample of simulator deficiency reports was also reviewed to ensure facility staff addressed identified modeling problems.

#### Problem Identification and Resolution

The inspectors reviewed recent operating history documentation found in inspection reports, licensee event reports, Ginna's CAP, and the most recent NRC plant issues matrix. The inspectors also reviewed specific events from Ginna's CAP which indicated possible training deficiencies to verify that they had been appropriately addressed. The NRC resident staff was also consulted for insights regarding licensed operators' performance.

#### b. Findings

No findings were identified.

### 1R12 Maintenance Effectiveness (71111.12Q – 2 samples)

#### a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed CAP documents and maintenance rule basis documents to ensure that Constellation was identifying and properly evaluating performance problems within the scope of the maintenance rule. For the samples selected, the inspectors verified that the SSCs were properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2)

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performance criteria established by Constellation staff was reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that Constellation staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Nuclear instrumentation N-31 source range energized with the plant at 100 percent power on January 13, 2013
- Oil leak on 'B' MFW pump causes 50 percent rapid load reduction which occurred on November 26, 2012, and was reviewed on February 12 and March 5, 2013

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 5 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that Constellation performed the appropriate risk assessments prior to removing equipment from service. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that Constellation personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When Constellation performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Planned maintenance on the 'B' EDG on January 30, 2013
- Pressurizer pressure control in manual and the 'B' spent fuel pool cooling pump out of service (OOS) on February 12, 2013
- Planned maintenance on the diesel fire pump system with the 'B' SW pump OOS for maintenance on February 20, 2013
- Planned maintenance on the 'B' motor-driven AFW system on February 25 and 26, 2013
- Planned maintenance on the 'A' CCW HX on March 13, 2013

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 5 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- 'B' EDG lube oil (L/O) system low pressure on February 1, 2013
- 'B' EDG fuel oil system low pressure on February 4, 2013
- 'B' MFW pump leaking SW strainer to L/O cooler on February 15, 2013
- Combustible loading analysis accounting for previously unidentified installed plywood in the screen house on March 1, 2013
- Auxiliary building block walls not properly pinned on March 12, 2013

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to Constellation's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by Constellation. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

Introduction. The inspectors identified a Green NCV of Ginna Operating License Condition 2.C.(3), "Fire Protection," for failure to implement and maintain in effect all fire protection features described in licensee submittals referenced in and as approved or modified by the NRC's safety evaluation report, dated February 1979 and subsequent supplements. Specifically, Constellation did not identify, account for, or evaluate non-fire retardant treated plywood and other combustibles in the screen house building (fire zone SH-2). As a result, a credible fire scenario involving the identified combustibles could affect equipment important to safety and required a recalculation of the combustible loading analysis.

Description. On March 1, 2013, the inspectors identified that several electrical panels were mounted on non-fire retardant plywood bases in the screen house; these plywood bases have likely been in place since the plant was originally constructed. The inspectors identified approximately 100 square feet of non-fire retardant treated 0.75-inch plywood, weighing approximately 230 pounds, which was not included in the combustible loading analysis for this fire area. This plywood has safety-related equipment mounted to it—the 'A' and 'B' screen house direct current (DC) distribution panels and the local SW pump selector switches. Both DC panels are large enough that they are considered ignition sources. Using its fire modeling database zone of influence calculator and assuming flame radiation for a 98<sup>th</sup> percentile heat release rate, Constellation determined that safety-related bus 18 could be impacted by the fire

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because of its close proximity to the identified plywood (within approximately 8 feet). Constellation assumed that a fire affecting bus 18 would also affect safety-related bus 17, thereby impacting all four safety-related SW pumps. In addition to the two safety-related DC distribution panels, buses 17 and 18, and the four SW pumps, the motor-driven fire pump and the diesel-driven fire pump control panels could also be affected by this fire scenario. This fire could also cause a short to ground on the conductor in cables L0725 and L0472, which run into bus 18, and cause the normal supply breaker to safety-related bus 14, which contains breakers for emergency core cooling system equipment, to spuriously open.

EPM-FPPR, "Ginna Station Fire Protection Program Report Volumes 1, 2 and 3," Revision 008.0 states, "Administrative controls shall be established and maintained to minimize the amounts of combustibles that a safety-related/safe shutdown area may be exposed to. These controls shall govern...wood used in safety-related/safe shutdown areas to assure that it is treated with flame retardant," and lists DA-ME-98-004, "Combustible Loading Analysis," Revision 010, dated May 21, 2012, as the evaluation used as part of the basis for Ginna's exemption from the technical requirements of Section III.G.3 of 10 CFR 50, Appendix R, which requires the installation of a complete area-wide fixed fire suppression system. Ginna evaluation DA-ME-98-004 assumed incorrect quantities of combustibles in its analysis of the screen house. Specifically, the calculation assumed 50 pounds of wood present in the screen house; approximately 583 pounds of wood and 101 pounds of other previously unidentified combustible materials were identified by the inspectors and Constellation's extent-of-condition review. The combustible loading analysis had calculated a total combustible loading of 9,122 BTU/ft<sup>2</sup> for the entire screen house building (fire area SH) and a total combustible loading of 8,841 BTU/ft<sup>2</sup> for the screen house building operating floor (fire zone SH-2). Based on the fire loading added by the wood and other identified materials, the final calculated total combustible loading increased to 9,525 BTU/ft<sup>2</sup> for fire area SH and 9,440 BTU/ft<sup>2</sup> for fire zone SH-2, which contained the majority of the previously unidentified combustibles. In accordance with EP-3-P-0132, "Fire Protection Appendix R Conformance Verifications," Revision 00800, the combustible loading is still considered in the 'LOW' range. Additionally, alternate shutdown capability that is independent of the fire area has been provided.

Immediate corrective actions included entering this issue into the CAP as CR-2013-001507 and CR-2013-001714. Additional planned corrective actions include revising DA-ME-98-004 and replacing the installed plywood with a non-combustible material.

Analysis. The inspectors determined that Constellation's failure to implement and maintain in effect all fire protection features—specifically, identifying and treating all wood with fire retardant and maintaining an accurate combustible loading analysis for fire zone SH-2—was a performance deficiency that was within Constellation's ability to foresee and correct and should have been prevented. The inspectors determined that the failure to treat all wood with fire retardant and maintain its combustible loading analysis accurate and up-to-date was more than minor, because it was associated with the protection against external factors attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power

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operations. Specifically, Constellation did not identify non-fire retardant treated wood and accurately account for the amount of combustibles present in the screen house and was required to recalculate the area's combustible loading to assure the assumptions made in Ginna's exemption request from the technical requirements of Section III.G.3 of 10 CFR 50, Appendix R, were still met. Additionally, this issue is similar to example 3I described in IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors evaluated the finding using the IMC Attachment 0609.04, "Initial Characterization of Findings," Issued June 19, 2012. The attachment instructs the inspectors to utilize IMC 0609 Appendix F, "Fire Protection Significance Determination Process," issued February 28, 2005, when the finding involves a failure to adequately implement fire prevention and administrative controls. A low degradation rating was assigned to this finding because the combustible loading of the screen house remained within its current 'LOW' range, and the fire protection program element was expected to display nearly the same level of effectiveness as it would have without the degradation. Therefore, the inspectors determined the finding is of very low safety significance (Green).

In accordance with IMC 0612, the finding does not have a cross-cutting aspect because the performance deficiency likely occurred during original plant construction and is not reflective of present plant performance.

Enforcement. Ginna Operating License Condition 2.C.(3), requires, in part, Constellation to implement and maintain in effect all fire protection features described in the licensee's submittals referenced in and as approved or modified by the NRC's Fire Protection Safety Evaluation dated February 14, 1979, and safety evaluation supplements dated December 17, 1980, February 6, 1981, June 22, 1981, February 27, 1985, and March 21, 1985, or configurations subsequently approved by the NRC. EPM-FPPR, "Ginna Station Fire Protection Program Report Volumes 1, 2 and 3," Revision 008.0, states, "ensure all wood products are fire retardant treated," and lists DA-ME-98-004, "Combustible Loading Analysis," Revision 010, dated May 21, 2012, as the evaluation used as part of the basis for Ginna's exemption from the technical requirements of Section III.G.3 of 10 CFR 50, Appendix R, which requires the installation of a complete area-wide fixed fire suppression system. Contrary to the above, for many years until March 2013, Constellation did not identify, account for, or evaluate 250 pounds of non-fire retardant treated plywood and 434 pounds of additional combustible material in the screen house building (fire zone SH-2). As a result, the combustible loading analysis for the area needed to be recalculated to assure assumptions made in Ginna's exemption request from the technical requirements of Section III.G.3 of 10 CFR 50, Appendix R, were still met. Immediate corrective actions included entering this issue into the CAP to evaluate replacing the installed plywood with a non-combustible material. Because this violation is of very low safety significance (Green), and Constellation entered this issue into their CAP (CR-2013-001507 and CR-2013-001714), this violation is being treated as an NCV consistent with Section 2.3.2 of the Enforcement Policy. **(NCV-05000244/2013002-01, Failure to Identify, Account for, and Properly Evaluate Non-Fire Retardant Treated Combustibles in the Screen House)**

Enclosure

1R18 Plant Modifications (71111.18 – 2 samples).1 Temporary Modificationa. Inspection Scope

The inspectors reviewed a temporary modification implemented by Engineering Change Package (ECP)-13-000099, "Temporary Set Point Change of 'B' EDG Low L/O Pressure Trip Time Delay," to determine whether the modification affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modification to verify that the temporary modification did not degrade the design bases, licensing bases, and performance capability of the affected systems.

b. Findings

No findings were identified.

.2 Permanent Modificationa. Inspection Scope

The inspectors evaluated a modification to the chemical and volume control system (CVCS) implemented by ECP-11-000789, "ESR (000) – CVCS Charging Pump Motor Variable Frequency Drives Electrical Tie-ins Portion." The inspectors verified that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design change, including installation of a variable speed, 125 horsepower alternating current motor, and installation of a 125 horsepower-rated variable frequency drive. The inspectors also reviewed the operational test procedure and observed the coupled run of the 'A' charging pump.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 8 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with

the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Pressurizer backup heaters breaker unplanned maintenance on January 23, 2013
- 'B' EDG fuel oil transfer pump replacement on January 31, 2013
- 'B' EDG L/O planned maintenance on February 1, 2013
- 'B' EDG fuel oil and L/O planned maintenance on February 6, 2013
- 'B' SW motor and pump planned maintenance on February 20, 2013
- 'B' motor-driven AFW pump planned maintenance on February 27, 2013
- 'B' EDG auto voltage regulator replacement on February 28, 2013
- 'A' charging pump planned maintenance on March 16, 2013

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 9 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and Constellation procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- STP-O-16.4A, AFW Pump 'A' Bypass Air-Operated Valve (AOV) Leak Test on January 18, 2013 (in-service test [IST])
- STP-E-12.5, Technical Support Center (TSC) Diesel Test on January 22, 2013
- STP-O-13.4, Diesel-Driven Portable Pump Test on January 26, 2013
- STP-O-13.11.2B, Z21 Zone Smoke Detection Testing (Diesel Generator 'B' Vault) on January 30, 2013
- CME-38-12-STABATTMON, Station Battery Monthly Performance Checks on February 11, 2013
- STP-E-11.2, Security 60 Cell Battery Bank on February 13, 2013
- STP-O-36QC, Standby AFW Pump 'C' – Quarterly on February 17, 2013 (IST)
- STP-O-16QT, AFW Turbine Pump – Quarterly on February 20, 2013 (IST)
- STP-I-9.1.17, Undervoltage Protection – 480 Volt Safeguard Bus 17 on March 1, 2013

b. Findings

No findings were identified.

**Cornerstone: Emergency Preparedness**

1EP6 Drill Evaluation (71114.06 – 1 sample)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine Constellation emergency drill on March 14, 2013, to identify any weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator, TSC, and emergency operations facility to determine whether the event classifications, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the station drill critique to compare inspector observations with those identified by Constellation staff in order to evaluate Constellation's critique and to verify whether the Constellation staff was properly identifying weaknesses and entering them into the CAP.

b. Findings

No findings were identified.

**2. RADIATION SAFETY**

**Cornerstone: Public Radiation Safety and Occupational Radiation Safety**

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

During the period March 11 to 14, 2013, the inspectors conducted the following activities to verify that Constellation was properly implementing physical, administrative, and engineering controls for access to locked high radiation areas and other radiological controlled areas (RCAs) during normal operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, relevant TSs, and Ginna's procedures.

Plant Walkdown and Radiation Work Permit (RWP) Reviews

The inspectors toured accessible RCAs in the SG mausoleum, the intermediate building, auxiliary building, and various radwaste and contaminated equipment storage buildings. Independent radiation surveys were performed on selected areas to confirm the

accuracy of survey data and the adequacy of postings. Locked high radiation areas located in these areas were verified to be properly secured, posted, and monitored during plant tours.

The inspectors identified radiological-significant jobs scheduled to be performed in the RCAs. The inspectors reviewed the applicable RWPs, as low as reasonable achievable (ALARA) job reviews, and the electronic dosimeter dose and dose rate alarm set points for the associated tasks to determine if the radiological controls were acceptable and if the set points were consistent with plant policy. Jobs reviewed included cleaning of the 'A' CCW HX (RWP 13-1/2), turbine building floor grinding (RWP 13-1/7), and installation of 'A' and 'C' charging pump motors (RWP 13-21). For the jobs reviewed, the inspectors determined if dosimetry was appropriately specified and properly located on the body and if air samples were taken for jobs that had the potential for generating airborne contamination; i.e., turbine building floor grinding (RWP 13-1/7). The inspectors evaluated the effectiveness of contamination controls by touring work areas, reviewing survey data, and observing practices at various work locations in the auxiliary building, turbine building, and in contaminated material storage buildings.

#### Locked High Radiation Area Controls

The inspectors reviewed procedures related to the control of high dose rate and locked high radiation areas. The inspectors discussed these procedures with radiation protection (RP) supervision to determine if any changes made to these procedures reduced safety measures.

#### Airborne Controls

The inspectors reviewed the preparations made in response to possible changing radiological conditions in the turbine building which may have resulted from the floor grinding. The inspectors reviewed the preparations made for this task including installing tent containments, use of high-efficiency particulate air portable filtration systems, portal contamination monitors, and air samplers for work areas.

During plant tours, the inspectors verified that continuous air samplers were operating and located in areas where potential airborne contamination could occur.

#### Contamination and Radioactive Material Control

During plant tours, the inspectors verified that contaminated materials were properly bagged, surveyed, labeled, and segregated from work areas. The inspectors verified that drums containing radioactive materials were properly labeled identifying the drum contents and associated radiation level.

The inspectors observed workers using contamination monitors to determine if various tools and equipment were potentially contaminated and met criteria for releasing the materials from the RCAs.

The inspectors reviewed the site procedure used to inventory and leak test radioactive check sources. The inspectors reviewed current source inventories and leak test results to confirm that sources were properly controlled, met the leak test acceptance criteria, and were accounted.

#### External Dosimetry

The inspectors verified that detailed procedures associated with dosimeter use were implemented, including routine optically stimulated luminescent dosimeter issuance, multi-badging, and extremity dosimeter use. The inspectors verified that procedural controls were in place for external effective dose equivalent determinations that would be used for high dose gradient tasks and verified through observations that dosimeters were worn on the workers' body location receiving the highest dose rate. The inspectors reviewed CRs related to the proper use of dosimetry to determine if the cause was properly determined and that the corrective actions were effective to preclude recurrence.

#### Radiation Worker and Radiation Protection Technician Performance

During tours of RCAs, the inspectors questioned radiation workers and RP technicians regarding the radiological conditions at the work site and the radiological controls that applied to their task. Additionally, radiological-related CRs were reviewed to evaluate if the incidents were caused by repetitive radiation worker or technician errors and to determine if an observable pattern traceable to a similar cause was evident.

The inspectors observed pre-job RWP briefings to determine if workers were properly informed including identification of the radiological conditions associated with their tasks, electronic dosimetry dose and dose rate set points, and contamination controls and dose mitigation measures.

#### Problem Identification and Resolution

The inspectors evaluated the CAP for assuring that radiological hazard assessments and related controls were effective and properly implemented by reviewing relevant CRs, personnel contamination event reports, and electronic dosimetry alarm reports. The inspectors evaluated whether the problems were identified in a timely manner, extent-of-condition and cause evaluations were performed, when appropriate, and corrective actions were effective to preclude repetitive problems.

#### b. Findings

No findings were identified.

## 2RS2 Occupational ALARA Planning and Controls (71124.02)

### a. Inspection Scope

During the period March 11 to 14, 2013, the inspectors performed the following activities to verify that Constellation staff was properly implementing operational, engineering, and administrative controls to maintain personnel exposure ALARA for activities performed during routine plant operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20 and Ginna procedures.

#### Radiological Work Planning

The inspectors reviewed pertinent information regarding site cumulative exposure history, the exposure challenges for the fall 2012 refueling outage, current exposure trends, and the 5-year ALARA exposure reduction plan.

In reviewing Ginna's ALARA program, the inspectors evaluated the departmental interfaces between RP, operations, maintenance crafts, and engineering to identify missing ALARA program elements and interface problems. The evaluation was accomplished by interviewing site staff, reviewing station ALARA committee meeting minutes, and attending an ALARA committee meeting. Additionally, the inspectors attended a training session provided to the engineering department by the RP department regarding industry unplanned exposure experiences.

#### Verification of Dose Estimates

The inspectors reviewed the assumptions and basis for the 2012 outage exposure plan. The inspectors evaluated the implementation of procedures associated with monitoring and re-evaluating dose estimates when the forecasted cumulative exposure for tasks was approached during the outage.

The inspectors reviewed the ALARA post-job reviews for all 2012 outage projects whose actual exposure exceeded 5 roentgen equivalent man (rem). Included in this review were scaffolding installation and removal (RWP 12-5612) and refueling activities (RWPs 12-5618/12-9618).

The inspectors evaluated whether the actual exposure was greater than 50 percent of the estimated exposure and whether the station ALARA committee promptly evaluated the effectiveness of exposure controls as the estimated dose was approached.

The inspectors evaluated the basis for dose revisions for various outage project dose estimates that resulted from exposure challenges; e.g., expanded project scope and emergent work.

The inspectors reviewed the exposures for the 10 workers who received the highest doses for 2012 to confirm that no individual exceeded the regulatory annual limit or the performance indicator criteria.

Enclosure

### Job Site Inspections

The inspectors reviewed the dose estimates provided in an ALARA challenge board and RWP for the installation of the 'A' and 'C' charging pump motor variable frequency drives, a job-in-progress.

During the inspection period, the inspectors observed workers perform tasks supporting replacement of the charging pump motor drives, grinding of the turbine building floor, and cleaning of the CCW HX. Workers were questioned regarding their knowledge of job site radiological conditions and ALARA measures applied to their tasks.

### Source Term Reduction and Control

The inspectors reviewed the status and historical trends for the reactor coolant system source term. Through review of survey maps and interviews with the ALARA engineer, the inspectors evaluated recent source term measurements and control strategies. Specific strategies employed during the fall 2012 outage included use of macro-porous clean-up resin, enhanced chemistry controls, system flushes, maximizing SG water levels, and temporary shielding.

For ongoing operations, the inspectors assessed the effectiveness of temporary shielding and tank/pipe flushing for reducing auxiliary building area dose rates that were affected by the residual irradiated metallic debris material from the removal of reactor baffle plate bolts. The inspectors evaluated the effectiveness of the residual irradiated metallic debris material clean-up project by reviewing survey maps and postings.

### Problem Identification and Resolution

The inspectors reviewed elements of the CAP related to implementing the ALARA program to determine if problems were being entered into the program for timely resolution. CRs related to programmatic dose challenges, personnel contaminations, dose and dose rate alarms, and the effectiveness in predicting and controlling worker exposure were reviewed.

#### b. Findings

No findings were identified.

### 2RS4 Occupational Dose Assessment (71124.04)

#### a. Inspection Scope

During the period March 11 to 14, 2013, the inspectors reviewed occupational doses to ensure they were appropriately monitored and assessed. The inspectors used the requirements in 10 CFR Part 20, the guidance in Regulatory Guide (RG) 8.13, "Instructions Concerning Prenatal Radiation Exposures," RG 8.36, "Radiation Dose to



Embryo Fetus,” RG 8.40, “Methods for Measuring Effective Dose Equivalent from External Exposure,” TSs, and Ginna’s procedures required by TSs as criteria for determining compliance.

#### Audits and Self Assessments

The inspectors reviewed the results of Constellation’s RP program audits and self assessments related to internal and external dosimetry. A review was conducted of procedures associated with dosimetry operations including issuance and use of external dosimetry, assessment of internal dose, and evaluation of dose assessment for radiological incidents.

The inspectors evaluated the procedural requirements for determining when external dosimetry and internal dose assessments were required.

#### External Dosimetry

The inspectors evaluated whether Constellation’s dosimetry vendor was accredited with the National Voluntary Laboratory Accredited Program. The inspectors evaluated the onsite storage of the optically stimulated luminescent dosimeters before issuance, during use, and before processing and reading. The inspectors also reviewed the guidance provided to radiation workers with respect to care and storage of dosimeters. The inspectors assessed the methods used to determine the background radiation contribution to the dosimeter and how the background correction factor is applied to determine the dose of legal record.

#### Internal Dose Assessment

The inspectors reviewed implementation of the internal dose assessment program. Included in this review were calculations of derived air concentrations from airborne monitoring and bioassay techniques. These methods were applied in response to an incident in which the isotopic results from a personnel lapel air sampler indicated the presence of trace contamination during the fall 2012 outage. To accurately assess dose to the worker, Constellation analyzed the lapel air sample, conducted whole body counting, and initiated in-vitro (urine and fecal) analyses. The final committed effective dose equivalent was determined to be less than 1 mrem. The inspectors evaluated the techniques used to establish the uptake to the individual and the resulting dose.

#### Declared Pregnant Workers

The inspectors assessed the process used by Constellation to inform workers of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for monitoring and controlling exposure to a declared pregnant worker. The inspectors reviewed Constellation’s documentation and monitoring results for one declared pregnant worker who was employed during the inspection period.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**4OA1 Performance Indicator Verification (71151 – 3 samples)a. Inspection Scope

The inspectors reviewed Constellation's submittals for the following Initiating Events Cornerstone performance indicators (PIs) for the period of January 1 through December 31, 2012.

- Unplanned Scrams
- Unplanned Power Changes
- Unplanned Scrams with Complications

To determine the accuracy of the PI data reported during this period, inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed Ginna's operator narrative logs, maintenance planning schedules, CRs, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified

4OA2 Problem Identification and Resolution (71152)Routine Review of Problem Identification and Resolution Activitiesa. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Constellation entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended CR screening meetings.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting

On April 12, 2013, the inspectors presented the inspection results to Mr. Joseph Pacher, Vice President, and other members of the Ginna staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

**ATTACHMENT: SUPPLEMENTARY INFORMATION**

Enclosure

**SUPPLEMENTARY INFORMATION**

**KEY POINTS OF CONTACT**

**Licensee Personnel**

J. Pacher, Vice President, Ginna  
E. Dean III, Plant General Manager  
J. Bowers, General Supervisor, Radiation Protection  
D. Dean, General Supervisor, Operations Support  
S. Doty, Manager, Maintenance  
K. Garnish, Operations Training  
M. Geckle, Manager, Nuclear Safety and Security  
T. Harding, Director, Licensing  
P. Landers, Instructor, Continuing Training  
J. List, Supervisor, Continuing Training  
K. McLaughlin, General Supervisor, Shift Operations  
T. Mogren, Manager, Engineering Services  
T. Paglia, Manager, Operations  
S. Preston, Director, Performance Improvement Unit  
J. Scalzo, Director, Emergency Preparedness  
S. Snowden, General Supervisor, Chemistry  
S. Wihlen, Manager, Integrated Work Management

**LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED**

**Opened/Closed**

|                     |     |  |
|---------------------|-----|--|
| 05000244/2013002-01 | NCV | Failure to Identify, Account for, and Properly Evaluate Non-Fire Retardant Treated Combustibles in the Screen House (Section 1R15) |
|---------------------|-----|--|

**LIST OF DOCUMENTS REVIEWED**

**Section 1R01: Adverse Weather Protection**

**Procedures**

O-22, Cold Weather Walkdown Procedure, Revision 00804  
OPG-RAIN-SNOW-WATER-INTRUSION, Operations and Site Response to Water Intrusion,  
Revision 00100

**Section 1R04: Equipment Alignment****Procedures**

STP-O-16-COMP-A, Auxiliary Feedwater Pump 'A' – Comprehensive Test, Revision 00700  
 STP-O-30.8, Service Water System Valve Position Verification, Revision 00102  
 STP-O-30.9, Component Cooling Water Flow Path Verification, Revision 00002  
 STP-O-30.11, Emergency Diesel Generator 'B' Pre-Startup Alignment, Revision 00501

**Drawings**

33013-1231, Main Steam (Safety Related) Piping and Instrument Drawing (P&ID), Revision 0, Sheet 2  
 33013-1234, Condensate Storage P&ID, Revision 41  
 33013-1237, Auxiliary Feedwater P&ID, Revision 65  
 33013-1239, Diesel Generator – 'A' P&ID, Revision 25, Sheet 1  
 33013-1239, Diesel Generator – 'B' P&ID, Revision 23, Sheet 2  
 33013-1245, Auxiliary Coolant Component Cooling Water P&ID, Revision 33  
 33013-1246, Auxiliary Coolant Component Cooling Water P&ID, Revision 13, Sheet 2  
 33013-1250, Station Service Cooling Water Safety Related P&ID, Revision 60, Sheet 1  
 33013-1250, Station Service Cooling Water Safety Related P&ID, Revision 46, Sheet 2  
 33013-2285, Motor-Driven and Turbine-Driven Auxiliary Feedwater Pumps Lube Oil Skid P&ID, Revision 20

**Condition Reports**

|                |                |                |
|----------------|----------------|----------------|
| CR-2012-000290 | CR-2012-004721 | CR-2013-001381 |
| CR-2012-000307 | CR-2012-004761 | CR-2013-001410 |
| CR-2012-000347 | CR-2012-004786 | CR-2013-001412 |
| CR-2012-000556 | CR-2012-005514 | CR-2013-001468 |
| CR-2012-001004 | CR-2012-007044 | CR-2013-001471 |
| CR-2012-002646 | CR-2012-008664 | CR-2013-001795 |
| CR-2012-003365 | CR-2013-000330 | CR-2013-001802 |
| CR-2012-003918 | CR-2013-001110 |                |

**Section 1R05: Fire Protection****Procedures**

A-103.9, Fire Brigade Training, Revision 03001  
 A-601.13, Fire Protection/Appendix R Compensatory Actions, Revision 00000  
 A-905, Open Flame, Welding and Grinding Permit (Hot Work Permit), Revision 04202  
 FRP-4.0, Auxiliary Building Basement, Revision 00800  
 FRP-6.0, Auxiliary Building Operating Floor, Revision 00700  
 FRP-15.0, Cable Tunnel, Revision 00800  
 FRP-24.0, Diesel Generator Room 'A' and Vault, Revision 00500  
 FRP-25.0, Diesel Generator Room 'B' and Vault, Revision 00800  
 SC-3.1.1, Fire Alarm Response (Fire Brigade Activation), Revision 017  
 SC-3.4.1, Fire Brigade Captain and Control Room Personnel Responsibilities, Revision 04000

**Drawings**

21488-0100, Fire Barrier General Arrangement Sheet Fire, Smoke, and Pressure Barriers Plan  
 View Elevation 253 feet 6 inches, Revision 13, Sheet 4  
 21488-110, Fire Barrier General Arrangement Sheet Diesel Generator Room 'A' Floor Plan

Attachment

Penetration Locations Floor Elevation 253 feet 6 inches, Revision 6, Sheet 1  
21488-110, Fire Barrier General Arrangement Sheet Diesel Generator Room 'A' Floor Plan  
Penetration Locations Floor Elevation 253 feet 6 inches, Revision 5, Sheet 2  
21488-111, Fire Barrier General Arrangement Sheet Diesel Generator Room 'B' Vault North Wall  
Penetration Locations Floor Elevation 244 feet 0 inches, Revision 4, Sheet 3  
21488-111, Fire Barrier General Arrangement Sheet Diesel Generator Room 'B' Vault North Wall  
Penetration Locations Floor Elevation 244 feet 0 inches, Revision 5, Sheet 4  
33013-2540, Fire Response Plan General Plant Drawing Index and Symbol Legend,  
Revision 008  
33013-2543, Fire Response Plan Auxiliary Building Plan – Basement Floor Elevation 235 feet  
8 inches, Revision 004  
33013-2543, Fire Response Plan Auxiliary Building Plan – Basement Floor Elevation 235 feet  
8 inches, Revision 007  
33013-2544, Fire Response Plan Turbine Building Plan – Basement Floor Elevation 253 feet  
6 inches, Revision 12  
33013-2545, Fire Response Plan Containment Structure and Intermediate Building Plan –  
Intermediate Floor Elevation 253 feet 3 inches, Revision 9  
33013-2552, Fire Response Plan Auxiliary Building Plan – Operating Floor Elevation 271 feet  
0 inches, Revision 007

Condition Reports

CR-2012-007044

CR-2013-000507

CR-2013-000523

Work Order

WO C91653666

Miscellaneous

13-0010, R.E. Ginna Station Open Flame, Welding, and Grinding Permit, dated January 23, 2013

13-0012, R.E. Ginna Station Open Flame, Welding, and Grinding Permit, dated January 23, 2013

2013-0004, Quality Assurance Storage Fire, February 12, 2013

DA-ME-98-004, Combustible Loading Analysis, Revision 10

EPM-FPPR, Ginna Station Fire Protection Program Report Volumes 1, 2 and 3, Revision 008.0

**Section 1R11: Licensed Operator Regualification Program and Licensed Operator Performance**

Procedures

AP-FW.1, Abnormal MFW Pump Flow or NPSH, Revision 01801

CNG-MD-1.01-3001, Physical Examination Process for NRC Licensed Operators and  
Licensed Candidates, Revision 00200

CNG-OP-1.01-1000, Conduct of Operations, Revision 00900

CNG-OP-1.01-2003, Alarm Response and Control, Revision 00300

Condition Report

CR-2013-000839

Miscellaneous

2012 Biennial Exam (Cycle 12-7) Simulator vs. Plant Differences

ANSI/ANS-3.5-1985 Nuclear Power Plant Simulators for use in Operator Training  
OTG-2.2, Simulator Examination Instructions  
OTG-10.0, License Activation  
Prompt Investigation for FT-476 Isolation Manifold Installed Incorrectly, February 6, 2013  
SEG-13-02-01, Crew Challenge 1, Revision 0  
Simulator Test Plan 2010 - 2013

Job Performance Measures

JC010.001, Energize a Minimum of 100 KW b/u Heaters  
JR001.008, Calculate SD Margin for Operating Rx with Untrippable Rod  
JR002.001, Establish RCS Injection  
JR003.003, Start a RCP as Directed by ES-1.2, Post LOCA Cooldown and Depressurization  
JR012.011, Perform Immediate Actions of E-0 with SI  
JR039.001, Locally Close MSIVs  
JR061.002, Place Standby AFW System in Service  
JR062.016, Transfer the Electric Plant from 50/50 Alternate to 50/50 Normal  
JR064.008, Start D/D 'A' per ER-FIRE.1

Comprehensive Written Exams (2013)

RO Written Exam Numbers 1 and 2  
SRO Written Exam Numbers 1 and 2

Simulator Scenarios

ECA3132-01 Steam Generator Tube Rupture with LOCA FRH1-03A, Loss of Heat Sink  
ECA3132-09, Steam Generator Tube Rupture  
ES1213-13 SBLOCA  
ES1213-15, LOCA  
FRP1-04, Pressurized Thermal Shock

Simulator Testing

2011 Malfunction Test 14.4.7.11.8 – PZR-8 Pressurizer Level Master Controller  
2011 Malfunction Test 14.4.7.12.3 – RCS -3 DBA into Containment  
2011 Malfunction Test 14.4.7.12.5 – RCS-5 RCP Trip  
2011 Malfunction Test 14.4.7.12.10 – RCS-10 RCS Loop Flow Transmitter Failure  
2011 Malfunction Test 14.4.7.12.16 – RCS-16 Fuel Cladding Failure  
2011 Malfunction Test 14.4.7.13.1 – RHR-01 RHR Pump Trip  
2011 Malfunction Test 14.4.7.15.1 – ROD-1 Uncontrolled Rod Motion  
2011 Normal Operations Test 14.4.2 – Normal Ops Acceptance Test  
2011 Transient Test 14.4.8.BE10 – Slow RCS Depressurization Using PORV  
2011 Transient Test 14.4.8.BE8 – Max Size RCS Rupture w/Loss of all AC  
2011 Transient Test 14.4.8.BE7 – Maximum Power Rate Ramp  
2012 14.4.1 Operating Limits Monitoring  
2012 14.3.2 Computer Real Time Test  
2012 14.4.3.1 100% Steady State Accuracy  
2012 14.4.3.2 100% Steady State Drift  
2012 14.4.4.1 NSSS – BOP Energy Balance

**Section 1R12: Maintenance Effectiveness**

Documents

Apparent Cause Evaluation for Incorrect 'O' Ring (Gasket) Installed in 'B' MFW Pump Oil Filter Housing, January 17, 2013

EVAL-G-43C-03508, MR (A)(1) Evaluation is Required for N31 Source Range Train Due to Reliability Criteria Exceedance with Maintenance Preventable Functional Failure Causes, March 12, 2013

EVAL-G-84B-03309, Plant Down Power Due to Oil Leak on 'B' FW Pump, March 5, 2013  
Plant Health Committee Meeting Minutes for February 12 and March 5, 2013

Procedure

CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00200

Condition Reports

|                |                |                |
|----------------|----------------|----------------|
| CR-2010-001181 | CR-2012-005258 | CR-2013-001020 |
| CR-2011-001487 | CR-2012-007138 | CR-2013-002120 |
| CR-2011-007085 | CR-2012-008912 |                |
| CR-2011-007184 | CR-2012-009427 |                |

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

Document

LR-SWS-PROGPLAN, Service Water System Program, Revision 3

Procedures

CNG-OP-4.01-1000, Integrated Risk Management, Revision 01200

MMP-GM055-00001, Underwater Inspection/Cleaning of Mechanical Equipment, Structures in the Screen House and Discharge Canal, Revision 00100

OPG-PROTECTED EQUIPMENT, Operations Protected Equipment Program, Revision 00500

Drawing

33013-1237, Auxiliary Feedwater P&ID, Revision 65

Condition Reports

CR-2013-001372  
CR-2013-001412  
CR-2013-001709

Work Order

WO C91812615

**Section 1R15: Operability Determinations and Functionality Assessments**

Procedures

EP-3-P-0132, Fire Protection Appendix R Conformance Verifications, Revision 00800

FPS-16, Bulk Storage of Combustible Materials and Transient Fire Loads, Revision 01700

Condition Reports

|                |                |                |
|----------------|----------------|----------------|
| CR-2011-006059 | CR-2013-000802 | CR-2013-000825 |
| CR-2013-000753 | CR-2013-000807 | CR-2013-000826 |
| CR-2013-000770 | CR-2013-000819 | CR-2013-000827 |

Attachment



|                |                |                |
|----------------|----------------|----------------|
| CR-2013-000829 | CR-2013-001161 | CR-2013-001553 |
| CR-2013-000913 | CR-2013-001393 | CR-2013-001714 |
| CR-2013-001070 | CR-2013-001473 |                |
| CR-2013-001019 | CR-2013-001507 |                |

**Miscellaneous**

Apparent Cause Evaluation for 'B' EDG Low L/O Pressure, March 12, 2013  
 DA-ME-98-004, Combustible Loading Analysis, Revision 10  
 EPM-FPPR, Ginna Station Fire Protection Program Report Volumes 1, 2 and 3, Revision 008.0  
 Functionality Assessment for Auxiliary Building Block Walls, Revisions 0, 1, 2,  
 March 4 and 12, 2013  
 Operability Determination for Extending the Delay Time in the 'B' EDG L/O Pressure Switch  
 to 40 Seconds, February 3, 2013  
 Operational Decision-Making Checklist for 'B' EDG Trip, February 1, 2013  
 Operational Decision-Making Checklist for 'B' EDG Restart after Low L/O Trip, February 2, 2013  
 Operational Decision-Making Checklist for 'B' EDG Fuel Oil Pressure Low, February 4, 2013  
 Operational Decision-Making Checklist for 'B' EDG Delay in L/O Pressure at Switches,  
 March 1, 2013  
 Operational Decision-Making Checklist for 'B' MFP SW Strainer Leak, February 15, 2013  
 PRAER-G1-2013-001, Probability Risk Assessment Evaluation Request, Revision 0

**Section 1R18: Plant Modifications****Procedures**

CNG-CM-1.01-1004, Temporary Plant Configuration Change Process, Revision 00201  
 CPI-INSTR-64B, Calibration of Emergency Diesel Generator 'B' Instrumentation, Revision 2200  
 STP-O-31H, Charging Pump A Drive Replacement Operational Test In Service Coupled Run,  
 Revision 00000

**Condition Reports**

|                |                |                |
|----------------|----------------|----------------|
| CR-2013-000793 | CR-2013-001070 | CR-2013-001525 |
| CR-2013-000802 | CR-2013-001177 | CR-2013-001673 |
| CR-2013-000913 | CR-2013-001393 |                |
| CR-2013-001019 | CR-2013-001444 |                |

**Work Order**

WO C91580104

**Miscellaneous**

ECP-11-000789, ESR-2009-0141 ESR (000) – CVCS Charging Pump Motor Variable Frequency  
 Drives Electrical Tie-ins Portion, Revision 0000  
 ECP-13-000099, Temporary Set Point Change of 'B' EDG Low L/O Pressure Trip Time Delay,  
 February 3, 2013  
 Operability Determination for Extending the Delay Time in the 'B' EDG L/O Pressure Switch to  
 40 Seconds on February 3, 2013

**Section 1R19: Post-Maintenance Testing****Procedures**

CME-50-02-52/PHBG, Westinghouse, 480-Volt Air Circuit Breaker, Type DB-50 Pressurizer

Attachment

Heater Backup Group Bus 16, Position 16A Maintenance for 52/PHBG, Revision 006  
 STP-O-2.7.2-COMP-A, Loop 'A' Service Water Comprehensive Pump Test, Revision 00500  
 STP-O-12.2, Emergency Diesel Generator 'B', Revision 01102  
 STP-O-12.2LU, Emergency Diesel Generator 'B', Revision 00000  
 STP-O-12.6-COMP-B, Diesel Generator Fuel Oil Transfer Pump 'B' Comprehensive Test,  
 Revision 00200  
 STP-O-16-COMP-B, Auxiliary Feedwater Pump 'B' – Comprehensive Test, Revision 00602  
 STP-O-16QT, Auxiliary Feedwater Turbine Pump – Quarterly, Revision 00800  
 STP-O-31A, Charging Pump 'A' Inservice Test, Revision 00700  
 STP-O-36QC, Standby Auxiliary Feedwater Pump 'C' – Quarterly, Revision 00401  
 STP-O-R-2.3B, Diesel Generator 'B' Trip Testing, Revision 00101

#### Condition Reports

|                |                |                |
|----------------|----------------|----------------|
| CR-2013-000447 | CR-2013-000916 | CR-2013-001378 |
| CR-2013-000793 | CR-2013-000940 | CR-2013-001435 |
| CR-2013-000872 | CR-2013-001165 |                |
| CR-2013-000914 | CR-2013-001314 |                |

#### Work Orders

WO C91324031  
 WO C91776759  
 WO C91797350  
 WO C92154403  
 WO C92198767

### **Section 1R22: Surveillance Testing**

#### Procedures

CME-38-12-STABATTMON, Station Battery Monthly Performance Checks, Revision 00901  
 M-38, Equalizing Charge for Station Battery Systems 1A and 1B Battery, Revision 04202  
 STP-E-11.2, Security 60 Cell Battery Bank, Revision 00103  
 STP-E-12.3, Security Emergency Diesel Test, Revision 00501  
 STP-E-12.5, Technical Support Center Diesel Test, Revision 00200  
 STP-E-13.3, Fire Pump Electrical Equipment Surveillance, Revision 00200  
 STP-I-9.1.17, Undervoltage Protection – 480 Volt Safeguard Bus 17, Revision 00500  
 STP-O-13.4, Diesel-Driven Portable Pump Test, Revision 00208  
 STP-O-13.11.2B, Z21 Zone Smoke Detection Testing (Diesel Generator 'B' Vault),  
 Revision 00001  
 STP-O-16.4A, AFW Pump 'A' Bypass AOV Leak Test, Revision 00101  
 STP-O-16Q.T, Auxiliary Feedwater Turbine Pump – Quarterly, Revision  
 STP-O-36QC, Standby Auxiliary Feedwater Pump 'C' – Quarterly, Revision 00401

#### Drawing

33013-1237, Auxiliary Feedwater P&ID, Revision 64

#### Condition Reports

|                |                |                |
|----------------|----------------|----------------|
| CR-2012-003765 | CR-2013-000983 | CR-2013-001111 |
| CR-2013-000500 | CR-2013-000997 | CR-2013-001112 |
| CR-2013-000922 | CR-2013-001033 | CR-2013-001497 |

Work Orders

WO C91749289  
WO C91755645  
WO C91776749  
WO C91776769  
WO C91785315  
WO C91797547

**Section 1EP6: Drill Evaluation**

Condition Reports

|                |                |                |
|----------------|----------------|----------------|
| CR-2013-001839 | CR-2013-001865 | CR-2013-001872 |
| CR-2013-001860 | CR-2013-001869 | CR-2013-001963 |
| CR-2013-001861 | CR-2013-001870 |                |
| CR-2013-001863 | CR-2013-001871 |                |

Miscellaneous

GIN-EP-ID-13-02, Ginna Station 1<sup>st</sup> Quarter 2013 ERO Integrated Drill, March 14, 2013

**Section 2RS1: Radiological Hazard Assessment and Exposure Controls**

Procedures

A-1.1, Access Control to Locked High Radiation and Very High Radiation Areas, Revision 04802  
A-1.12, Ginna Dosimetry Quality Assurance Program, Revision 00000  
CNG-RP-1.01-1000, On-Line Dose Performance Threshold Criteria, Revision 00000  
CNG-RP-1.01-2001, Dosimetry, Revision 00000  
CNG0-RP-1.01-2002, Effective Dose Equivalent – External, Revision 00000  
CNG-RP-1.01-3001, Alpha Monitoring and Control, Revision 00100  
IP-RPP-6, Department ALARA Advocate, Revision 00000  
ND-ALA, ALARA, Revision 00800  
RP-1006, Radiation Protection NRC Performance Indicator, Revision 00100  
RP-ALA-PLAN/RWP-PREP, Radiation Work Permit, Revision 00500  
RP-ALA-REVIEW, ALARA Job Review, Revision 01100  
RP-ALPHA-RAD-MON, Alpha Radiation Monitoring, Revision 00200  
RP-SUR-POST, Radiological Postings and Boundary Control, Revision 01400  
RP-SUR-REL, Unconditional Release of Material From Restricted Areas, Revision 01900  
RP-SUR-SOURCE, Radioactive Source Inventory and Control, Revision 01401

Condition Reports

CR-2012-001940  
CR-2012-004066  
CR-2012-007949  
CR-2012-007987  
CR-2012-008003  
CR-2013-001761

RWP/ALARA Job Reviews

RWP 12-5612, Scaffold Work Activities  
RWP-12-5618/12-9618, Refueling Activities

Miscellaneous

2012 ALARA Outage Report  
Air Sample Data for Turbine Building Floor Grinding  
ALARA Committee Meeting Handouts, March 13, 2013  
ALARA Committee Meeting Minutes, Meetings from October 1, 2012, through March 14, 2013  
Engineering Department Training Industry Experience Handouts on Unplanned Exposures  
Ginna Alpha Characterization, dated March 8, 2013  
Ginna 5-Year ALARA Plan, 2013 through 2017  
Quality and Performance Assessment Report for September 1 through December 31, 2012  
Radioactive Source Inventory and Leak Test Record for February 4, 2013  
RG-74, Implement Effective Dose Equivalent – External  
RPG-72, RP Guideline Alpha Characterization  
RPSSG-21, Dosimetry Report Guideline

**Section 2RS2: Occupational ALARA Planning and Controls**

Procedures

A-1.1, Access Control to Locked High Radiation and Very High Radiation Areas, Revision 04802  
A-1.12, Ginna Dosimetry Quality Assurance Program, Revision 00000  
CNG-RP-1.01-1000, On-Line Dose Performance Threshold Criteria, Revision 00000  
CNG-RP-1.01-2001, Dosimetry, Revision 00000  
CNG0-RP-1.01-2002, Effective Dose Equivalent – External, Revision 00000  
CNG-RP-1.01-3001, Alpha Monitoring and Control, Revision 00100  
IP-RPP-6, Department ALARA Advocate, Revision 00000  
ND-ALA, ALARA, Revision 00800  
RP-1006, Radiation Protection NRC Performance Indicator, Revision 00100  
RP-ALA-PLAN/RWP-PREP, Radiation Work Permit, Revision 00500  
RP-ALA-REVIEW, ALARA Job Review, Revision 01100  
RP-ALPHA-RAD-MON, Alpha Radiation Monitoring, Revision 00200  
RP-SUR-POST, Radiological Postings and Boundary Control, Revision 01400  
RP-SUR-REL, Unconditional Release of Material From Restricted Areas, Revision 01900  
RP-SUR-SOURCE, Radioactive Source Inventory and Control, Revision 01401

Condition Reports

CR-2012-001940  
CR-2012-004066  
CR-2012-007949  
CR-2012-007987  
CR-2012-008003  
CR-2013-001761

RWP/ALARA Job Reviews

RWP 12-5612, Scaffold Work Activities  
RWP-12-5618/12-9618, Refueling Activities

Miscellaneous

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Engineering Department Training Industry Experience Handouts on Unplanned Exposures  
Ginna Alpha Characterization, dated March 8, 2013  
Ginna 5-Year ALARA Plan, 2013 through 2017  
Quality and Performance Assessment Report for September 1 through December 31, 2012  
Radioactive Source Inventory and Leak Test Record for February 4, 2013  
RG-74, Implement Effective Dose Equivalent – External  
RPG-72, RP Guideline Alpha Characterization  
RPSSG-21, Dosimetry Report Guideline

**Section 2RS4: Occupational Dose Assessment**

Condition Reports

CR-2012-001940  
CR-2012-004066  
CR-2012-007949  
CR-2012-007987  
CR-2012-008003  
CR-2013-001761

**4OA1: Performance Indicator Verification**

Document

NEI-99-02, Regulatory Assessment Performance Indicator Guideline, Revision 6

**LIST OF ACRONYMS**

|       |   |
|-------|---|
| ADAMS | Agencywide Documents Access and Management System |
| AFW   | auxiliary feedwater                               |
| ALARA | as low as reasonably achievable                   |
| AOV   | air-operated valve                                |
| CAP   | corrective action program                         |
| CCW   | component cooling water                           |
| CFR   | Code of Federal Regulations                       |
| CR    | condition report                                  |
| CVCS  | chemical and volume control system                |
| DC    | direct current                                    |
| ECP   | engineering change package                        |
| EDG   | emergency diesel generator                        |
| HX    | heat exchanger                                    |
| IMC   | Inspection Manual Chapter                         |
| IST   | in-service test                                   |
| JPM   | job performance measure                           |
| L/O   | lube oil  |
| MFW   | main feedwater                                    |
| NCV   | non-cited violation                               |
| NEI   | Nuclear Energy Institute                          |
| NRC   | Nuclear Regulatory Commission                     |
| OOS   | out of service                                    |
| P&ID  | pipng and instrument drawing                      |
| PI    | performance indicator                             |
| RCA   | radiological controlled area                      |
| rem   | roentgen equivalent man                           |
| RG    | regulatory guide                                  |
| RP    | radiation protection                              |
| RWP   | radiation work permit                             |
| SDP   | significance determination process                |
| SG    | steam generator                                   |
| SSC   | structure, system, and component                  |
| SW    | service water                                     |
| TS    | technical specification                           |
| TSC   | technical support center                          |
| UFSAR | Updated Final Safety Analysis Report              |
| WO    | work order  |