From:	Kellner, Bob
To:	Sherrill, Thomas M
Cc:	Diaz, Jose; Rivera, Jonathan
Subject:	NRC 2021 Radiation Safety Inspection - Brunswick 2021002
Date:	Wednesday, January 13, 2021 10:34:00 AM
Attachments:	BRU 2021002 RP Document Request List.pdf

Tom,

Thank you for confirming that you will be the point of contact for the upcoming scheduled Radiation Safety Inspection at Brunswick.

Attached is the Request for Information for the inspection. The request includes a list of the documents we routinely request for Inspection Procedures (IPs) 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and 71151. If you plan to upload the requested documents to CERTREC, using software to 'zip' the numerous files into a single file prior to upload has proven to be very efficient.

As mentioned previously, the plan is to be onsite the weeks of March 1- 4 and March 29 - April 2, 2021. As of now, Jose Diaz and I will be onsite both weeks. Jonathan Rivera will also be onsite the second week.

Depending on how things evolve, and if COVID-19 work and travel limitations are effected, we may have to pursue some combination of partial, remote, or reduced on-site inspection time to complete the inspection activities. Please update me if Duke or Brunswick decides to modify, reduce, or limit onsite access. I will you let you know if I receive any information on restriction of travel from NRC management.

Please let me know if you have any questions.

Regards,

Bob

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ML21019A377

Brunswick Steam Electric Plant

Radiation Safety Baseline Inspection
Initial Information Request
Inspection Report: 2021002

During the weeks of March 1- 4 and March 29 - April 2, 2021, the NRC will perform a baseline Radiation Safety Inspection at the Brunswick Steam Electric Plant (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and 71151).

Experience has shown that this inspection is resource-intensive for both the NRC inspectors and your staff. In order to minimize the impact to your onsite resources and to ensure a productive inspection, we are requesting in advance documents needed for this activity. It is important that all documents are up-to-date, and complete, thereby minimizing the number of additional documents requested during the preparation, and/or the onsite portions of the inspection. The NRC requests that these documents be provided to the inspectors no later than February 19, 2021.

If there are any questions about this inspection or the material requested, please contact the lead inspector, Robert Kellner at Robert.Kellner@nrc.gov, at 404-997-4508, or the Engineering Branch 3 Chief, Binoy Desai at 404-997-4519.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, “Public inspections, exemptions, requests for withholding,” a copy of this document will be available electronically for public inspection in the NRC Public Document Room, or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS); accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Document Request List

Occupational and Public Radiation Safety Cornerstones

Inspection Dates:	March 1- 4 and March 29 - April 2, 2021	
Documents Due to Region II by:	February 19, 2020	
Inspection Procedures:	IP 71124.01	Radiological Hazard Assessment and Exposure Controls
	IP 71124.02	ALARA Planning and Controls
	IP 71124.03	In-plant Airborne Radioactivity Control and Mitigation
	IP 71124.04	Occupational Dose Assessment
	IP 71124.05	Radiation Monitoring Instrumentation
	IP 71151	Performance Indicator Verification

Lead Inspector & Mailing Address:

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Note: Current version of these documents is expected unless specified otherwise. Secure file server access (Certrec, SharePoint, etc.), or electronic media (CD/DVD), is preferred. To the extent possible, please organize the information as it is arranged below. Experience has shown that poorly organized files can lead to a less efficient inspection and places additional burden on licensee staff. 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 is requested from **March 1, 2020** to present for IPs 71124.01 and 71151. Documentation for all other IPs is requested from **March 1, 2019** to present. We would prefer as much of the information as possible in electronic form. An index of the files is also helpful. For those items requesting a list of documents/areas, the inspector will may select documents/areas from the list for on-site review.

Miscellaneous

1. List of primary contacts for each inspection area including names and telephone numbers
2. Plant Management, Radiation Protection (RP), and Chemistry organizational charts w/ contact numbers
3. Corrective action program procedure(s)
4. List of radiation protection procedures, including title and number
5. Most recent 10 CFR 61 analysis for the DAW waste stream
6. Outage schedule, including planned work activities to be conducted during the weeks of the inspection (e.g. Gantt chart or similar list).

71124.01 - Radiological Hazard Assessment and Exposure Controls
(Last inspected March 2020)

1. Site and/or corporate procedures related to RP controls (e.g. Posting, labeling, surveys, survey frequency, RWPs, contamination control, HRA/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots, ISFSI Controls, etc.)
2. Procedures related to release of personnel and materials (e.g. release surveys, decontamination, guidance for alarm follow-up, etc.)
3. List of planned outage & active online Radiation Work Permits (RWPs), including dose and dose rate limits.
4. List of locations, or plant maps indicating the location, of LHRAs and VHRAs. Include areas with the potential to become a LHRA during routine operations or outages.
5. List of all non-fuel items stored in spent fuel pool (e.g. used filters, irradiated hardware, etc.).
6. Technical basis documents (white paper, engineering calculation, etc.) related to the facility beta-gamma and alpha radiation characterization.
7. All self-assessments or audits covering radiological hazard assessment and exposure controls and HP controls since March 1, 2020 (if none, then provide the two most recent).
8. List of Corrective Action Program (CAP) documents (CR, NRC, AR, etc.) related to RP controls (e.g., radworker error, HP technician error, posting issues, Nationally Tracked Sources issue, HRA/LHRA/VHRA issues, survey problems, etc.) generated since March 1, 2020. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*

71124.02 - ALARA Planning and Controls
(Last inspected March of 2019)

1. Site and/or corporate procedures related to implementation of the ALARA Program and associated procedures for maintaining dose ALARA including permanent and temporary shielding processes.
2. List of ALARA planning packages for the upcoming U2 outage
3. Copies of the ALARA Committee meeting minutes, with attendance, indicating approval of the upcoming outage dose goals.
4. 2019 & 2020 (if available) annual ALARA reports.
5. Completed ALARA packages for the last outage for five work activities that had the greatest collective dose, and/or presented significant radiological risk.
6. Site ALARA goals for 2021.
7. Plant source term reduction strategy and results achieved since March 1, 2019.
8. List of CAP documents (CR, NRC, AR, etc.) generated since March 1, 2019 related to the ALARA program. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation
(Last inspected March 2019)

1. Site and/or corporate procedures related to airborne monitoring and control (e.g. use of purge systems, use of portable HEPA/charcoal units, temporary ventilation enclosures, use of CAMs, air sampling guidance, Alpha air sampling, etc.)
2. Procedures related to the use of respiratory protection devices (e.g., self-contained breathing apparatus (SCBA), total effective dose equivalent-ALARA guidance, powered air

purifying respirators (PAPRs), storage, maintenance, training, quality assurance (QA), and fit-testing).

3. The two (2) most recent grade D air testing certificates for each breathing air system and SCBA filling station.
4. Documentation of the last two (2) surveillances performed on SCBAs and negative pressure respirators available for emergency use.
5. Two most recent surveillances that verify the flow rates for the following equipment/systems:
   a) Reactor Building Ventilation System
   b) Fuel Handling Building Exhaust System
   c) Main Vent Stack
   d) Liquid Radwaste Discharge Line
6. Two most recent in-place HEPA filter and charcoal filter efficiency test results for the following systems:
   a) Control Building Ventilation System
   b) Turbine Building Ventilation System
   c) Standby Gas Treatment System
7. List of in service, or available for use, temporary ventilation systems (e.g. HEPA/charcoal negative pressure units, downdraft tables, tents, etc.).
8. List of in service, or available for use, HEPA vacuums.
9. Most recent audit or self-assessment covering airborne controls and respiratory protection.
10. List of CAP documents (CR, NCR, AR, etc.) related to airborne monitoring and respiratory protection generated since March 1, 2019. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*
11. Available for onsite review during inspection
    a) Inventory, inspection and maintenance records for respiratory protection devices and SCBA equipment.
    b) Training records, including fit test dates, for SCBA qualified individuals
       i. List of all licensed operators qualified to wear an SCBA
       ii. List of site ERO personnel qualified to wear an SCBA
       iii. List of all RP personnel qualified to wear an SCBA
    c) Training/qualification certificates for all onsite and/or vendor personnel qualified to repair SCBA that performed maintenance or repairs from March 1, 2019 to present.

71124.04 - Occupational Dose Assessment

(Last inspected March 2019)

1. Site and/or corporate procedures related to occupational dose assessment (e.g. external dose monitoring, dosimetry issuance and use, unusual dosimetry occurrences, multi-badging/extremity dosimetry/badge relocation, Effective Dose Equivalent (EDE), personnel contamination events PCEs, storage/care of personal dosimeters, use of electronic dosimeters, *in-vivo* and *in-vitro* internal dose assessment, skin dose assessment, QC for whole body counter, use of passive monitoring, if applicable, and declared pregnant workers).
2. NVLAP accreditation documentation for the 2019, 2020, and current year dosimetry used by the site as the dose of record.
3. Copy of the current facility neutron characterization and prospective dose evaluation, if available.
4. Most recent site-specific comparison/evaluation of TLD/OSL to electronic alarming dosimeter (EAD).
5. List of all positive air-sampling, whole body count, or in vitro analyses which resulted in

assignment of CEDE dose to an individual or required any kind of evaluation since March 1, 2019. *[Note: only a listing should be provided for use by the inspectors to select a sample of issues for review during the onsite inspection]*

6. Copies of Whole Body Counter nuclide libraries for routine and evaluation analysis
7. Technical basis documents (white paper, engineering calculation, etc.) related to passive whole body counting, if used.
8. List of all PCEs identified since March 1, 2019. *[Note: only a listing should be provided for use by the inspectors to select a sample of issues for review during the onsite inspection.]*
9. Most recent audit or self-assessment of the dosimetry program, and the most recent audit of the lab that processes site dosimetry.
10. List of CAP documents (CR, NRC, AR, etc.) related to internal or external dosimetry issues/events generated since March 1, 2019. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*

71124.05 - Radiation Monitoring Instrumentation

(Last inspected March 2019)

1. Radiation Protection and Maintenance procedures/guidance documents, as applicable, for the following:
   a) Calibration and functional test/source checks of portable radiation detection instruments
   b) Calibration and functional tests of small article monitor, personnel contamination monitor, portal monitor, counting room equipment, electronic alarming dosimeters, whole body counting equipment, and continuous air monitors
   c) Calibration of process and radiation monitors from systems that could result in a radioactive effluent release under normal and post-accident conditions (e.g. main stack radiation monitoring, condenser off-gas monitoring,
   d) Collection and analysis of high-range, post-accident effluent samples and sampling equipment
   e) Determination of set-points for area radiation monitor, CAM, PCM, PM, and SAM equipment used for area and personnel monitoring
   f) Calibration of installed area and ventilation radiation monitors
   g) QA program (inter-laboratory comparison program) for count room instruments
2. The two (2) most recent calibration records for each of the following instruments:
   a) Unit 2 Main Steam Line Monitors
   b) Main Control Room Radiation Monitor
   c) Unit 2 Condenser Off-Gas Radiation Monitors
   d) Unit 2 TIP Room ARM (Channel 2-21)
   e) Main Stack Radiation Monitoring System (ALL ranges low (normal) and mid/high (accident) range)
   f) Unit 2 High Range Drywell Area Radiation Monitors
   g) Liquid Waste Discharge Radiation Monitor
3. Documentation showing traceability to NIST and/or the primary calibration for the radioactive sources used to calibrate the instruments in item 2 above.
4. Emergency plan documents identifying which radiation monitors are used to determine emergency action levels (EALs).
5. Chart or procedure identifying emergency action levels (EALs) and actions associated with radiation monitors (if applicable).
6. Provide a current list of in service (available for use) SAMs, PCMs, PMs, air samplers, continuous air monitors (CAMs), portable radiation detection instruments, counting room (RP and Chemistry), and whole body counters. *[Note: The list will be used to select*

monitors for evaluation during the onsite inspection.)

7. Most recent calibration/test record for the instrument calibrator (e.g. Shepherd validation testing/dose rate curves)
8. Design documents and/or calculations showing how the alarm setpoints for the following instruments are determined:
   a) PCMs and PMs at the RCA and Protected Area exit points
   b) CAMs
9. Result of the Inter-Laboratory Comparison Program since March 1, 2019.
10. Most recent Radiation Monitoring System engineering performance review/evaluation or system health report, if applicable.
11. Most recent audit or self-assessment covering RP instruments (e.g. portables, RCA exit point, WBC, count room). Include any reviews conducted of vendor facilities, as applicable
12. List of CAP documents (CR, NRC, AR, etc.) related to portable instruments, area monitors, CAMs, RCA release point monitors, WBCs, and count room instruments generated since March 1, 2019. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*

71151 - Performance Indicator Verification (Occupational and Public Cornerstones)
(Last inspected March 2020)

1. Site, Corporate, and radiation protection specific procedure(s) for identifying, reporting, tracking, and correcting performance indicator (PI) occurrences.
2. Monthly PI reports since March 1, 2020, and copies of associated condition reports for any Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) Radiological Effluent occurrences.
3. List of all CAP documents using search keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, RETS/ODCM, abnormal or unmonitored release, offsite dose, and effluent release, etc. since March 1, 2020. *This should be a list of corrective action documents containing a CAP document number and a brief description, not complete documents.*
4. Last liquid and gaseous effluent release permit for CY 2020 which specifies the quarterly and annual (year to date) curies released by isotope and the associated public dose assessment(s).
5. List of all electronic dosimeter (ED) dose and dose rate alarms, since March 1, 2020.

Assistance Requested During On-Site Inspection

- Identification of radiological work activities available during the inspection week for observation, including notification of pre-job briefings, notification of risk significant work activities, and location of audio/visual surveillance for remote job coverage.
- Health physics assistance in coordinating observation of radiological job coverage activities and performing plant walk-downs.

Inspector Contact Information:

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