



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

February 1, 2013

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2801

**SUBJECT: BROWNS FERRY NUCLEAR PLANT – NOTIFICATION OF INSPECTION AND
REQUEST FOR INFORMATION**

Dear Mr. Shea:

On March 25-29, 2013, and April 8-12, 2013, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Occupational and Public Radiation Safety inspection at the Browns Ferry Nuclear Plant, (NRC Inspection Procedure 71124.01, Radiological Hazard Assessment and Exposure Controls, 71124.02, Occupational ALARA Planning and Controls, 71124.03, In-Plant Airborne Radioactivity Control and Mitigation and 71124.04 Occupational Dose Assessment, 71124.05 Radiation Monitoring Instrumentation and 71151 Performance Indicator Verification (Occupational and Public Radiation Safety Cornerstones). In order to minimize the impact to your on-site resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. 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 on-site portions of the inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Steve Austin at (256) 729-2070 of your organization that the material be available for review by March 12, 2013. Our inspection dates are subject to change based on your updated schedule of outage activities. If there are any questions about this inspection or the material requested, please contact the lead inspector Ruben Hamilton at (404) 997-4672 (ruben.hamilton@nrc.gov).

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Sincerely,

/RA/

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

Docket No. 05000259, 05000260, 05000296
License No. DPR-33, DPR-52, DPR-68

Enclosure:
Pre-Inspection Document Request

cc: (See page 3)

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cc: (See page 3)

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ADAMS: Yes ACCESSION NUMBER: ML13037A166 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII: DRS/PSB1	RII: DRS/PSB1					
SIGNATURE	/RA/	/RA/					
NAME	R. HAMILTON	B. BONSER					
DATE	1/29/2013	2/1/2013			2/ /2013	2/ /2013	2/ /2013
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRS\II\PSB1\INFORMATION REQUEST LETTERS\BROWNS FERRY\BROWN FERRY NOI AND RFI REV1.DOCX

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Pre-Inspection Document Request

Licensee: Browns Ferry Nuclear Plant

Inspection Dates: March 25-29, and April 8-12, 2013

Documents Due to Region by: March 12, 2013

Inspection Procedures:

71124.01	Radiological Hazard Assessment and Exposure Controls
71124.02	Occupational ALARA Planning and Controls
71124.03	In-Plant Airborne Radioactivity Control and Mitigation
71124.04	Occupation Dose Assessment
71124.05	Radiation Monitoring Instrumentation
71151	Performance Indicator Verification

Lead Inspector: Ruben Hamilton
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Note: Unless specified otherwise, the current version of these documents is expected. Electronic media is preferred if readily available. (The preferred file format is MSWord, or searchable “.pdf” files on CDROM). *Note that the inspectors cannot accept data provided on USB or “flash” drives due to NRC IT security policies.* To the extent possible, please organize the information in the order shown below. Experience has shown that a poorly organized CD leads to a less efficient inspection and places additional burden on licensee staff. If there are questions regarding the documents requested, please do not hesitate to contact the lead inspector. During the inspection, the inspectors may request additional documents. If the licensee wishes to use an electronic document service such as CERTRAC or a SharePoint portal the inspectors will try to accommodate for the documentation requested on-site. The initial documents should not require an internet connection to be reviewed.

We would prefer as much of the information as possible in electronic form. An index to the CD contents is also helpful. For those items requesting a list of documents/areas, the inspectors will select documents/areas from the list for on-site review. If any of the requested information is too burdensome to provide electronically or as hard copies, simply indicate that the requested material is available for on-site review by the inspectors.

If you have any questions, please call Ruben Hamilton at (404) 997-4672. Thank you in advance for your efforts in putting together this material.

Assistance Requested During On-Site Inspection

1. Identification of work activities during the inspection for inspector observations, including notification of pre-job briefings.

Enclosure

2. Health physics assistance in plant walk-downs assessing radiological hazards and exposure controls, e.g. verifying the posting and locking of entrances to locked-high radiation areas and very high radiation areas, spent fuel pool controls, and radioactive material storage areas.
3. An onsite discussion with Chemistry and RadCon about the controls implemented to control work and effluent / environmental releases associated with the recent rad waste system failures.
4. Health physics and system engineer assistance in plant walk-downs and discussion of large and/or installed radiation monitors and systems.

General Information Needed

1. Plant Management, Radiation Protection, and Chemistry organizational charts with contact numbers.
2. Electronic copy of UFSAR chapters 11 and 12 (radwaste and radiation protection).
3. Corrective action program procedure.
4. Outage schedule of major activities (Gantt chart if available).
5. Audits and self-assessments performed since the last inspection that encompasses the areas of (1) radiation protection, (2) access controls, and (3) ISFSI.
6. List of radiation protection procedures, including title and number.

71124.01 - Radiological Hazard Assessment and Exposure Controls

1. List of active radiation work permits, including those specific to outage activities, with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
2. Procedures related to HP controls (e.g., Posting, labeling, surveys, RWPs, contamination control, HRA/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots, etc.).
3. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, guidance for alarm follow-up, etc.).
4. List of Nationally Tracked Sources and any change-of-ownership transactions.
5. Inventory list of all sealed sources stored onsite.
6. List of all non-fuel items stored in spent fuel pool.
7. HP plan for monitoring and controlling hazards associated with potential fuel leakers during the upcoming outage.
8. Most recent self-assessment or audit covering hazard assessment and exposure controls.
9. List of NCRs related to HP controls (e.g., radworker error, HP technician error, posting issues, HRA/LHRA/VHRA issues, survey problems, etc.) issued since March 2012. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*

71124.02 - Occupational ALARA Planning and Controls

1. All procedures related to ALARA (e.g., temporary shielding, ALARA planning, source term reduction, etc.).
2. List of top five dose jobs for the upcoming refueling outage and ALARA planning packages (including dose estimates, work hour estimates, special HP controls, and dose reduction initiatives), if available.
3. List of temporary shielding requests generated for the upcoming outage.
4. ALARA trending point data for last two outages.
5. Source term reduction strategic plan, if available.

6. Minutes from the last four Plant ALARA Committee Meetings.
7. Post-outage ALARA report for the last Unit 1, 2 and Unit 3 refueling outages.
8. Annual ALARA goal for 2013 and the methodology utilized to make the projections.
9. Completed ALARA packages (including post-job reviews) for five work activities completed during the 2012 spring outage which had the greatest collective dose. *Note that if these are included in Item 7, then there's no need to provide duplicate information.*
10. Most recent self-assessment or audit of ALARA program.
11. List of NCRs related to ALARA since March 2011. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

1. Procedures related to airborne monitoring and control (e.g., use of containment purge, use of portable HEPA/charcoal units, temporary ventilation enclosures, use of CAMs, air sampling guidance, Alpha air sampling, etc.), as applicable.
2. Procedures related to the use of respiratory protection devices, (e.g., SCBA, TEDE-ALARA guidance, PAPRs, storage, maintenance, training, QA, fit-testing, etc.).
3. The last two grade D air testing certificates for supplied air systems and SCBA filling equipment.
4. SCBA qualification records
 - a) Vendor training certificates for all onsite individuals qualified to repair SCBA
 - b) List of all licensed operators qualified to use SCBA
 - c) List of all maintenance personnel qualified to use SCBA
 - d) List of all HP personnel qualified to use SCBA
5. Documentation for last two surveillances performed on SCBA stored for emergency use.
6. Most recent audit, or self-assessment, covering airborne controls and respiratory protection
7. List of NCRs related to airborne monitoring and respiratory protection since March 2011. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*

71124.04 - Occupational Dose Assessment

1. 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, personnel contamination events, 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, declared pregnant workers).
2. NVLAP accreditation documentation for current dosimetry used by site.
3. List of all positive whole body counts, in vitro, or air sampling analyses which resulted in an assigned CEDE equal to or exceeding 10 millirem since March 2011. *[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]*
4. List of all personnel contamination events identified since March 2011. Include full documentation for any PCEs requiring skin dose assessment. *[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, however please include full dose assessment documentation as applicable]*
5. Most recent audit or self-assessment of the dosimetry program and the most recent audit of the lab that processes site dosimetry.

6. List of NCRs generated since March 2011, for internal or external dosimetry issues/events. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*

71124.05 - Radiation Monitoring Instrumentation

1. Procedures/Guidance Documents for:
 - a) Use of portable instrument calibrators (e.g., Shepherd calibrator)
 - b) Calibration and functional test/source checks of portable radiation detection instrumentation
 - c) Calibration and functional tests of small article monitor, personnel contamination monitor, portal monitor, whole body counting equipment, and continuous air monitors
 - d) Determination of set-points for the equipment identified in item 1(c) as well as for area radiation monitors
 - e) Collection and analysis of high-range, post accident effluent samples
 - f) QA program for count room instruments
2. The last two calibration records for the following monitors:
 - a) Unit 1 Post-accident Drywell High Range Area Monitor
 - b) Main Stack Monitor and Associated Sample Line Flow Rate Monitor(s)
 - c) Unit 2 Reactor Building Roof Vent Monitor
 - d) Radwaste Liquid Effluent Radiation Monitor
 - e) Unit 1 TIP Room Area Monitor
 - f) Portal Monitor Used in Dosimetry for Passive Monitoring
 - g) All SAMs at RCA exit point
 - h) All Whole Body Contamination Monitors (ARGOS) at RCA exit point
 - i) All Portal Monitors at RCA exit point
 - j) High-purity Germanium Detector No. 2
3. Documentation for the radioactive sources used to calibrate the above requested monitors showing traceability to a national standard (NIST) and traceability to the primary calibration, as applicable.
4. The last two surveillances performed on the Post-accident Sampling System, as applicable.
5. Chart or procedure listing EALs for radiation monitoring equipment.
6. The latest test record of the instrument calibrator (Shepherd validation testing/dose rate curves).
7. Latest system health report or Maintenance Rule report for the Radiation Monitoring system
8. Most recent audit or self-assessment covering HP instruments (portables, RCA exit point, WBC, count room); include any reviews conducted of vendor facilities, as applicable.
9. List of NCRs generated since July 2010 related to portable instruments, effluent and area monitors, CAMs, RCA release point monitors, WBCs, and count room instruments. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*

71151 - PI Verification (occupational and public cornerstones)

1. Procedure for gathering and reporting PI data.
2. List of all NCRs related to effluent dose/ODCM issues since March 2012. *This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*
3. List of all NCRs related to LHRA/VHRA issues or significant (>100 mrem) unintended doses since March 2012. *This should be a list of corrective action documents containing an AR number and brief description, not full CRs.*

4. Most recent gaseous and liquid effluent release permits showing year-to-date doses to the public.
5. 2012 Annual Radioactive Effluent Report OR an end-of-year public dose report if the official Effluent Report is not ready yet.
6. List of electronic dosimeter alarms since March 2012 (dose and dose rate).

Inspector Contact Information

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