



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

February 9, 2021

EA-20-094

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

SUBJECT: GRAND GULF NUCLEAR STATION – FINAL SIGNIFICANCE
DETERMINATION OF GREEN FINDING; NRC INSPECTION REPORT
05000416/2021090

Dear Mr. Franssen:

This letter provides you the final significance determination of the preliminary White finding discussed in U.S. Nuclear Regulatory Commission (NRC) Inspection Report 05000416/2020015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20303A214) dated October 29, 2020. The finding involved four apparent violations associated with events that occurred on May 22, 2020, when your staff offered to a carrier for transport a radioactive material package described as Low Specific Activity – II (LSA-II) that failed to meet the radiation level limits specified in 49 CFR 173.427 for shipping as LSA. The measured radiation levels were in excess of 10 mSv/hour (1 Rem/hour) at 3 meters from the unshielded package, exceeding the conditions of transport for LSA material and requiring the package be appropriately described as Type B radioactive material. Therefore, the shipment failed to contain the appropriate emergency response information which is required by 49 CFR 172.602(a), as well as the appropriate package markings required by 49 CFR 172.302(a). On January 28, 2021, the NRC staff discussed the results of this inspection with you and other members of your staff.

At your request, a Regulatory Conference was held on December 10, 2020, to discuss your views on this issue. A summary of this meeting was issued on December 17, 2020 (ADAMS Accession No. ML21012A445). During the meeting, your staff described your assessment of the significance of the finding and the corrective actions taken to resolve it. The details associated with the points and perspectives you presented, as well as the NRC's perspectives on these items, are included in the summary of the meeting and in its enclosures.

NRC Inspection Manual Chapter 0609, Appendix D, "Public Radiation Safety Significance Determination Process," yields a White outcome for certain radioactive material shipment-related documentation violations because emergency responders use this documentation to guide their efforts during possible transportation accidents involving hazardous materials. Failures to provide the correct radioactive material shipment-related documentation can, in certain instances, significantly hamper potential emergency response efforts. As such, the NRC evaluated the information provided by the Grand Gulf Nuclear Station

staff for the May 22, 2020, radioactive materials shipment to determine if emergency response efforts would be significantly hampered in the event of a hypothetical transportation accident in this case.

For the May 22, 2020, Grand Gulf Nuclear Station radioactive waste shipment, the NRC determined that while the emergency response information was incorrect, the shipment was provided with other Department of Transportation required communications (radioactive placards and labels) that would have indicated to emergency responders the hazard contained in the package. Further, the shipment paperwork included the Department of Transportation emergency response guideline (ERG) 162. While incorrect for an LSA-II shipment which requires ERG 163, the NRC determined that ERG 162 contains similar basic initial response information that would have aided emergency response personnel.

Therefore, the NRC determined that the incorrect information would have little impact on the initial emergency response actions for a transportation accident and concluded that the significance of the finding in NRC Inspection Report 05000416/2020015 is Green. Accordingly, the NRC is documenting a finding of very low safety significance (Green) in the enclosed report, which includes four examples of a violation of 10 CFR 71.5. Title 10 CFR 71.5 implements Department of Transportation regulations. The NRC is treating these as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

The NRC recognizes that your staff identified the issue during a routine quality assurance audit of your shipping activities. However, the NRC staff identified deficiencies in your evaluation of the issue, including your understanding of the applicable regulatory requirements for an LSA shipment. Therefore, the NRC determined that credit for self-identification, as described in NRC Inspection Manual Chapter 0612, is not appropriate and that the cross-cutting aspect of H.12 - Avoid Complacency remains applicable.

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

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

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 and from the NRC's ADAMS, accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning this matter, please contact Mr. Greg Warnick at 817-200-1249.

Sincerely,

Gregory G. Warnick, Chief
Reactor Inspection Branch
Division of Nuclear Materials Safety

Docket No. 05000416
License No. NPF-29

Enclosure:
Inspection Report 05000416/2021090

cc w/encl: Distribution via LISTSERV®

GRAND GULF NUCLEAR STATION – FINAL SIGNIFICANCE DETERMINATION OF GREEN FINDING; NRC INSPECTION REPORT 05000416/2021090 DATED – FEBRUARY 9, 2021

DISTRIBUTION:

SMorris, ORA
JMonninger, ORA
MMuessle, DNMS
LHowell, DNMS
GWarnick, DNMS
NGreene, DNMS
AVegel, DRP
MHay, DRP
JKozal, DRP
DProulx, DRP
CYoung, DRP
TSteadham, DRP
AElam, DRP
DCylkowski, RC
JGroom, ORA
JKramer, ORA
VDricks, ORA

BMaier, RSLO
RLantz, DRS
GMiller, DRS
AAgrawal, IPAT
RGrover, IPAT
BCorrell, IPAT
MMadison, DRMA
JMartin, OGC
AMoreno, RIV/OCA
LWilkins, OCA
MHaire, RIV/OEDO
GWilson, OE
FPeduzzi, OE
JPeralta, OE
SLingam, NRR
R4Enforcement
PJayroe, ORA

NRREnforcement.Resource
RidsNrrDirEnforcement Resource
RidsSecyMailCenter Resource
RidsEdoMailCenter Resource
RidsOiMailCenter Resource
RidsOcaMailCenter Resource
RidsRgn1MailCenter Resource
RidsRgn2MailCenter Resource
RidsRgn3MailCenter Resource
RidsOgcMailCenter Resource;
RidsOigMailCenter Resource;
RidsOpaMail Resource
RidsOeMailCenter Resource
OEWEB Resource;

[https://usnrc.sharepoint.com/teams/Region-IV-ACES/ACES S Drive/ENFORCEMENT/_EA CASES - OPEN/GG Radwaste Shipping EA-20-094/Final Action/FINAL ACTION_EA-20-094_Grand_Gulf_transportation.docx](https://usnrc.sharepoint.com/teams/Region-IV-ACES/ACES%20S%20Drive/ENFORCEMENT/_EA%20CASES%20-%20OPEN/GG%20Radwaste%20Shipping%20EA-20-094/Final%20Action/FINAL%20ACTION_EA-20-094_Grand_Gulf_transportation.docx)
ADAMS ACCESSION NUMBER: ML21040A231

<input checked="" type="checkbox"/> SUNSI Review By: PAJ		ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Sensitive <input checked="" type="checkbox"/> Non-Sensitive		<input type="checkbox"/> Non-Publicly Available <input checked="" type="checkbox"/> Publicly Available		Keyword NRC-002
OFFICE	ORA	RxIB	C:RPBC	ORA/ACES	RxIB			
NAME	PJayroe	NGreene	JKozal	JGroom	GWarnick			
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/			
DATE	01/29/21	02/04/21	02/05/2021	01/29/2021	02/08/2021			

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number: 05000416

License Number: NPF-29

Report Number: 05000416/2021090

Enterprise Identifier: I-2021-090-0002

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station

Location: Port Gibson, MS

Inspection Dates: June 2, 2020 to January 28, 2021

Inspector: N. Greene, PhD, Senior Health Physicist

Approved By: Gregory G. Warnick, Chief
Reactor Inspection Branch
Division of Nuclear Materials Safety

Enclosure

SUMMARY

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

List of Findings and Violations

Final Green Significance Determination of a Transportation Event on May 22, 2020			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Public Radiation Safety	Green NCV 05000416/2021090-01 Open/Closed	[H.12] - Avoid Complacency	71153
<p>The inspector identified a finding and associated non-cited violation of very low safety significance (Green), with four examples, of 10 CFR 71.5 for failure to follow the Department of Transportation regulations. The finding was the result of the licensee's transport of a radioactive material package as Low Specific Activity – II (LSA-II) that exceeded the LSA shipping limits for radiation levels as specified in 49 CFR 173.427. The licensee's staff failed to recognize that measured radiation levels, which were in excess of 10 mSv/hour (1 Rem/hour) at 3 meters from the unshielded package and exceeded the conditions for transporting LSA material, were not utilized in the waste characterization software. Thus, the licensee failed to ship the package as a Type B shipment. Consequently, the licensee failed to describe the hazardous material in accordance with 49 CFR 173.22(a), failed to ship the package with the appropriate emergency response information for a shipment containing primary resin as required by 49 CFR 172.602(a), and did not contain the appropriate package markings as required by 49 CFR 172.302(a).</p>			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
AV	05000416/2020015-01	Failure to Meet DOT Regulations During a Radioactive Shipment Due to an Incorrect Shipping Name, Marking, and Emergency Response Guide	71153	Closed

INSPECTION SCOPES

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

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), regional inspectors were directed to begin telework. For the inspection documented below, it was determined that the objectives and requirements stated in the IP could be performed remotely.

OTHER ACTIVITIES – BASELINE

71153 – Follow-Up of Events and Notices of Enforcement Discretion

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

- (1) The inspector evaluated information relative to a shipment issue that occurred on May 22, 2020. Specifically, on June 2, 2020, the licensee performed a review of documentation for shipping package GGN-2020-0515, dated as May 22, 2020, and identified that the shipping name, the package markings, and the Emergency Response Guide (ERG) submitted were all incorrect. Subsequently, the licensee contacted the vendor in receipt of the package, updated the shipping manifest, and contacted the NRC. The inspector then evaluated the event for any radiological impacts and non-compliances with NRC regulations. The NRC also evaluated the licensee's response on the event and conducted a conference to discuss the impacts and actions taken relative to shipment errors. The NRC essentially determined that the actions taken were appropriate and the radiological risks were not significantly impactful to the public; thus, a final determination was made as a violation of very low safety significance (Green).

INSPECTION RESULTS

Final Green Significance Determination of a Transportation Event on May 22, 2020			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Public Radiation Safety	Green NCV 05000416/2021090-01 Open/Closed	[H.12] - Avoid Complacency	71153
The inspector identified a finding and associated non-cited violation of very low safety significance (Green), with four examples, of 10 CFR 71.5 for failure to follow the Department of Transportation (DOT) regulations. The finding was the result of the licensee's transport of a radioactive material package as Low Specific Activity – II (LSA-II) that exceeded the LSA shipping limits for radiation levels as specified in 49 CFR 173.427. The licensee's staff failed to recognize that measured radiation levels, which were in excess of 10 mSv/hour			

(1 Rem/hour) at 3 meters from the unshielded package and exceeded the conditions for transporting LSA material, were not utilized in the waste characterization software. Thus, the licensee failed to ship the package as a Type B shipment. Consequently, the licensee failed to describe the hazardous material in accordance with 49 CFR 173.22(a), failed to ship the package with the appropriate emergency response information for a shipment containing primary resin as required by 49 CFR 172.602(a), and did not contain the appropriate package markings as required by 49 CFR 172.302(a).

Description:

On May 16, 2020, the licensee filled a liner with spent resin and sampled the primary resin for isotopic analysis. The licensee used the data provided by the results of the analysis as inputs to its waste characterization software for the DOT Classification Summary analysis. Due to the data provided, the computer software calculated a dose rate of less than 1 Rem/hour from the liner at 3 meters (i.e., 810 mrem/hour). Additionally, the software output indicated that the package contained 10 CFR Part 37 Category 2 Quantity and reportable quantities of radionuclides. However, because the software calculated a dose rate less than 1 Rem/hour at 3 meters from the liner, the computer applied an exemption for LSA that is allowed by the regulations. During the shipping preparation process, routine and required infield pre-shipping surveys were conducted on the liner to record the dose rates at several locations and distances in relation to the liner's position. For Survey GGN-2005-00524, dated May 21, 2020, the highest measurement taken at 3 meters from the liner was 1757 mrem/hour (1.757 Rem/hour), which exceeded the LSA exemption criteria in 49 CFR 173.427(a)(1).

The licensee's failure to use the maximum actual dose rate measured at 3 meters from the unshielded liner rather than the value calculated by the computer software, caused the licensee to assign the shipment an incorrect basic description and package markings. The basic description is composed of the United Nations (UN) Identification Number, Proper Shipping Name, Hazard Class, maximum activity contained in each package in the International System of Units (SI) units and number and type of packages. Markings on bulk packages such as this shipment are comprised of the identification number on orange or white square on-point displays. The inspector identified that the Hazard Class, maximum activity contained in each package in SI units and number and type of packages were correct. However, the UN Identification Number and Proper Shipping Name were not correct on the shipping papers and package markings.

On May 22, 2020, the licensee offered to a carrier for transport the radioactive material package, which was described as LSA-II, but failed to meet the radiation level limits specified in 49 CFR 173.427 for shipping as LSA. This misclassification caused the licensee to provide the carrier with the incorrect emergency response information. Specifically, the carrier was provided with a licensee template of ERG 162 when ERG 163 was required due to the conditions of transport for LSA materials being exceeded. It is noteworthy to mention that ERG 162 is designed for packages with contents of low to moderate level radiation, whereas ERG 163 is designed for packages with contents of low to high level radiation.

During a paperwork review on June 2, 2020, the licensee's Radiation Protection (RP) staff identified that the shipment was transported incorrectly with errors in the radioactive material package characterization, markings, and ERGs. As a result, the RP staff contacted the receiver of the shipment and updated the shipping manifest. They then notified the NRC staff of the shipment errors, as well as placed the issue into their corrective action program.

In 1985, the International Atomic Energy Agency (IAEA) introduced the rule that LSA material may not exceed 10 mSv/hour (1 Rem/hour) at 3 meters from the unshielded source. This rule was created to mitigate the effects of radiation dose from material that may be dispersed outside of the shipping package in an accident condition. NUREG-1608/RAMREG-003, "Categorizing and Transporting Low Specific Activity Materials and Surface Contaminated Objects," which is a joint publication between the DOT and the NRC, builds on the idea of this rule and further expands on the use of appropriate ERGs in Section 4.1.3. This section states, in part:

ERG 163, used to describe the potential health hazards of radioactive materials for low to high level radiation, addresses Type B quantities of radioactive materials, which is appropriate for unshielded LSA materials exceeding 10 mSv/hour (1 Rem/hour) at 3 meters. ERG 162, used to describe the potential health hazards of radioactive materials for low to moderate level radiation, such as packages marked "Radioactive Material, LSA," does not acknowledge that Type B quantities could be present and is therefore inappropriate for packages containing LSA materials exceeding 10 mSv/hour (1 Rem/hour) at 3 meters.

Upon further review of this issue and discussion with the licensee, the inspector determined that the difference between the information the licensee provided (ERG 162) and that which was required (ERG 163) were similar in nature and would have had little impact on the initial response actions by responders to a transportation accident in this case. Additionally, the shipment was provided with other DOT required communications (radioactive placards and labels) that would have indicated to emergency responders the hazard contained in the package. Through discussions with the licensee, the NRC confirmed that the carrier maintained in its possession, a copy of the 2016 Emergency Response Book ("Orange Book"), which contained all of the required emergency response information for each characterization of radioactive shipments. Thus, the inspector concluded that the failure to provide the correct emergency response information to the carrier, in this case, would not have seriously hampered any response actions. Moreover, the shipment was transported in a robust Type B cask. Therefore, the radiological risk of the issue was not deemed significant.

Corrective Actions: As immediate corrective actions, the licensee entered this issue into its corrective action program, and implemented the following:

- Initiated an Apparent Cause Evaluation via CR-GGN-2020-06915, later upgraded to a Root Cause Evaluation
- Immediately contacted the receiving process facility of the shipment to inform them of the error
- Immediately revised the shipping manifest and submitted it to the processing facility
- Contacted the NRC Region IV office to inform them of the issue

Corrective Action References: CR-GGN-2020-06915

Performance Assessment:

Performance Deficiency: The licensee failed to meet NRC requirement of 10 CFR 71.5(a) for failure to comply with all DOT regulations in 49 CFR Parts 171 through 180. Specifically, as required by 49 CFR Part 172, the licensee failed to identify that the radiation dose rates,

measured 3 meters from the unshielded liner, were higher than the calculated value for the primary resin liner associated with shipment GGN-2020-0515, exceeding 1 Rem/hour. This failure led the licensee to assign the incorrect basic description and markings to the shipment package and caused the licensee to supply the carrier with the incorrect emergency response information.

Screening: The inspector determined the performance deficiency was more than minor because it was associated with the Program & Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.

Significance: The inspector assessed the significance of the finding using Inspection Manual Chapter (IMC) 0609 Appendix D, "Public Radiation Safety Significance Determination Process [SDP]." The finding was preliminarily determined to be of low to moderate safety significance (White) because it was a finding in the transportation branch in which: (1) radiation limits were not exceeded, (2) there was no breach of the package during transit, (3) there were no Certificate of Compliance issues, (4) it was not a low-level burial ground nonconformance, and (5) it was a failure to provide emergency response information as required by 49 CFR 172.602.

However, the NRC staff recognizes that in certain cases, it is possible for a licensee to violate the regulation governing emergency response information without the potential to seriously hamper emergency response efforts. In further consideration, IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," provides objective criteria to evaluate licensee failures to provide emergency response information that is required by 49 CFR 172.602. As described above, the shipment left the licensee's facility and control and did not fully meet the requirements of 49 CFR 172.602 (i.e., incorrect proper shipping name/UN number and incomplete/inaccurate emergency response information). Yet, the difference between the information the licensee provided and that which was required would have had minimal impact on the initial response actions by responders to a transportation accident in this case. Therefore, the NRC has made a final determination that the finding is of very low safety significance (Green).

Cross-Cutting Aspect: H.12 - Avoid Complacency: Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools. Specifically, the licensee determined that complacency within the staff caused multiple individuals to not identify various technical issues associated with the shipment, in which failing to confirm the override of the unshielded dose rate at 3 meters was most prevalent. Radioactive shipments and shipping documentation completion at the site are viewed as routine, but more attention to detail should have been implemented for a resin shipment with significantly higher levels of measured dose rates.

Enforcement:

There were four examples of the licensee's failure to meet DOT regulations as required by 10 CFR 71.5(a). Those four examples are as follows:

Violation #1: Title 10 CFR 71.5(a) requires, in part, that each licensee who delivers licensed material to a carrier for transport shall comply with the applicable requirements of the DOT

regulations in 49 CFR Parts 171 through 180.

Title 49 CFR 172.600(c) requires, in part, that no person to whom 49 CFR 172 Subpart G applies may offer for transportation a hazardous material unless: (1) emergency response information conforming to 49 CFR 172 Subpart G is immediately available for use at all times the hazardous material is present; and (2) emergency response information, including the emergency response telephone number, required by 49 CFR 172 Subpart G is immediately available to any person who, as a representative of a Federal, State or local government agency, responds to an incident involving a hazardous material, or is conducting an investigation which involves a hazardous material.

Title 49 CFR 172.602(a) requires, in part, that for purposes of 49 CFR 172 Subpart G, the term “emergency response information” means information that can be used in the mitigation of an incident involving hazardous materials and, as a minimum, must contain the basic description and technical name of the hazardous material, the immediate hazards to health, and the immediate precautions to be taken in the event of an accident or incident.

Contrary to the above, on May 22, 2020, the licensee delivered to a carrier for transport licensed material, and the emergency response information that accompanied the shipment did not include the correct basic description of the hazardous material, the immediate hazards to health, and the immediate precautions to be taken in the event of an accident or incident, as required by 49 CFR 172.600(c) and 49 CFR 172.602(a). Specifically, the basic description of the hazardous material was for a low specific activity shipment rather than a Type B shipment; the immediate hazards to health failed to advise responders that life threatening conditions may exist if contents were to be released or the package shielding failed; and the immediate precautions to be taken in the event of an accident or incident failed to provide appropriate guidance on external dose exposure control relative to the use of positive pressure self-contained breathing apparatus (SCBA) and structural firefighters’ protective clothing.

Violation #2: Title 10 CFR 71.5(a) requires, in part, that each licensee who delivers licensed material to a carrier for transport shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 171 through 180.

Title 49 CFR 172.302(a) requires, in part, except as otherwise provided in this subpart, no person may offer for transportation or transport a hazardous material in a bulk packaging unless the packaging is marked as required by 49 CFR 172.332 with the identification number specified for the material in the 49 CFR 172.101.

Title 49 CFR 172.332 requires, in part, that identification number markings must be displayed on orange panels or placards as specified this section.

Title 49 CFR 172.101 requires, in part, that the designation of UN 3321 be assigned to LSA-II, non-fissile or fissile-excepted packages and the designation of UN 2916 be assigned to Type B(U), non-fissile or fissile-excepted packages.

Contrary to the above, on May 22, 2020, the licensee offered for transportation or transport a hazardous material in bulk packaging, and the licensee failed to mark the packaging with the identification number marking specified for this material in 49 CFR 172.101. Specifically, the licensee marked the package using the United Nations (UN) number UN 3321 which is for LSA-II radioactive material. Since the package did not meet LSA-II specifications, the

UN 2916 marking for Type B radioactive material was required.

Violation #3: Title 10 CFR 71.5(a) requires, in part, that each licensee who delivers licensed material to a carrier for transport shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 171 through 180.

Title 49 CFR 173.427(a)(1) requires, in part, that low specific activity material must be transported in accordance with the condition that the external dose rate may not exceed an external radiation level of 1 Rem/hour at 10 feet from the unshielded material.

Contrary to the above, on May 22, 2020, the licensee delivered licensed material to a carrier for transport with an external dose rate that exceeded an external radiation level of 1 Rem/hour at 10 feet from the unshielded material. Specifically, the licensee prepared the shipment under the provisions of low specific activity (LSA-II) radioactive material and the actual survey results revealed a maximum dose rate of 1.757 Rem/hour at 10 feet from the unshielded material.

Violation #4: Title 10 CFR 71.5(a) requires, in part, that each licensee who delivers licensed material to a carrier for transport shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 171 through 180.

Title 49 CFR 173.22(a)(1) requires, in part, that except as otherwise provided in 49 CFR Part 173, a person may offer a hazardous material for transportation in a packaging or container required by 49 CFR Part 173 only if the person shall class and describe the hazardous material in accordance with 49 CFR Parts 172 and 173.

Contrary to the above, on May 22, 2020, the licensee offered hazardous material for transportation in a packaging or container required by 49 CFR Part 173 and failed to describe the hazardous material in accordance with 49 CFR Parts 172 and 173. Specifically, radiation level surveys of the package indicated the hazardous material should be described as Radioactive Material, Type B(U) package, non-fissile or fissile-excepted. However, the material was described as Radioactive Material, LSA-II.

Enforcement Action: These violations are being treated as non-cited violations, consistent with Section 2.3.2 of the NRC Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On January 28, 2021, the inspector presented the inspection results to Mr. R. Franssen, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71153	Corrective Action Documents	CR-	GGN-2020-06915	
	Miscellaneous		Grand Gulf Nuclear Station Radioactive Material Transportation Presentation	12/10/2020
		683411-10	Package Characterization Report for Liner in Shipment GGN-2020-0515	05/21/2020
		ERG 162	Emergency Response Guide 162: Radioactive Materials (Low to Moderate Level Radiation)	2016
		ERG 163	Emergency Response Guide 163: Radioactive Materials (Low to High Level Radiation)	2016
	Procedures	02-S-01-11	Radwaste Operations	23
		EN-RW-102	Radioactive Shipping Procedure	18
	Radiation Surveys	GGN-2020-00524	Liner Survey for Shipment GGN-2020-0515	05/21/2020
		GGN-2020-00525	Cask Survey for Shipment GGN-2020-0515	05/21/2020
		GGN-2020-00526	Departure Survey for Shipment GGN-2020-0515	05/21/2020
	Shipping Records	GGN-2020-0515	UN3321, Radioactive Material, LSA-II, Class 7	05/22/2020
		GGN-2020-0515	UN2916, Radioactive Material, Type B(U) package, Class 7	05/22/2020