



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
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January 25, 2011

Mr. Mano Nazar  
Executive Vice President and Chief Nuclear Officer  
Florida Power and Light Company  
P.O. Box 14000  
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT UNIT 3 AND Unit 4 – NOTIFICATION OF INSPECTION AND  
REQUEST FOR INFORMATION

Dear Mr. Nazar:

During the weeks of April 11 – 15, 2011, and April 18 – 22, 2011, the NRC will conduct baseline radiation safety inspection activities at your Turkey Point Nuclear Plant site. The inspection will evaluate activities in the Occupational Radiation Safety Inspection cornerstone using NRC Inspection Procedures (IP) 71124.01, 71124.02, 71124.03, and 71124.08. The inspection also will review Performance Indicator (PI) verification and reporting activities associated with both the Occupational and Public Radiation Safety Inspection Cornerstones using IP 71151.

Experience has shown that this inspection is resource intensive both for the NRC inspectors and your staff. In order to minimize the impact to your on-site resources and to conduct 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 onsite portions of the inspection. The lead inspector has requested that the subject informational material be made available to the NRC staff by March 14, 2011, if not earlier, to allow preparation for the upcoming inspection

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Ms. Stavroula Mihalakea of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Wade T. Loo at (404) 997-4727.

In accordance with 10 CFR 2.390 of the NRC's Rules of Practice, 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 (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/ RA /**

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

Docket Nos.: 50-250, 50-251,  
License Nos.: DPR-31, DPR-41

Enclosure: Occupational Radiation Protection Inspection Document Request

cc w/encl: (See page 3)

FP&L

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## Pre-Inspection Document Request

### Occupational Radiation Safety Cornerstone

Licensee: Turkey Point Nuclear Plant  
Docket Numbers: 50-250, 50-251  
Inspection Dates: April 11 – 15, 2011, and April 18 - 22, 2011

### Inspection Procedures to be performed:

71124.01 Radiological Hazard Assessment and Exposure Controls  
71124.02 Occupational ALARA Planning and Controls  
71124.03 In-Plant Airborne Radioactivity Control and Mitigation  
71124.08 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation  
71151 Performance Indicator Verification

Documentation is requested from February 2009, to the present for all items; however, information for inspection procedure 71151 is requested from October 2010, to present.

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 Wade Loo at 404-997-4727. Thank you in advance for your efforts in putting together this material.

### Assistance Requested During On-Site Inspection

- Identification of work activities during the inspection for inspector observations, including notification of pre-job briefings, notification of diving 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 HDR-HRA and VHRA, and spent fuel pool controls.
- Health physics assistance in plant walk-downs/job coverage of ongoing outage activities to assess access controls and ALARA practices.
- Assistance in plant walk-downs of the solid and liquid radwaste processing systems.
- Discussions with appropriate individuals regarding access controls and ALARA planning.
- Schedule of transportation shipments during the inspection and notification of opportunities for observations of shipment preparation/receipt; discussions with appropriate individuals regarding the transportation program.

Enclosure

### General Information Request

- Telephone numbers of contacts.
- Plant and Radiation Protection organizational charts, including personnel involved in solid radwaste processing and transportation of radwaste/radioactive materials.
- Electronic copy of applicable chapters of UFSAR (e.g. radiation protection program, liquid and solid radioactive waste program, etc.).
- Outage schedule, including work activities to be conducted during the week(s) of the inspection.
- List of active radiation work permits, including those specific to outage activities, with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
- List of radiation protection procedures.
- Corrective Action Program procedures.
- Procedure(s) for identifying, notification, tracking, and correcting PI occurrences.
- List of all Performance Indicators (PIs) and copies of associated corrective action reports for Occupational Exposure Control Effectiveness, and RETS/ODCM Radiological Effluent Occurrences.
- Audits and self-assessments performed since the last inspection that encompass the areas of (1) access controls; (2) the ALARA program and implementation; (3) liquid and solid radwaste processing; (4) SCBAs; (5) air sampling instrumentation; and (6) transportation of radioactive material/radwaste.
- ALARA reviews and planning and associated RWPs for cask loading activities.
- Records of contamination incidents since the last inspection.

### 71124.01: Radiological Hazard Assessment and Exposure Controls

- Site and corporate procedures associated with the access control program. Procedures should include:
  - ▶ Radiological surveys, postings, and radiation control barricades.
  - ▶ Security and control of high radiation sources/objects stored in pools.
  - ▶ Radiation Work Permits.
  - ▶ Radiological Job-Coverage.
  - ▶ Controlling access to High Radiation Areas (HRAs), High Dose Rate High Radiation Areas (HDR-HRAs), and Very High Radiation Areas (VHRAs)
  - ▶ Key controls for all high radiation areas.
  - ▶ Radioactive material control, including contamination and hot particles.
- List of the 10 most exposure significant work areas within radiation areas, high radiation areas (<1R/hr), or airborne radioactivity areas in the plant. This may include areas with low dose rates but high collective dose. Identify any high radiation areas with significant dose gradients (factor of five or more), including underwater diving activities.

- List of LHRAs, HDR-HRAs (>25 rem in one hour @ 30 cm), and VHRAs. Include areas with the potential to become a LHRA during routine operations or outages.
- List of corrective action reports generated since the last inspection related to access controls, including the following:
  - ▶ Access controls, including high radiation area radiological incidents.
  - ▶ Radiological events caused by radiation worker errors.
  - ▶ Radiological events caused by radiation protection technician errors.
- Available for on-site review during inspection:
  - ▶ Elevation maps with most recent operating and outage radiation survey levels.
  - ▶ RWPs for the top five dose rate areas or tasks.

71124.02: ALARA Planning and Controls

- Site and corporate procedures associated with maintaining site dose ALARA, including those involving ALARA work activities. These procedures should include:
  - ▶ ALARA program implementation, including ALARA committee activities and ALARA planning, briefing, and reviews.
  - ▶ Radiation work permit preparation and worker compliance.
  - ▶ Processes used to estimate and track work activity specific exposures.
  - ▶ Making changes to dose estimates during task performance.
  - ▶ Work controls.
  - ▶ Engineering controls.
  - ▶ Exposure mitigation requirements.
- Most recent annual ALARA report and most recent refueling outage report.
- Annual ALARA goals for 2010, and 2011, and the methodology utilized to make the projections.
- Historic trends and current status of plant source term.
- List approximately 10-15 work activities planned during the inspection likely to result in the highest personnel collective exposures and those which present the greatest radiological risk to workers (e.g. work in HRAs, diving, potentially changing radiological conditions). Include the dose projections and ALARA package numbers.
- ALARA Committee activity summaries (e.g. meeting minutes) for three months or 3 meetings after the last refueling outage, and the three months or 3 meetings prior to the upcoming refueling outage.
- Completed ALARA packages (including post-job reviews) for the five work activities that were completed during the last outage, which had the greatest collective dose and/or presented significant radiological risk.

- List of five activities (including ALARA package number) from the previous outage in which the work scope changed or was extended, and alternative ALARA measures were taken to respond to the emergent conditions.
- List of five activities from the previous outage in which the estimated work hours were significantly different than the actual hours expended. List five activities in which the estimated and actual hours expended were accurate.
- Outline of the source term reduction strategy. Information should include:
  - ▶ Historic trends and current status of plant source term.
  - ▶ Factors that affect the source term.
  - ▶ Activities employed to reduce the source term.
  - ▶ Specific sources identified for reduction actions.
  - ▶ Source term reduction evaluation.
  - ▶ Results achieved since last inspection.
- List of activities since that last inspection that were reviewed for ALARA problems and actions taken to prevent recurrence. Include corrective action report number(s) if applicable.
- List of corrective action reports generated since the last inspection related to the ALARA program, including the following:
  - ▶ ALARA planning.
  - ▶ Post-job review identified problems.
  - ▶ Radiation worker practices.
  - ▶ Occurrences where the collective exposure was greater than intended dose determined to be ALARA for the individual work activities.
- Available for onsite review during the inspection:
  - ▶ ALARA planning packages for jobs being performed during the outage.
  - ▶ Temporary shielding requests generated for the outage.
  - ▶ Records of personnel monitored for radiation exposure that show the total TEDE to date for each person. If possible, sort individuals by work group.

71124.03: In-Plant Airborne Radioactivity Control and Mitigation

- Site and corporate procedures/manuals associated with airborne radiation monitoring instrumentation and respiratory protection. Procedures/manuals should include:
  - ▶ Operation, calibration, and maintenance of air sampling instrumentation, including set-point determination (e.g., low-vols, high vols, goosenecks, AMS 4s, etc.).
  - ▶ Calibration and maintenance of portable instruments.
  - ▶ Actions to be taken when air sampling instrumentation is found to be significantly out of tolerance/calibration.
  - ▶ Issuance and use of respiratory protective equipment (emphasis on SCBA and air-supplied equipment).

- ▶ Training, including fit-testing, for use of SCBA and supplied-air systems.
  - ▶ SCBA maintenance activities, including vital components (i.e. regulators).
  - ▶ Determination/verification of Grade D air for SCBA.
- Two most recent calibrations for the following CAM equipment:
- ▶ Control Room Ventilation.
  - ▶ Spent Fuel Pool.
  - ▶ Radioactive Waste Processing.
- Records of certification of air quality for equipment used to provide breathing air for air-supplied respirators and SCBA bottles since the last inspection.
- List of corrective action reports generated since the last inspection involving radiation monitoring and protective equipment deficiencies, including the following:
- ▶ Continuous air monitors.
  - ▶ Respiratory protection equipment and program implementation.
- Available for onsite review by inspector during inspection:*
- ▶ Inventory, inspection, and maintenance records for SCBA equipment.
  - ▶ Training records, including fit-testing, for SCBA-qualified individuals.
  - ▶ Training records/certification for individuals qualified to perform maintenance on vital components (e.g. regulators) on SCBA.
- 71124.08: Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation
- Site and corporate procedures/manuals describing licensee compliance with 10 CFR Parts 20, 61, and 71 and 49 CFR Parts 170-189. Procedures/manuals should include:
- ▶ Solid and liquid radwaste processing procedures.
  - ▶ Procedure(s) for transferring radioactive waste 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 radionuclide's, and (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.
- Process Control Program (PCP).
- Most recent Annual Radioactive Effluents Release Report.
- Most recent radio-chemical sample analysis results (i.e., "10 CFR Part 61" analysis) for each of the radioactive waste streams (e.g., dry active waste (DAW), ion exchange resins, mechanical filters, and sludges and activated materials, etc.).

- List and documentation of any changes made to the radioactive waste processing systems (liquid and solid), and/or the PCP since the last inspection and associated 10 CFR 50.59 documentation, as appropriate.
- Copies of applicable transport cask Certificate of Compliance for the last three transport cask shipments.
- Training and qualification records for personnel responsible for radioactive waste processing and radioactive material shipment preparation activities.
- Copy of the Radioactive Shipping Log for the last 12 months. (The inspector will select transportation shipping packages for review during the inspection).
- List of corrective action reports generated since the last inspection involving radioactive waste and radioactive material/waste transportation.
- Available for on-site review during the inspection:
  - ▶ Site drawing(s) showing the location of all stored radioactive materials and all stored radioactive waste.
  - ▶ Plant drawings sufficient to permit the inspector to walk-down the liquid and solid radioactive waste processing systems to verify current system configuration/operation agree with the descriptions contained in the UFSAR and in the PCP.
  - ▶ Documentation describing the status of any radioactive waste process equipment that is not operational and/or is abandoned in place.
  - ▶ Information concerning the site's waste disposal volume and waste reduction program.
  - ▶ Training curriculum and primary lesson plans for qualifying persons, including vendors, for radwaste processing, packaging, and making shipments of radioactive materials and radioactive waste as specified by 49 CFR 172.

IP 71151: Performance Indicator Verification

- Monthly/Quarterly PI reports since October 1, 2010, and copies of associated Condition Report documents for any Occupational Exposure or RETS/ODCM Radiological Effluent PI events occurrences.
- Liquid and gaseous effluent release permits which specify the quarterly (October 2010 – March 2011), annual CY 2010, and 4th quarter 2010, curies released by isotope and associated public dose assessments.
- List of all CR documents since October 1, 2010, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked LHRA door, etc.
- List of all corrective action documents since October 1, 2010, using keywords abnormal/unmonitored effluent release, etc.
- List of all electronic dosimeter (ED) dose rate alarms and all ED dose alarms since October 1, 2010.

Enclosure