



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 19, 2017

Tanya Hamilton
Site Vice President
Shearon Harris Nuclear Power Plant
5413 Shearon Harris Rd.
M/C HNP01
New Hill, NC 27562-0165

**SUBJECT: HARRIS NUCLEAR PLANT - NOTIFICATION OF INSPECTION AND REQUEST
FOR INFORMATION**

Dear Ms. Hamilton:

During the week of July 17 - 21, 2017, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at the Harris Nuclear Plant (NRC Inspection Procedures 71124.01, 71124.06, 71124.07, 71124.08, and Radiation Safety sections of 71151).

In order to minimize the impact to your onsite resources and to ensure a productive inspection, we have enclosed a request for documents needed for this activity. It is important that all of these documents are up-to-date, and complete, in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection. The NRC requests that the subject informational material be provided in CD format on or before June 26, 2017.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Chuck Yarley of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Wade Loo at 404-997-4727, or the Chief of Plant Support Branch 1, Brian Bonser at 404-997-4653.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget under control numbers 3150-0008, 3150-0011, 3150-0014, 3150-0044, and 3150-0135. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement, unless the requesting document displays a currently valid Office of Management and Budget control number.

This letter and its enclosure will be made available for public inspection and copying at <https://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Brian R. Bonser, Chief
Plant Support Branch 1
Division of Reactor Safety

Dockets No. 50-400
License No. NPF-63

Enclosure:
Document Request List

cc: Distribution via Listserv

SUBJECT: HARRIS NUCLEAR PLANT - NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION DATED: May 19, 2017

Dockets No. 50-400
License No. NPF-63

Enclosure:
Document Request List

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Document Request List

Inspection Dates: July 17 - 21, 2017

Documents Due to Region II by: June 26, 2017

Licensee: Harris Nuclear Plant

Docket Number: 05000400

Inspection Procedures (IPs):

IP 71124.01	Radiological Hazard Assessment and Exposure Controls
IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment
IP 71124.07	Radiological Environmental Monitoring Program
IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation
IP 71151	Performance Indicator Verification (Radiation Safety cornerstones only)

Lead Inspector: Wade Loo, Sr. Health Physicist

Note: The current version of these documents is expected unless specified otherwise. Electronic media is preferred if readily available. *[Note that the inspectors cannot accept data provided on USB or "flash" drives due to NRC IT security policies.]* Please organize the information as it is arranged below to the extent possible. Experience has shown that a poorly organized CD leads to a less efficient inspection and places additional burden on licensee staff. Please pay particular attention to the date ranges for the items requested, as they may change from item to item. During the inspection, the inspectors may request additional documents. If there are questions regarding the documents requested, or if the documents cannot be provided by the due date, please do not hesitate to contact the lead inspector.

Documentation for these inspection procedures is requested from the date listed under each program area to present. We would prefer as much of the information as possible in electronic form. An index of the CD contents is also helpful. For those items requesting a list of documents/areas, the inspector will select documents/areas from the list for onsite review.

General Information

- ❑ List of primary site contacts for each inspection area below, including names and telephone numbers
- ❑ List of radiation protection procedures, including title and number
- ❑ Most recent DAW 10 CFR Part 61, analytical results
- ❑ Corrective Action Program (CAP) procedures
- ❑ Schedule of major activities (Gantt chart if available), including work activities to be conducted during the week of the inspection
- ❑ Audits and self-assessments performed from the last inspection date of that program area as listed below

Enclosure

71124.01 - Radiological Hazard Assessment and Exposure Controls

(Last inspected October 2016)

1. List of active Radiation Work Permits (RWPs) including their administrative limits, electronic dosimeter dose rate limit, and dose limit
2. List of locations, or plant maps indicating the location, of all locked high radiation areas (LHRAs) and very high radiation areas (VHRAs) Include areas with the potential to become a LHRA during routine operations or outages
3. Most recent survey of all LHRAs and VHRAs (as applicable)
4. Site and corporate procedures related to health physics (HP) controls (e.g., posting, labeling, surveys, RWPs, contamination control, high radiation area (HRA)/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots)
5. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, guidance for alarm follow up, etc.)
6. List of the 10 most exposure significant work areas within radiation areas (RAs), HRAs, or airborne radioactivity areas in the plant. This may include areas with low dose rates, but high collective dose. Identify any HRAs with significant dose gradients (factor of five or more), including underwater diving activities
7. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, and guidance for alarm followup)
8. List of Nationally Tracked Sources, and copies of any National Source Tracking System (NSTS) transaction documentation (e.g., annual reconciliation)
9. Most recent sealed source inventory record
10. List of all non-fuel items stored in spent fuel pool (SFP)
11. List of CAP nonconformance reports (NCRs), action requests (ARs), condition reports (CRs), etc. related to HP controls (e.g., radworker error, HP technician error, posting issues, Nationally Tracked Sources, HRA/LHRA/VHRA issues, survey problems) issued since October 1, 2016. [This should be a list of CAP documents containing NCRs, ARs, CRs, etc. numbers and brief descriptions, not full documents.]

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

(Last inspected August 2014)

1. Offsite Dose Calculation Manual (ODCM) and a list of changes made in the last revision
2. List of permitted effluent release points, including any release points from onsite surface water bodies (as applicable)
3. Procedures for:
 - (a) collection, analysis, release, and dose evaluations for gaseous and liquid effluent
 - (b) groundwater monitoring program
4. List of changes made to radioactive effluent processing/discharge systems since August 1, 2014
5. List of any non-radioactive systems that have become contaminated since August 1, 2014
6. List of any unmonitored, unplanned, or otherwise abnormal gaseous or liquid releases since August 1, 2014. Include copies of any reports to the NRC (via 10 CFR 50.72 or other reporting requirements) regarding abnormal onsite spills/leaks of radioactive material (RAM)
7. List of 10 CFR 50.75(g) entries made since August 1, 2014

8. List of liquid and gaseous effluent monitors listed as out-of-service for > 1 day since August 1, 2014, including any special reports submitted to the NRC as a result of effluent monitor operability
9. Inter-laboratory comparison program results (for onsite count lab) since August 1, 2014
10. Results of the last two surveillance tests performed on the HEPA/Charcoal filter system for the Auxiliary Building vent
11. The last two gaseous effluent release permits, and the last two liquid effluent release permits
12. All audits, self-assessments, and/or reviews of the radioactive effluent monitoring program since August 1, 2014
13. List of CRs, ARs and NCRs generated since August 1, 2014 as a result of gaseous and liquid effluent processing, and/or ODCM related activities. Include all CRs, ARs and NCRs related to voluntary reporting of onsite spills/leaks of RAM [*This should be a list of corrective action documents containing an AR/NCR number and brief description, not full CRs.*]

71124.07 - Radiological Environmental Monitoring Program

(Last inspected August 2014)

1. Collection schedule for Radiological Environmental Monitoring Program (REMP) samples during the week of inspection and contact numbers for collection staff
2. Procedures for:
 - (a) collection and analysis of environmental samples
 - (b) calibration and maintenance of REMP air and/or water samplers
 - (c) calibration of meteorological monitoring instruments (wind speed and direction, air temperature, etc.)
 - (d) periodic meteorological instrumentation surveillance requirements
3. Calibration records for REMP air and water sampling equipment (as applicable) since August 1, 2014
4. Last two calibration records for each meteorological monitoring instrument on the primary tower (wind speed, wind direction, and air temperature)
5. Inter-laboratory comparison program results (environmental lab) since August 1, 2014
6. List of systems, structures, or components, identified as credible mechanisms for the potential release of licensed material to the groundwater
7. List of changes to the REMP (sample locations, sample frequency, type of samples, etc.) since August 1, 2014
8. All audits, self-assessments, and/or reviews of REMP activities since August 1, 2014. The data should include any reviews conducted of vendor activities and their facilities (e.g., environmental lab)
9. List of CRs, ARs and NCRs generated as a result of REMP activities since August 1, 2014. [*This should be a list of corrective action documents containing an AR/NCR number and brief description, not full CRs.*]

71124.08 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

(Last inspected October 2014)

1. Provide Procedures/Guidance Documents describing licensee compliance with 10 CFR Parts 20, 61, and 71, and 49 CFR Parts 170-189. Procedures/manuals should include:
 - ❑ Solid and liquid radioactive waste (radwaste) processing procedures
 - ❑ Procedure(s) for transferring radwaste resin and sludge discharges into shipping/disposal containers
 - ❑ Waste stream mixing and/or sampling procedures, including:
 - (1) waste concentration averaging
 - (2) use of scaling factors and calculations used to account for difficult-to-measure radionuclides
 - (3) ensuring waste stream composition data accounts for changing operational parameters
 - ❑ Shipping/transportation procedures
 - ❑ Cask loading and closure procedures (licensee and vendor) applicable to last three cask transports
 - ❑ List of RAM storage areas, including satellite radiological controlled areas (RCAs)
 - ❑ Monitoring impact of long-term storage (e.g., buildup of gases produced by waste decomposition, chemical reactions, container deformation, loss of container integrity, rerelease of free-flowing water)
 - ❑ Process Control Program (PCP)
2. Most recent radio-chemical sample analysis results (i.e., "10 CFR Part 61" analysis) for each of the radwaste streams (e.g., dry active waste (DAW), ion exchange resins, mechanical filters, and sludges and activated materials). List and documentation of any changes made to the radwaste processing systems (liquid and solid) and/or the PCP since the October 1, 2014, and associated 10 CFR 50.59 documentation, as appropriate
3. Copies of applicable transport cask Certificate of Compliance for the last three transport cask shipments
4. Training and qualification records for personnel responsible for radwaste processing, packaging, and making shipments of RAM and radwaste
5. Log of RAM shipments (LSA I, II, III; SCO I, II, Type A, or Type B) since October 1, 2014. (The inspectors will select three to five packages to review in detail.)
6. Most recent self-assessment or audit of Shipping/radwaste processing and RAM storage programs
7. List of CAP NCRs (AR, CR, NCR, etc.) related to involving radwaste and RAM processing and/or transportation (e.g., keyword searches for RAM, shipping, radwaste, 10 Part 61, etc.) issued since October 1, 2014. *[This should be a list of corrective action documents containing an (AR, CR, NCR, etc.) number and brief description, not full documents.]*
8. Available for onsite review during the inspection
 - ❑ Site drawing(s) showing the location of all stored RAMs and all stored radwaste
 - ❑ Plant drawings sufficient to permit the inspector to walkdown the liquid and solid radwaste processing systems, to verify current system configuration/ operation agree with the descriptions contained in the Updated Final Safety Analysis Report and in the PC

- ❑ Documentation describing the status of any radwaste process equipment that is not operational and/or is abandoned in place
- ❑ Information concerning the site's waste disposal volume and waste reduction program

71151 - Performance Indicator Verification

(Last inspected October 2016)

1. Site and corporate procedures for gathering and reporting performance indicator (PI) data
2. Monthly/Quarterly PI reports since October 1, 2016, and copies of associated corrective action reports for any Occupational Exposure or Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) Radiological Effluent PI events occurrences
3. Most recent gaseous and liquid effluent release permits showing year-to-date curies released by isotope and associated public dose assessments, and the last calendar year (CY) 2016 gaseous and liquid effluent release permits showing year-to-date curies released by isotope and associated public dose assessments
4. 2016 Annual Radioactive Effluent Report OR an end-of-year public dose report, if the official Effluent Report is not ready yet
5. List of all CAP documents since October 1, 2016, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked LHRA door, etc.
6. List of all CAP documents since October 1, 2016, using keywords such as: abnormal/unmonitored effluent release, etc.
7. List of all ED dose rate alarms, and all ED dose alarms since October 1, 2016

Assistance Requested During On-Site Inspection

- ❑ Identification of work activities available during the inspection for inspector observations, including notification of pre-job briefings, notification of risk significant work activities, and audio/visual surveillance for remote job coverage
- ❑ Health physics assistance in plant walk-downs assessing access controls, (e.g. verifying the posting and locking of entrances to high and very high radiation areas (HRA and VHRA), and SFP controls)
- ❑ Health physics assistance in plant walk-downs/job coverage of ongoing activities to assess access controls
- ❑ Health physics assistance in plant walk-downs of radwaste processing systems
- ❑ Identification of any transportation activities available during the inspection for inspector observations

Inspector Contact Information:

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Atlanta, GA 30303

LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable
AR	Action Requests
ARM	Area Radiation Monitor
CAM	Continuous Air Monitor
CAP	Corrective Action Program
CEDE	Committed Effective Dose Equivalent
CR	Condition Report
CY	Calendar Year
DAW	Dry Active Waste
DOP	Diocetylthalate
DPW	Declared Pregnant Worker
EAL	Emergency Action Level
ED	Electronic Dosimeter
HEPA	High Efficiency Particulate Air
HP	Health Physics
HRA	High Radiation Area
ISFSI	Independent Spent Fuel Storage Installation
LHRA	Locked High Radiation Area
NCR	Nonconformance Report
NIST/NBS	National Institute of Standards and Technology/National Bureau of Standards
NVLAP	National Voluntary Laboratory Accreditation Program
PA	Protected Area
PAPR	Powered Air Purifying Respirators
PCE	Personnel Containment Event
PCM	Personnel Contamination Monitor
PI	Performance Indicator
PM	Portal Monitor
QA	Quality Assurance
QC	Quality Control
RA	Radiation Area
RAM	Radioactive Material
RCA	Radiological Controlled Area
RETS/ODCM	Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual
RWP	Radiation Work Permit
SAM	Small Article Monitor
SCBA	Self-contained Breathing Apparatus
SFP	Spent Fuel Pool
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
VHRA	Very High Radiation Area
WBC	Whole Body Counter