



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

August 12, 2015

Mr. Ken Walsh, Sr.
Site Vice President
Tennessee Valley Authority
Watts Bar Nuclear Plant
P.O. Box 2000 (Mail Stop ADM 1V-WBN)
Spring City, TN 37381-2000

**SUBJECT: WATTS BAR (UNIT 1) NUCLEAR PLANT - NOTIFICATION OF INSPECTION
AND REQUEST FOR DOCUMENTS**

Dear Mr. Walsh:

During the weeks of October 5 – 9, 2015, and October 19 – 23, 2015, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at the Watts Bar Unit 1 Nuclear Plant (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, 71151, and portions of Temporary Instruction 2800/041). 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 September 23, 2015.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Rusty Proffitt. If there are any questions about this inspection or the material requested, please contact the lead inspector, Adam Nielsen at 404-997-4660, or the Plant Support Branch 1 Chief, Brian Bonser at 404-997-4653.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public inspections, exemptions, requests for withholding" of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, and its Enclosure, 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>.

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.

Sincerely,

/RA/

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

Docket No. 50-390
License No. NPF-90

Enclosure:
Document Request List

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Sincerely,

/RA/

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

Docket No. 50-390
License No. NPF-90

Enclosure:
Document Request List

DISTRIBUTION:

A. Blamey, RII, DRP
C. Kontz, RII, SR PE
B. Bishop, RII, PE
S. Roberts, RII, RIDP
J. Nadel, RII, SRI
J. Hamman, RII, RI
S. Price, RII, ORA/RC
P. Lee, RII, EICS
RIDSNNRRDIRS
PUBLIC

☒ PUBLICLY AVAILABLE

☐ NON-PUBLICLY AVAILABLE

☐ SENSITIVE

☒ NON-SENSITIVE

ADAMS: ☒ Yes ACCESSION NUMBER: ML15225A097

☒ SUNSI REVIEW COMPLETE

☒ FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1					
SIGNATURE	ADN	BRB1					
NAME	A. Nielsen	B. Bonser					
DATE	8/ 12 /2015	8/ 12 /2015					
E-MAIL COPY	YES NO	YES NO					

OFFICIAL RECORD COPY

Document Request List

Inspection Dates: October 5 - 9, 2015
October 19 - 23, 2015

Documents Due to Region II by: September 23, 2015

Inspection Procedures:	IP 71124.01	Radiological Hazard Assessment and Exposure Controls
	IP 71124.02	Occupational 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
	TI 2800/041	10 CFR Part 37, Materials Security Review at Facilities with a 10 CFR Part 73, Physical Protection Program

Lead Inspector: Adam Nielsen
Sr. Health Physicist
US NRC Region II
404-997-4660
Adam.Nielsen@nrc.gov

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, please do not hesitate to contact the lead inspector.

Miscellaneous

1. List of primary contacts for each inspection area w/phone numbers
2. Corrective action program procedure(s)

71124.01 - Radiological Hazard Assessment and Exposure Controls

1. Timeline of major outage activities (e.g., Gantt chart or similar list)
2. Procedures related to health physics (HP) controls (e.g., Posting, labeling, surveys, Radiation Work Permits (RWPs), contamination control, high radiation area (HRA)/locked high radiation area (LHRA)/very high radiation area (VHRA) control, key control, control of divers, special controls during fuel offload, hot spots)
3. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, guidance for alarm followup)
4. List of Nationally Tracked Sources and any change-of-ownership transactions
5. Most recent sealed source inventory record

Enclosure

6. List of all non-fuel items stored in spent fuel pool
7. Most recent self-assessment or audit covering HP controls
8. List of Problem Evaluation Reports (PERs) related to HP controls (e.g., radworker error, HP technician error, posting issues, HRA/LHRA/VHRA issues, survey problems) issued since April 19, 2014. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*

71124.02 - Occupational As Low As Reasonably Achievable Planning and Controls

1. All procedures related to As Low As Reasonably Achievable (ALARA) (e.g., temporary shielding, ALARA planning, source term reduction)
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. ALARA trending point data for last two outages
4. Source term reduction strategic plan, if available
5. Minutes from the last four Plant ALARA Committee Meetings
6. Most recent self-assessment or audit of ALARA program
7. List of PERs related to ALARA since August 17, 2013. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

1. Procedures related to airborne monitoring and control (e.g., use of purge systems, use of portable HEPA/charcoal units, temporary ventilation enclosures, use of continuous air monitors (CAMs), air sampling guidance, Alpha air sampling), as applicable
2. Procedures related to the use of respiratory protection devices, (e.g., self-contained breathing apparatus (SCBA), total effective dose equivalent (TEDE)-ALARA guidance, powered air purifying respirators (PAPRs), storage, maintenance, training, quality assurance (QA), fit-testing)
3. The last two grade D air testing certificates for each supplied air system and SCBA filling station
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 PERs related to airborne monitoring and respiratory protection since August 17, 2013. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*

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. National Voluntary Laboratory Accreditation Program (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 committed effective dose equivalent (CEDE) equal to or exceeding 10 millirem since August 17, 2013
4. List of all Level III personnel contamination events identified since August 17, 2013
5. Most recent audit or self-assessment of the dosimetry program and/or the most recent audit of the lab that processes site dosimetry
6. List of PERs generated since August 17, 2013, for internal or external dosimetry issues/events. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*

71124.05 - Radiation Monitoring Instrumentation

1. Procedures/Guidance Documents for:
 - (a) calibration and functional test/source checks of portable radiation detection instruments
 - (b) calibration and functional tests of small article monitor (SAM), personnel contamination monitor (PCM), portal monitor (PM), whole body counting equipment, and continuous air monitors (CAMs)
 - (c) collection and analysis of high-range, post-accident effluent samples
 - (d) QA program for count room instruments
2. The last two calibration records for each of the following instruments:
 - (a) 0-RE-90-101, A, B, C, Auxiliary Building Vent
 - (b) 1-RE-90-120, 121, S/G Blowdown Liquid
 - (c) 1-RE-90-271, RB Upper Compartment post-accident monitor (PAM)
 - (d) 1-RE-90-273, RB Lower Compartment PAM
 - (e) Whole Body Counter (WBC) in Dosimetry area
 - (f) All SAMs at radiological controlled area (RCA) exit point
 - (g) All PMs at RCA exit point
 - (h) All Whole Body Contamination Monitors at RCA exit point
 - (i) High-purity Germanium Detector No. 1
3. Documentation for the radioactive sources used to calibrate the instruments in item 2 above. For the Auxiliary Building Vent and the Containment Hi Range PAMs, also include paperwork showing traceability to a national standard (NIST) and/or traceability to the primary calibration, as applicable.
4. Design documents and/or calculations showing how the alarm setpoints for the following instruments are determined:
 - (a) 1-RE-90-271, RB Upper Compartment PAM
 - (b) SAMs at RCA exit
5. Chart or procedure listing emergency action levels (EALs) associated with radiation monitors (if applicable)
6. The latest test record of the calibrator used to calibrate and/or source check portable instruments (Shepherd validation testing/dose rate curves)
7. Latest system health 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 PERs generated since August 17, 2013, 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 a PER number and brief description, not full PERs.]*

71151 – Performance Indicator Verification (Occupational and Public Cornerstones)

1. Procedure for gathering and reporting performance indicator (PI) data

2. List of all PERs related to effluent dose/offsite dose calculation manual (ODCM) issues since April 19, 2014. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*
3. LIST of all PERs related to LHRA/VHRA issues or significant (>100 mrem) unintended doses since April 19, 2014. *[This should be a list of corrective action documents containing a PER number and brief description, not full PERs.]*
4. Most recent gaseous and liquid effluent release permits showing year-to-date doses to the public
5. LIST of electronic dosimeter alarms since April 19, 2014 (dose and dose rate)

TI 2800/041 – 10 CFR Part 37 (Health Physics portions only)

1. All procedures related to 10 CFR Part 37 compliance (storage of RAM, Part 37 Security Plan, etc.)*
2. List of all known locations of Category 1 and Category 2 material
3. All supporting calculations for determination of whether an aggregation of RAM meets the definition of Category 1 or Category 2 (e.g., warehouse calculation)
4. Shipping logs from April 1, 2014, to present.

*Please do not include Safeguards or Official Use Only information in the submittal. That information can be reviewed onsite.

LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable
CAMs	Continuous Air Monitors
CEDE	Committed Effective Dose Equivalent
EALs	Emergency Action Levels
HRA	High Radiation Area
HP	Health Physics
LHRA	Locked High Radiation Area
NVLAP	National Voluntary Laboratory Accreditation Program
ODCM	Offsite Dose Calculation Manual
PAM	Post-accident Monitor
PAPRs	Powered Air Purifying Respirators
PCM	Personnel Contamination Monitor
PERs	Problem Evaluation Reports
PM	Portal Monitor
RCA	Radiological Controlled Area
RWPs	Radiation Work Permits
SAMs	Small Article Monitors
SCBA	Self-contained Breathing Apparatus
TEDE	Total Effective Dose Equivalent
VHRA	Very High Radiation Area
WBC	Whole Body Counter