



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

April 21, 2017

Ernie Kapopoulos
Site Vice President
H.B. Robinson Steam Electric Plant
Duke Energy
3581 West Entrance Road, RNPA01
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON NUCLEAR PLANT - NOTIFICATION OF INSPECTION AND
REQUEST FOR INFORMATION

Dear Mr. Kapopoulos:

During the week of June 19 - 23, 2017, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at the Robinson Nuclear Plant (NRC Inspection Procedures 71124.02, 71124.03, 71124.04, 71124.05, 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. The NRC requests that these documents be provided to the inspectors no later than June 1, 2017.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Ms. Christine Caudell (843) 857-1395 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, and its enclosure, will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Request for Withholding."

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Sincerely,

/RA: Steven P. Sanchez for/

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

Docket No. 50-261
License No. DPR-23

Enclosure:
Pre-Inspection Document Request

cc: Distribution via Listserv

SUBJECT: H.B. ROBINSON NUCLEAR PLANT - NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

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Pre-Inspection Document Request

Occupational and Public Radiation Safety Cornerstone

Inspection Dates: June 19 – 23, 2017

Documents Due to Region II by: June 1, 2017

Licensee: H.B. Robinson Nuclear Plant

Docket Number: 05000261

Inspection Procedure: 71124.02 Occupational ALARA Planning and Controls
71124.03 In-Plant Airborne Radioactivity Control and Mitigation
71124.04 Occupational Dose Assessment
71124.05 Radiation Monitoring Instrumentation
71151 Performance Indicator Verification (Radiation Safety cornerstones only)

Lead Inspector: Wade Loo, Senior 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. Pay particular attention to the date ranges for the items requested as they may change from item to item. If there are questions regarding the documents requested, or if the documents cannot be provided by the due date of June 1, 2017, please do not hesitate to contact the lead inspector, Wade Loo at (404) 997-4727.

Miscellaneous

1. List of primary contacts for each inspection area including names and telephone numbers
2. Plant Management, Radiation Protection, and Chemistry organizational charts w/ contact numbers.
3. List of radiation protection procedures, including title and number.
4. Most recent DAW 10 CFR Part 61 analytical results.
5. Schedule of major activities (Gantt chart if available), including work activities to be conducted during the week of the inspection (i.e., Any work activities that would incur any significant dose, calibrations of plant fixed radiation monitors)
6. Corrective action program (CAP) procedures

71124.02 - ALARA Planning and Controls

(Last inspected May 2015)

1. Site and corporate procedures associated with maintaining exposure ALARA, including those involving ALARA work activities. These procedures should include ALARA program

Enclosure

implementation, RWP preparation and worker compliance, estimating and tracking specific exposures for work activities, making changes to dose estimates during task performance, work controls, engineering controls, temporary shielding, exposure mitigation requirements, and source term reduction.

2. List of top five dose jobs for the last refueling outage and associated ALARA planning packages (including dose estimates, work-hour estimates, special HP controls, and dose reduction initiatives).
3. Annual ALARA and refueling outage reports since May 2015.
4. Annual ALARA goals for 2016 and 2017, and the methodology utilized to make the projections.
5. Current status/characterization of plant source term, as well as any relevant plans or actions to reduce it (e.g., Source Term Reduction Strategic Plan).
6. Summaries of the last four ALARA Committee Meetings (e.g., meeting minutes).
7. Completed ALARA packages (including post-job reviews) for the five work activities that had the greatest collective dose and were completed during the last refueling outage.
8. List of shielding packages for the last refueling outage.
9. Shutdown survey results for the last two outages.
10. Self-assessments or audits of ALARA program since May 2015.
11. List of NCRs, ARs, CRs, etc. related to the ALARA program issued since May 2015. This should be a list of corrective action documents containing NCR, AR, CR, etc. numbers and brief descriptions, not full documents.

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

(Last inspected May 2015)

1. Site and corporate procedures related to airborne monitoring and control. These procedures should include operation, calibration, maintenance, and set-point determination of air sampling equipment; issuance, use, training, fit-testing, storage, maintenance, and quality assurance (QA) of respiratory protective equipment, including Self-Contained Breathing Apparatus (SCBA) and air-supplied respirators; SCBA maintenance of vital components (i.e., regulators); determination and verification of Grade D air for SCBAs; use of containment purge; use of portable High Efficiency Particulate Air (HEPA) / charcoal units; Total Effective Dose Equivalent (TEDE)-ALARA determinations; and alpha air sampling.
2. Two most recent HEPA filter Dioctyl phthalate (DOP) and charcoal test results for the following ventilation systems:
 - Control Room Ventilation
 - Radwaste Processing Building Ventilation
 - Auxiliary Building Ventilation
 - Containment Ventilation
3. All records of grade D air quality certification for breathing air supply systems for SCBAs and air-supplied respirators filling equipment since May 2015.
4. Last two surveillances performed on SCBAs stored for emergency use.
5. SCBA qualification records:
 - a. Vendor training certificates for all individuals qualified to repair SCBA vital components.
 - b. List of all licensed operators, maintenance/I&C personnel, and HP personnel qualified to use SCBAs.
 - c. Inventory, inspection, and maintenance records for SCBA equipment.
6. Audits or self-assessments covering airborne controls and respiratory protection since May 2015.

- List of NCRs, ARs, CRs, etc. related to airborne controls and respiratory protection since May 2015. This should be a list of corrective action documents containing NCR, AR, CR, etc. numbers and brief descriptions, not full documents.

71124.04 Occupational Dose Assessment

(Last inspected May 2015)

- Site and corporate procedures related to internal and external dose monitoring (i.e., dosimetry issuance and use). These procedures should include guidance for multi-badging; monitoring in steep/highly variable dose rate gradients; personnel contamination events; storage/care of personal dosimeters; use of electronic dosimeters (EDs) including evaluation of any biases identified relative to TLD monitoring; internal dose assessment (i.e., both *in-vivo* and *in-vitro* bioassay and air sampling capabilities); guidance for calibration, QC, and use of whole body counter (WBC); release of contaminated individuals; use of passive monitoring as screening method for evaluations; special *in-vitro* sample collection and analysis; and actions for declared pregnant workers (DPW).
- National Voluntary Laboratory Accreditation Program (NVLAP) accreditation documentation for current dosimetry used by the site.
- List of all positive WBCs results, *in-vitro* or air sampling analyses that resulted in an assigned committed effective dose equivalent (CEDE) equal to or exceeding 10 millirem since May 2015. *[Note: Only a listing should be provided for use by the inspectors to select a sample of issues for in-depth review during the onsite inspection].*
- List of all personnel contamination events identified since May 2015. *[Note: Only a listing should be provided for use by the inspectors to select a sample of issues for in-depth review during the onsite inspection].*
- A list of personnel who have received approved dose extensions since May 2015.
- Audits or self-assessments covering the dosimetry program since May 2015.
- List of NCRs, ARs, CRs, etc. related to internal and external dosimetry since May 2015. This should be a list of corrective action documents containing NCR, AR, CR, etc. numbers and brief descriptions, not full documents.

71124.05 Radiation Monitoring Instrumentation

(Last inspected May 2015)

- Site and corporate procedures related to radiation monitoring instrumentation. These procedures should include use of portable instrument calibrators (e.g., Shepherd/Hopewell calibrators); calibration and functional test/source checks of portable radiation detection instrumentation; calibration and functional tests of small article monitors (SAMs), personnel contamination monitors (PCMs), portal monitor (PMs), WBC equipment, and continuous air monitors (CAMs); determination of set-points for Area Radiation Monitors (ARMs), CAMs, PCMs, PMs and SAMs; QA program for count room instruments (e.g., laboratory inter-comparison data); and collection and analysis of high-range post-accident effluent samples.
- Last two calibration records for the containment high-range post-LOCA radiation monitors.
- List of the following monitors currently in service (including serial number, location, and model information): (*Specific calibration records will be selected for review during the onsite inspection*)
 - All SAMs at radiological controlled area (RCA) exit points
 - All PCMs at RCA exit points
 - All PMs at RCA exit points and the protected area (PA) exit

- All count room High-Purity Germanium and Liquid Scintillation counters
 - All in service portable radiation survey instruments available for use (including air samplers, friskers, telepoles/teletectors, and dose rate measuring instruments)
4. Documentation for the sources used to calibrate the above requested monitors showing traceability to the National Institute of Standards & Technology/National Bureau of Standards (NIST/NBS), and to the primary calibration, as applicable.
 5. Last two calibration records of the portable instrument calibrator (e.g., Shepherd/Hopewell validation testing/dose rate curves).
 6. Last two calibration records for the WBC (and PM if passive monitoring used)
 7. List of any Emergency Action Level (EAL) value(s) associated with installed or portable radiation monitoring instrument indication(s). Last two system health reports for the Radiation Monitoring systems.
 8. Any modification(s), upgrade(s), or replacement(s) performed on installed radiation monitoring instrumentation (e.g., area radiation monitors, CAMs, RCA release point monitors, WBCs, and count room instruments) since May 2015.
 9. Audits or self-assessments covering HP instruments (portables, RCA exit point, WBC, count room) since May 2015. Include any reviews conducted of vendor facilities, as applicable.
 10. List of NCRs, ARs, CRs, etc. related to radiation monitoring instrumentation since May 2015. This should be a list of corrective action documents containing NCR, AR, CR, etc. numbers and brief descriptions, not full documents.

71151 - Performance Indicator Verification

(Last inspected January 2016)

1. Site and corporate procedures for gathering and reporting performance indicator (PI) data.
2. Monthly/Quarterly PI reports since January 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. List of all corrective action documents since January 2016, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked LHRA door, etc.
5. List of all corrective action documents since January 2016, using keywords such as: abnormal/ unmonitored effluent release, etc.
6. List of all ED dose and dose rate alarms (including setpoints and the dose / dose rate received), since January 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, audio/visual surveillance for remote job coverage, and calibration of plant fixed radiation monitors.

Inspector Contact Information:

Wade Loo
Senior Health Physicist
US NRC Region II
(404) 997-4727
Wade.Loo@nrc.gov

Mailing Address:

U.S. Nuclear Regulatory Commission
Region II
ATTN: Mr. Wade Loo
245 Peachtree Center Ave., N.E
Suite 1200
Atlanta, GA 30303