



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

January 09, 2024

Carlos Martinez, Site Manager
Vallecitos Nuclear Center
GE Hitachi Nuclear Energy
6705 Vallecitos Road
Sunol, CA 94586-8524

SUBJECT: GE HITACHI NUCLEAR ENERGY - NRC INSPECTION REPORT
050-00018/2023-002, 050-00070/2023-002, AND 050-00183/2023-002

Dear Carlos Martinez:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) inspection conducted on October 16 - November 29, 2023, at your Vallecitos Nuclear Center in Sunol, California. The inspection covered the following shutdown reactors under the subject licenses: Vallecitos Boiling Water Reactor (VBWR); General Electric Test Reactor (GETR); and Empire State Atomic Development Associates Incorporated Vallecitos Experimental Superheat Reactor (EVESR). The NRC inspectors discussed the results of this inspection with you and members of your staff on November 29, 2023. The inspection results are documented in the enclosure to this letter.

During this inspection, the NRC inspectors examined activities conducted under your licenses as they relate to public health and safety, the environment, and to confirm compliance with the Commission's rules and regulations, as well as with the conditions of your licenses. Within these areas, the inspection consisted of the examination of selected procedures and representative records, tour of the reactors and supporting equipment, independent radiation surveys, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation involves your failure to comply with the applicable requirements of the Department of Transportation regulations as required by 10 CFR 71.5(a), specifically the 49 CFR 172.203(d)(3) requirement to list the maximum activity of radioactive contents contained in each package during transport. Since you placed the deficiency into your corrective action program, the safety significance of the issue was determined to be low, and because the violation was non-repetitive and not willful, this violation is being treated as a Non-Cited Violation (NCV), consistent with Section 2.3.2.a of the NRC's Enforcement Policy. The current Enforcement Policy is included on the NRC's Website at (<https://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>). This NCV is described in the subject inspection report.

You are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. However, if you contest the violation or significance of the NCV, 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: (1) the Regional Administrator, Region IV; and (2) the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC's Website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

If you have any questions regarding this inspection, please contact Troy Johnson at 817-200-1596, or the undersigned at 817-200-1249.

Sincerely,



Signed by Warnick, Gregory
on 01/09/24

Gregory G. Warnick, Chief
Decommissioning, ISFSI, and Operating
Reactor Branch
Division of Radiological Safety and Security

Docket Nos. 050-00018, 050-00070;
050-00183
License Nos.: DPR-1, TR-1, DR-10

Enclosure:
Inspection Report 050-00018/2023-002;
050-00070/2023-002; 050-00183/2023-002

GE HITACHI NUCLEAR ENERGY - NRC INSPECTION REPORT 050-00018/2023-002;
05000070/2023002; 05000183/2023-002 - DATED JANUARY 09, 2024

DISTRIBUTION:

JMonninger, ORA
JLara, ORA
TBloomer, DRSS
GMiller, DORS
MLaFronzo, DRSS
BTharakan, DRSS
RAlexander, ORA
DCylkowski, ORA
VDricks, ORA
SAnderson, NMSS
JParrott, NMSS
LWilkins, OCA
AMoreno, RIV/OCA
ROrlikowski, RIV/OEDO
R4-DRSS-DIOR-DECOM

GE Vallecitos ListServ
GE Test Reactor ListServ

DOCUMENT NAME: GE HITACHI NUCLEAR ENERGY - NRC INSPECTION REPORT 050-
00018/2023-002; 050-00070/2023-002; 050-00183/2023-002

ADAMS ACCESSION NUMBER: **ML23362A083**

→ SUNSI Review By: MTJ	ADAMS: → Yes <input type="checkbox"/> No	<input type="checkbox"/> Sensitive → Non-Sensitive	<input type="checkbox"/> Non-Publicly Available → Publicly Available	Keyword NRC-002
OFFICE	DRSS/DIOR	DRSS/DIOR	DRSS	NMSS/RDB
NAME	MTJohnson	LaFranzo	BKTharakan	JParrott
SIGNATURE	/RA/	/RA/	/RA/	/RA/
DATE	12/28/23	01/03/24	12/28/23	01/02/24
OFFICE	C:REFS/ETRB1	C:DIOR		
NAME	MSRome	GGWarnick		
SIGNATURE	/RA/	/RA/		
DATE	01/08/24	01/09/24		

OFFICIAL RECORD COPY

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

Docket Nos.: 050-00018; 050-00070; and 050-00183

License Nos.: DPR-1; TR-1; and DR-10

Report Nos.: 050-00018/2023-002; 050-00070/2023-002; and 050-00183/2023-002

Licensee: GE Hitachi Nuclear Energy

Facility: Vallecitos Boiling Water Reactor (VBWR)
GE Test Reactor (GETR)
ESADA Vallecitos Experimental Superheat Reactor (EVESR)

Location: 6705 Vallecitos Road
Sunol, California

Inspection Dates: October 16 - November 29, 2023

Inspectors: M. Troy Johnson, Senior Health Physicist
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Michael R LaFranzo, Senior Health Physicist
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Binesh K Tharakan, CHP, Technical Assistant
Division of Radiological Safety and Security

Accompanied By: Christian R. Dennes, Health Physicist
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Gregory G. Warnick, Branch Chief
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Approved By: Gregory G. Warnick, Branch Chief
Decommissioning, ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Enclosure

EXECUTIVE SUMMARY

GE Hitachi Nuclear Energy

NRC Inspection Report 050-00018/2023-002; 050-00070/2023-002; and 050-00183/2023-002

This U.S. Nuclear Regulatory Commission (NRC) inspection was a routine, announced inspection of licensed activities being conducted at the three permanently defueled reactors at the Vallecitos Nuclear Center. In summary, the inspectors identified one Severity Level IV violation. Other than the one identified violation, the licensee was conducting activities in accordance with site procedures, license requirements, and applicable NRC regulations.

Decommissioning Performance and Status Review at Permanently Shutdown Reactors and Class III Research and Test Reactors

- The licensee conducted decommissioning activities and Class III research and test reactors activities in accordance with license and regulatory requirements. The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the site. Staffing level and qualification met minimum requirements, and financial assurance was adequate. (Section 1.2)

Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors

- The licensee implemented its safety review program in accordance with site procedures and regulatory requirements. (Section 2.2)

Problem Identification and Resolution at Permanently Shutdown Reactors

- The inspectors concluded that the licensee was adequately implementing its corrective action program in accordance with regulatory requirements. (Section 3.2)

Fire Protection Program at Permanently Shutdown Reactors

- The licensee continued to effectively implement its fire protection program. The inspectors reviewed the fire hazard analysis, fire brigade, pre-fire plans and procedures for firefighting and determined that they were adequate. The licensee continued to effectively implement its fire system maintenance and inspection in accordance with procedures and regulatory requirements. (Section 4.2)

Solid Radioactive Waste Management and Transportation of Radioactive Materials

- The NRC determined that one Severity Level IV non-cited violation of 10 CFR 71.5(a)(vi), specifically 49 CFR 172.203(d)(3), occurred when the licensee did not accurately include the maximum activity of the radioactive contents contained in the packages shipped on December 6, 2022. (Section 5.2)

Occupational Radiation Exposure at Permanently Shutdown Reactors

- The inspectors determined the licensee ensured adequate protection of worker health and safety from exposure to radiation or radioactive material in accordance with regulations. (Section 6.2)

Radioactive Waste Treatment, and Effluent and Environmental Monitoring

- The inspectors did not identify any significant deficiencies in the licensee's environmental gamma or air sampling program during the inspection. (Section 7.2)

Report Details

Summary of Plant Status

The GE Hitachi Nuclear Energy Americas, LLC (GEH or Licensee) maintains three shutdown reactors: Vallecitos Boiling Water Reactor (VBWR); General Electric Test Reactor (GETR); and Empire State Atomic Development Associates Incorporated Vallecitos Experimental Superheat Reactor (EVESR). GETR and EVESR are in a possession-only, safe storage (SAFSTOR) condition, with no fuel remaining in the reactors or spent fuel pools. VBWR is actively in decommissioning. At the time of the inspection, VBWR was in Inspection Manual Chapter 2561, Category 3 decommissioning.

Since the last inspection, GEH removed additional material within the VBWR to prepare for the removal of the VBWR reactor vessel. During the inspection, GEH's contractor NorthStar Group, removed the VBWR reactor vessel and shipped it to Waste Control Specialists LLC in Andrews County, Texas, for disposal.

1 Decommissioning Performance and Status Review at Permanently Shutdown Reactors (71801) and Class III Research and Test Reactors (69002)

1.1 Inspection Scope

The inspectors observed site activities, reviewed materials, and interviewed site personnel:

- To evaluate the status of decommissioning and verify whether the licensee was conducting decommissioning activities in accordance with regulatory and license requirements.
- To maintain awareness of work activities to assess licensee control and conduct of decommissioning.
- To identify changes that potentially impact decommissioning financial assurance.
- To determine if activities at Class III research and test reactors were conducted safely and in accordance with regulatory requirements and licensee commitments, since the last inspection.

1.2 Observations and Findings

a. Status of Decommissioning

The inspectors attended the pre-job brief for the removal of the VBWR vessel and noted the brief to be thorough with a focus on radiation protection and personnel safety. Additionally, inspectors discussed with licensee and contractor staff the status of decommissioning activities and noted them to be on schedule commensurate with challenges encountered.

b. Decommissioning Operations

The inspectors performed plant tours of VBWR, EVESR, and GETR including radiologically controlled areas and containments to assess field conditions and decommissioning activities. Also, the inspectors evaluated the material condition of

structures, systems, components, housekeeping, system configurations, worker level of knowledge, as well as procedure use and adherence. The inspectors observed the removal of the VBWR reactor vessel and noted engineering controls in the work plans were appropriately implemented to protect the public and the environment.

The inspectors evaluated whether the licensee's organization and staffing were appropriately adjusted for changes in the status of decommissioning. The inspectors determined the licensee staffing met the minimum requirement to ensure reasonable assurance of safety and security in accordance with regulatory requirements and the license.

c. Decommissioning and Class III Research and Test Reactors Staffing and Training

The inspectors reviewed select radiation protection and transportation staff records to determine if they were trained in accordance with license and regulatory requirements and found that personnel qualifications and training were current.

d. Decommissioning Planning, Scheduling, and Cost Assessment

The inspectors reviewed the licensee's decommissioning strategy, schedule, and estimated costs to determine whether the licensee had appropriately made any changes to decommissioning schedule major milestones and associated costs in accordance with Title 10 *Code of Federal Regulations* (CFR) 50.82(a)(7) and noted that no significant changes had been made.

The inspectors discussed with the facility licensing manager the activities that occurred since the last required decommissioning trust fund report submittal. The current major focus is the decommissioning and termination of the VBWR license.

The inspectors reviewed the overall financial status of decommissioning and conducted an interview with the facility licensing manager with the assistance of financial assurance experts from the NRC's program office to maintain awareness of any changes to the financial allocation control process. The inspectors determined that the site's financial status regarding decommissioning operations was adequate.

e. Problem Identification and Resolution

The inspectors reviewed a sample of problems documented in the corrective action program and verified that the licensee had identified and implemented appropriate corrective actions.

1.3 Conclusions

The licensee conducted decommissioning activities and Class III research and test reactor activities in accordance with license and regulatory requirements. The inspectors determined that the licensee was adequately controlling decommissioning activities and radiological work areas at the site. Staffing level and qualification met minimum requirements, and financial assurance was adequate. No findings of significance were identified.

2 Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors (37801)

2.1 Inspection Scope

The inspectors observed site activities, reviewed materials, and interviewed site personnel to verify the licensee's safety review process was in accordance with the requirements of 10 CFR 50.59, "Changes, tests, and experiments." The inspection provides assurance that required license amendments have been obtained.

2.2 Observations and Findings

a. Decommissioning Safety Review Program

The inspectors reviewed procedure VSS 2.0, "Change Authorization," revision 24, and determined that the procedure was adequate to identify changes to technical specifications resulting from proposed changes, tests, experiments, and modifications as applicable. Notably, VSS 2.0 included other evaluations in the Change Authorization (CA) process in addition to the screening required in 10 CFR 50.59 to include, for example, screening for compliance with 10 CFR 50.82(a)(6).

It was noted by the inspectors through document review and interviews that cognizant licensee personnel were knowledgeable and appeared to be appropriately trained.

b. Design Changes, Tests, Experiments, and Modifications

Three CA screenings had been completed since the last inspection. These were CA 2023-01, "VBWR Vessel Pipe Cutting and Welding in Preparation for Vessel Removal," CA 2023-02, "Mobilize and Prep for VBWR Vessel Removal," and CA 2023-03, "VBWR Vessel Removal-Final."

The inspectors assessed the details of each CA and found the judgments were appropriate relative to 10 CFR 50.59. Additionally, the inspectors reviewed a sample of work activities for utilization of the 10 CFR 50.59 screening process and found the associated judgments, if needed, appropriate.

The inspectors noted on the review of CA 2023-03, while not specifically a 10 CFR 50.59 screening, that section 2, part 2c, entitled, "Does the proposed activity result in significant environmental impacts not previously reviewed," was marked "no". This screening was for the requirements in 10 CFR 50.82(a)(6) which states, in part, (a) licensees shall not perform any decommissioning activities, as defined in § 50.2, that (ii) result in significant environmental impacts not previously reviewed.

The VBWR is a California State Historic Preservation Officer recommended landmark. According to the National Environmental Policy Act, potential adverse effects on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, and the potential for loss or destruction of significant scientific, cultural, or historical resources should be evaluated for the significance of their environmental impact.

The inspectors reviewed the licensee's evaluation of the environmental significance

since removing the VBWR reactor vessel required cutting a hole in the top of the recommended landmark. The licensee evaluated the environmental impact as not significant as the CA included plans to restore the condition of the hole and have the restoration evaluated by a historical, as well as a structural, architect within 60 days.

No licensee safety review committee meetings were performed during the time of the inspection.

2.3 Conclusions

The licensee implemented its safety review program in accordance with site procedures and regulatory requirements. No findings of significance were identified.

3 **Problem Identification and Resolution Action at Permanently Shutdown Reactors (40801)**

3.1 Inspection Scope

The inspectors reviewed the licensee's corrective action program related to the oversight of the three shutdown reactors:

- To evaluate the effectiveness of licensee controls in identifying, resolving, and correcting issues in accordance with the NRC approved Quality Assurance (QA) Program and 10 CFR Part 50, Appendix B, Criterion XVI.
- To determine whether the audits and assessments were conducted in accordance with the requirements of the NRC-approved QA program and 10 CFR Part 50, Appendix B.
- To confirm that the licensee has established, implemented, and performed management reviews of the safety conscious work environment.

3.2 Observations and Findings

At the time of the inspection, the licensee was implementing its corrective action program under procedures CP-16-108, "Corrective Action Program," revision 15, WI-20-106-06, "Corrective Action Program Qualifications," revision 8.0, and associated implementing procedures. These procedures apply to all the GEH nuclear sites including the Vallecitos Nuclear Center (VNC).

The inspectors reviewed the licensee's implementation of these procedures and a list of corrective action condition reports (CRs) generated at VNC between November 2022 and the time of the onsite inspection. The following CRs associated with activities at the shutdown reactors were reviewed to verify adherence to the corrective action procedures – CRs 40954, 42133, 42738, 43265, and 43904.

The inspectors also reviewed the licensee's 2021 nuclear safety culture assessment report and a nuclear quality audit report of the licensee's 10 CFR Part 21 and corrective action program. The inspectors determined that the licensee was appropriately documenting the issues identified by these reports in the corrective action program.

3.3 Conclusions

The inspectors concluded that the licensee was adequately implementing its corrective action program in accordance with regulatory requirements. No findings of significance were identified.

4 **Fire Protection Program at Permanently Shutdown Reactors (64704)**

4.1 Inspection Scope

The inspectors observed site facilities, reviewed materials, and interviewed site personnel:

- To assess whether the licensee has an effective decommissioning fire protection program that was maintained and implemented to address the potential for fires that could result in the release or spread of radioactive materials.
- To evaluate whether the licensee has appropriate procedures to prevent or minimize the release of radioactive materials resulting from fires involving contaminated plant structures, systems, and components or radioactive waste products.
- To verify the decommissioning fire protection program ensures adequate protection from the fire-induced release of radioactive material from contaminated plant areas and combustible waste products.

4.2 Observations and Findings

a. Fire Protection Program

The inspectors walked down the VBWR, GETR, and EVESR and evaluated potential fire areas to verify fire hazards were being identified, examined the physical plant configuration, and evaluated if physical fire protection features were adequate from an emergency preparedness perspective. The inspectors concluded that the licensee was adequately implementing those focus areas.

The inspectors reviewed the fire protection program to assure the effectiveness of fire protection for facilities, systems, and equipment that could result in a radiological hazard, considering the plant conditions and activities during decommissioning in accordance with 10 CFR 50.48(f)(3). Additionally, the inspectors reviewed the licensee's fire protection program for compliance with applicable requirements. The inspectors concluded that the licensee was adequately implementing their procedures and meeting regulatory and license requirements.

b. Fire Protection Systems and Equipment

The inspectors also observed the fire extinguishers located throughout the facility and reviewed the fire systems maintenance program as defined by procedure No. 1.16, "Fire System Maintenance and Inspection," revision 5. Fire extinguishers demonstrated to have an adequate annual maintenance tag, were not damaged, and had appropriate pressure gauge readings. The inspectors concluded that the licensee was adequately implementing the fire system maintenance and inspection program in accordance with their procedure and were meeting regulatory and license requirements.

c. Control of Combustible Materials and Ignition Sources

To minimize the occurrence of fire, the majority of flammable materials have been removed from all three reactor locations as observed by the inspectors during walk downs. Hot work when required was monitored by fire watch and controlled by licensee procedure.

d. Organization

The inspectors interviewed the emergency planning drill coordinator regarding the performance of drills and schedule. The site does not maintain a local fire brigade but does perform drills with local law enforcement and fire protection organizations as required. No drills were in progress to observe at the time of the inspection.

e. Problem Identification and Resolution

There were no corrective action entries relating to fire protection at the time of the inspection.

4.3 Conclusions

The licensee continued to effectively implement its fire protection program. The inspectors reviewed the fire hazard analysis, fire brigade, pre-fire plans and procedures for firefighting and determined that they were adequate. The licensee continued to effectively implement its fire system maintenance and inspection in accordance with procedures and regulatory requirements. No findings of significance were identified.

5 Solid Radioactive Waste Management and Transportation of Radioactive Materials (IP 86750)

5.1 Inspection Scope

The inspectors performed interviews with licensee staff and reviewed documents associated with a shipment of licensed material to verify the effectiveness of the licensee's programs for processing, handling, storage, and transportation of radioactive material.

5.2 Observations and Findings

a. Transportation of Radioactive Materials

During the inspection, the licensee packaged and shipped radioactive waste for ultimate disposal off site. The inspectors interviewed the licensee's shippers who prepared the shipping papers and found they had adequate knowledge to ensure documentation was prepared as required by NRC and U.S. Department of Transportation (DOT) regulations. The inspectors reviewed the licensee's shipping papers and found the information was appropriate for the shipment. The inspectors also verified that the emergency contact, an external contractor for this shipment, was available while shipment was in transit and had adequate knowledge to assist first responders and contact the licensee, as needed. The inspectors also observed the licensee instruct the driver of the shipment and ensure that placards were appropriately placed on the vehicle.

b. Problem Identification and Resolution

During the review of CR 43265, which documented errors in the concentrations of radioactive material shipped to Waste Control Specialists (WCS) in Texas, the inspectors identified one Severity Level IV non-cited violation of 10 CFR 71.5(a)(vi), for the failure to comply with the applicable requirements of the DOT regulations in 49 CFR 172.203(d)(3).

In December 2022, VNC sent several containers of low-level radioactive waste in three shipments to WCS. The shipments included manifest numbers TSDf-9859-0001, TSDf-9859-0002, and TSDf-MULTI-0001. The waste consisted of lead and concrete bricks removed from the VBWR containment.

On August 3, 2023, WCS reported to VNC that the WCS In-Situ Object Counting System (ISOCS) found Cs-137 concentrations exceeded the waste profile limit on seven VNC waste containers identified as 10258, 12986, 10227, 10240, 10259, 10189, and 10246, included on manifest TSDf-9859-0002, which was shipped on December 6, 2022. In fact, one of the containers (12986) had Cs-137 concentrations almost 50 times higher than originally manifested, 825 vs 17.1 picocuries per gram. The licensee determined the error was due to an inadequate waste characterization profile. The waste profile for the bricks was created using VNC characterization data. The data was reviewed and entered in to the WCS system by a broker who was contracted by VNC to assist with shipment logistics and development of manifests. The radionuclide distribution used for creation of the waste profile was based on a qualitative radionuclide distribution from smears internal to the reactor vessel instead of the bricks themselves. As a result, the derived source term was high in activation products and low in fission products. Specifically, it was 80% Ni-63 and 20% Cs-137. By comparison, the smears of the bricks themselves (taken before and after development of the manifest) were 20% Ni-63 and 80% Cs-137. Site personnel, contractors, and decommissioning staff discussed this discrepancy; however, they decided to proceed with the existing waste profile assuming it was more conservative given the proximity of the samples to the VBWR. Additionally, no volumetric samples were taken to characterize the bricks, no dose-to-curie analysis was performed to measure dose rate from the package to back calculate the curie content, nor was the use of industry standard radioactive waste management software used to generate the waste profile and ship the material.

10 CFR Part 71.5(a), states, in part, that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations.

The DOT regulations in 49 CFR 172.203(d)(3), state, in part, that the description for a shipment of a Class 7 (radioactive) material must include the following additional entries as appropriate: (3) The maximum activity of the radioactive contents contained in each package during transport.

Contrary to the above, on December 6, 2022, the licensee failed to follow 49 CFR 172.203(d)(3) and ensure that the description for a shipment of a Class 7 (radioactive) material included the maximum activity of the radioactive contents contained in each package during transport. Specifically, the Cs-137 concentrations of the radioactive

contents listed on manifest TSD-9859-0002 were approximately 50 times less than what was transported.

Using Example 6.8.c.3(a) of the NRC Enforcement Policy dated January 13, 2023, for guidance, the NRC determined this to be a Severity Level IV non-cited violation because of the very low amounts of radioactive material shipped (total quantity in the millicurie range), there were no changes in the waste classification (it remained Class A waste), and the corrective actions taken by the licensee to correct the record and identify the causes of the error.

5.3 Conclusions

The NRC determined that one Severity Level IV non-cited violation of 10 CFR 71.5(a), specifically 49 CFR 172.203(d)(3), occurred when the licensee did not accurately include the maximum activity of the radioactive contents contained in the packages shipped on December 6, 2022.

6 Occupational Radiation Exposure at Permanently Shutdown Reactors (83750)

6.1 Inspection Scope

To independently gather sufficient information to ensure adequate protection of worker health and safety from exposure to radiation or radioactive material at permanently shutdown reactors.

6.2 Observations and Findings

a. Organization, Changes, and Training

No major changes since the last inspection in organization, personnel, facilities, radiation instrumentation, equipment, programs, or procedures that may affect occupational radiation protection were noted.

b. Radiological Work Planning and Observation

The inspectors verified the licensee was identifying the magnitude and extent of radiological hazards and was adequately assessing those hazards and validated adequate implementation of radiological controls.

The inspectors verified that the licensee's planning was commensurate with the risk of the work and identified appropriate dose reduction techniques, defined reasonable dose goals, and identified verification points.

The inspectors performed tours of the radiologically controlled areas to verify appropriate radiological postings and evaluated material conditions.

No planned special exposures were planned for or had occurred at the time of the inspection.

6.3 Conclusions

The inspectors determined the licensee ensured adequate protection of worker health and safety from exposure to radiation or radioactive material in accordance with regulations. No findings of significance were identified.

7 Radioactive Waste Treatment, and Effluent and Environmental Monitoring (84750)

7.1 Inspection Scope

The inspectors reviewed the licensee's environmental gamma and air sampling program:

- To ensure that the radioactive effluent sampling and analysis requirements were satisfied so that discharges of radioactive materials are adequately quantified and evaluated from all established release points and releases from any unmonitored and uncontrolled discharged pathways are precluded.
- To ensure that radiological environmental monitoring programs were effectively implemented consistent with technical specifications and the offsite dose calculation manual.

7.2 Observations and Findings

a. Radiological Environmental Monitoring Program

The inspectors toured the locations where gamma environmental monitors were located, and each was located in the designated location as required by procedure and in a condition where its detection capabilities were not compromised. The inspectors also reviewed the licensee's gamma environmental reports for 2022 and did not find any concerns.

b. Radioactive Gaseous and Liquid Effluent Treatment

The inspectors reviewed the licensee's four environmental air sample locations. Three of the four samplers were located in small shelters where the intake and exhaust of the samplers were within the shelters. Each shelter was approximately 4'x4' at its base and 8' tall with two louvers at the bottom and a rotating louver at the top of the shelter. A single door allows access, and the shelter was secured from unauthorized access. Each filter's air flow was controlled by a Schmidt Instrument Co. Model 5-AH flow regulator which appeared to be able to maintain an air flow as calibrated to ensure loading of the filter did not affect the quantity of air flowing through the filter. The inspectors reviewed the licensee's sampling procedures and calibration procedures and did not identify deficiencies during the inspection. The inspectors also review the 2022 environmental air sampling results which did not exceed regulatory limits.

7.3 Conclusions

The inspectors did not identify any significant deficiencies in the licensee's environmental gamma or air sampling program during the inspection. No findings of significance were identified.

8 Exit Meeting Summary

On November 29, 2023, the NRC inspectors presented the final inspection results to Mr. Carlos Martinez, Site Manager, and other members of the licensee staff. All proprietary information that was reviewed was returned to the licensee or controlled appropriately.

SUPPLEMENTAL INSPECTION INFORMATION

KEY POINTS OF CONTACT

Licensee

C. Martinez, VNC Site Manager
J. Smyly, Regulatory Compliance Manager
S. Murray, Licensing Manager
H. Bunting, Radiation Safety Officer

INSPECTION PROCEDURES

IP 71801 Decommissioning Performance and Status Review at Permanently Shutdown Reactors
IP 69002 Class III Research and Test Reactors
IP 37801 Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors
IP 40801 Problem Identification and Resolution at Permanently Shutdown Reactors
IP 64704 Fire Protection Program at Permanently Shutdown Reactors
IP 86750 Solid Radioactive Waste Management and Transportation of Radioactive Materials
IP 83750 Occupational Radiation Exposure at Permanently Shutdown Reactors
IP 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

0500018/2023002-01 NCV Failure to comply with applicable requirements of 49 CFR 172.203(d)(3).

Discussed

None

LIST OF ACRONYMS

ADAMS Agency Documents Access and Management Systems
CFR *Code of Federal Regulations*
CR Condition Report
DOT U.S. Department of Transportation
EVESR Empire State Atomic Development Associates Incorporated Vallecitos
 Experimental Superheat Reactor
FAB Financial Assurance Branch
GEH GE Hitachi Nuclear Energy Americas, LLC
GETR General Electric Test Reactor
NRC U.S. Nuclear Regulatory Commission
NCV Non-Cited Violation
VBWR Vallecitos Boiling Water Reactor
VNC Vallecitos Nuclear Center