

UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 101 MARIETTA STREET, N.W. ATLANTA, GEORGIA 30303

Report No.: 50-261/83-17

Licensee: Carolina Power and Light Company 411 Fayetteville Street Raleigh, NC 27602

Docket No.: 50-261

License No.: DPR-23

Facility Name: H. B. Robinson

Albright

K. P. Barr, Section Chief Operational Programs Branch

Accompanying Personnel & K. P. Barr

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Inspection at H. B. Robinson site near Hartsville, South Carolina Inspectors:

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SUMMARY

Approved by:

Inspection on July 25-29, 1983

Areas Inspected

This routine, unannounced inspection involved forty-seven inspector-hours on site in the areas of inspector follow-up items, corrective action for previous violations, transportation of radioactive materials, breathing air line contamination event, steam generator replacement outage preparation, and posting, labeling, and control.

Results

Of the six areas inspected, no violations or deviations were identified.

Division of Engineering and Operational Programs

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*S. Crocker, Manager Environmental and Radiation Control
- \*R. Connally, Assistant to the Plant General Manager
- \*C. Wright, Specialist, Regulatory Compliance
- \*J. Petigout, Senior ALARA Specialist
- \*B. MacCready, Radiation Control Supervisor
- \*S. Zimmerman, Director, Planning and Scheduling
- \*M. Burch, ALARA Technician
- D. Miller, Construction Engineer
- C. Bethea, Training Supervisor
- B. Ritchie, Radiation Control Foreman
- D. Boan, Radiation Control Foreman
- R. Denney, Radiation Control Foreman
- B. Meyer, Radiation Control Steam Generator Specialist

Other licensee employees contacted included three technicians and two office personnel.

NRC Resident Inspector

\*S. Weise, Senior Resident Inspector

\*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 29, 1983, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

(Closed) Violation (82-34-04) This violation concerned the disposal of contaminated oil to an unauthorized recipient. Licensee representatives stated that waste oil is not released from Unit 2. Waste oil from Unit 2 is solidified by a contractor and shipped to a waste facility that is authorized to accept the solidified oil. The oil solidification is conducted under the contractor Process Control Program. Current oil handling practices should preclude recurrence of this violation. The inspector had no further questions.

(Closed) Viclation (82-34-06) This violation concerned the failure to have procedures established to detail waste oil sampling techniques. The result was that contaminated oil was sold to an unauthorized recipient. The inspector determined through discussions with licensee personnel that Unit 2 waste oil is not released any longer. Oil is saved for solidification and shipment to an authorized waste burial facility. The need for waste oil unconditional release procedures is no longer required. The inspector had no further questions.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Inspector Follow-Up Items

(Closed) IFI (82-34-05) This item concerned the licensee investigation into the disposal of waste oil from unit 2. The investigation was completed subsequent to the inspection and details of the investigation were documented in a written report. A review of the report indicates that the investigating team was thorough in attempting to determine the source of the contaminated oil and circumstances which allowed its release from unit 2. The report concluded that one drum of oil found with detectable contamination was probably diluted, unintentionally, to below the MDA of the counting geometry and this oil was subsequently sold to a waste oil salvage company. On the next occasion when contaminated oil was found outside the unit 2 controlled area, the tank was moved to the unit 2 controlled area for decontamination. The licensee now solidifies waste oil from unit 2 and sends it to an authorized waste burial facility. The inspector had no further guestions.

(Closed) IFI (82-34-01) This item concerned what appeared to be large numbers of personnel leaving the facility with low level body burdens. The licensee was requested to evaluate their air sampling, respiratory protection and whole body counting programs. The licensee concluded from their investigation that the low level body burdens were in most cases due to low level skin contamination. The inspector reviewed exit whole body counts performed during an outage in May, 1983. The licensee showed that by showering personnel subsequent to the whole body counts which indicated a few percent of body burdens, the whole body count results were reduced below one percent. The inspector agreed that for the cases reviewed, skin contamination appeared to be the cause of the apparent high whole body counts. The inspector had no further questions.

(Closed) IFI (83-03-01) This item concerned the need for the licensee to determine monitor tank recirculation times in order to ensure representative sampling prior to a liquid waste discharge. The inspector reviewed the results of a test the licensee performed using trisodium phosphate as the chemical tracer. Their test indicated that between 30 and 45 minutes of tank recirculation was required in order to ensure proper mixing of the monitor tank prior to discharge. The inspector reviewed licensee procedures OP-34-G-3 and CPL-OP-34 which requires the monitor tanks to be recirculated for one hour prior to sampling. The inspector had no further questions.

#### 6. Steam Generator Replacement Preparation

The inspectors reviewed licensee preparations for the steam generator replacement outage through discussions with individuals having responsibilities in the following areas: (a) construction, (b) training, (c) ALARA, (d) plant scheduling and planning, (e) radiation control.

a. Construction

The inspectors discussed preparation and scheduling of the outage with a construction engineer. This individual worked at Turkey Point during their recent steam generator replacement outage. The construction unit appears to be progressing well in their part of the outage planning. They have identified and scheduled the completion of work procedures. Procedure preparation appeared to be on schedule. At the time of the inspection the schedule showed that procedure preparation should be complete by November, 1983.

Construction of several buildings needed during the outage has begun. The constuction unit has determined the type of facilities needed during the outage and then solicited comments from plant personnel for design of the facilities. Construction is also planning to provide additional electrical power service and breathing air lines for work in the containment.

b. Training - The inspector discussed the status of GET and special training which will be required during the outage. The plant training supervisor stated that the normal GET courses would be the responsibility of the plant training unit and that they would increase their training staff by hiring 3 contractor personnel as training personnel. Two of the 3 additional personnel are already onsite and prior to the outage the third trainer would be hired. These personnel are also providing GET level III training to first line supervisory personnel. Level III training is an expanded more detailed radiation control area worker training. This training gives more detail on plant systems, ALARA, and good health physics practices.

Special training needs required for specific tasks during the outage have been determined by the construction unit. The construction unit is responsible for writing the lesson plan, having it approved by the plant training unit and then providing a qualified instructor for the course. In addition to training conducted by the construction unit, a major contractor for the steam generator replacement will provide expanded training for their personnel. Although the detail that this training will finally entail is not known, the list of expanded training is comprehensive and is projected to cover steam generator model familiarization, procedure adherence, housekeeping, fire protection, basic ALARA, practical health physics, QA basics, security, clearance concepts and hold tags, and good safety practices. c. ALARA - The inspectors discussed the role of the plant ALARA section with the ALARA specialist. The plant ALARA section will have essentially the same role during the outage as in other outages. The section will interface with the construction ALARA specialist. The ALARA section plans to hire a contractor, who is familiar with ALARA practices, to assist in ALARA work in preparation for the outage. At the time of this inspection the construction ALARA specialist had not been hired and all constructior procedures were being sent to the construction ALARA specialist at the Brunswick plant for review. These procedures will be reviewed by plant personnel for adequate health physics controls as part of the responsibilities of the Radiation Control Steam Generator Specialist.

The plant ALARA unit will be assisted in dose tracking by ALARA coordinators employed by major contractors during the outage. These personnel will mainly perform dose tracking functions and keep their respective work crews aware of their dose. They will assist in ensuring that man-rem budgets are met or for determining the reason for over-runs.

Radiation Control Preparation - The plant radiation control unit will d. have an individual to provide attention to the SG outage. The individual who will fill the position of SG coordinator is scheduled to move to the plant staff from the corporate staff on August 1, 1983. The inspectors discussed with the individual his previous experience. He was a health physicist at another PWR for approximately two years. During this time he worked mainly in the radwaste and dosimetry area. Subsequent employment was with a state radiological health program. His main work with the state involved decommissioning state licensed facilities. He has now worked for CP&L for two years in the corporate office. His first year with CP&L was in the emergency planning area. Over the past year he has been involved with health physics aspects of the steam generator outage planning. The inspector stated that the individual's past experience and education appeared to meet technical specification requirements for a person in a responsible position. The inspector stated that the individual would need support from more experienced plant staff members due to his lack of extensive health physics experience during a major outage such as the SG outage.

The inspectors did not find substantial SG outage preparation and scheduling to have been started by the Radiation Control Section. Although a list of items to support the outage was formed by corporate personnel earlier this year, there have been no priorities or scheduled completion dates given to these items. A lack of prioritizing these items may effect outage scheduling since the construction unit will use some of the information this list will provide for planning purposes. The Manager, Environmental and Radiation Control stated that he expected the outage coordination for preparation and scheduling to progress more efficiently after the SG coordinator reports to the plant. The inspector determined that part of the plant coordination has also been held back due to attention that outages prior to the SG outage must be given.

The inspector stated that continued attention would be given to SG outage preparation during future inspections.

# 7. Transportation of Radioactive Material

During the inspection the inspector observed the package markings, loading and final monitoring of the vehicle used for transport of a shipment to a waste burial site. The packages were properly marked "Radioactive LSA" as required by DOT regulations. The loaded packages were properly braced and loaded in the enclosed, exclusive use trailer in order to meet waste burial facility and DOT requirements. Subsequent to the loading of the shipment, the inspector observed Radiation Control personnel monitoring the vehicle for radiation levels. Radiation levels exterior to the trailer and in the driver position in the cab were within DOT requirements for radiation levels around the vehicle.

The inspector selectively reviewed radioactive material shipments for the facility during May 1983. The shipping papers were in good order and complied with DOT requirements.

On July 28, 1983, the inspector observed two trucks with "Radioactive" placards on the trailers entering the unit 1 area. Approximately 21 to 3 hours later the inspector asked radioactive material transportation personnel about the contents of the shipment. These personnel had no information that a radioactive material shipment had come onsite. They immediately began trying to determine the location of the two trucks. They determined that warehouse personnel on the unit 2 construction side were to receive the trucks. Construction warehouse personnel told the Radiation Control personnel that they knew of the requirement to notify the Radiation Control unit when radioactive material came onsite and that they would have made the notification within another fifteen minutes. Radiation Control personnel stressed to contruction warehouse personnel the necessity for immediate notification when radioactive material comes on site. The cargo on the trucks were two contaminated cherry pickers purchased from another licensee. This equipment will be used inside containment during the steam generator replacement outage. Both shipments contained small amounts of radioactive material. Receipt surveys described in 10 CFR 20.205 were not required for these two shipments.

No violations or deviations were identified.

## 8. Contaminated Air Line

The licensee has erected a tent containment outside the hot machine shop. HEPA filters are installed to remove airborne activity created during operations in the tent. The exhaust from the HEPA filters is directed into the hot machine shop which is ventillated by the auxillary building ventillation. The tent is used to cut up old spent fuel racks for shipment to a waste burial facility. Measured air activity has been in the 1 E-8  $\mu$ c/cc range. Air line respirators have been used for work in the tent beginning on July 16, 1983. The air system used for breathing air is the instrument air system. On Tuesday, July 19, after personnel had complained that they needed additional air, the licensee checked the manifold pressure gauge and found it indicated adequate air pressure to the respirators. They later decided to hook the airline manifold to another nearby, larger line on the same instrument air line. There was a quick disconnect at the point where they wanted to hook up. One individual pushed on the fitting and a rush of air came out carrying dust and rust particles. The two individuals involved went to a frisker station in the hot machine shop and found themselves to be contaminated.

The licensee then initiated an investigation to determine the extent of the air line contamination by connecting air sampling devices to the hook up points. No additional parts of the system were found to be contaminated. The licensee has isolated the contaminated portion of the air line and tagged it so that it will not be used. A work order to have that section of the air line removed (approximately six feet) has been submitted. As additional corrective action, the Manager, Environmental and Radiation Control stated that an air sample would be pulled from each intended connection point prior to use of the connection for breathing air.

An air sample from the contaminated air line indicated 6.6 E-8  $\mu$ cc. This corresponds to an MPC fraction of 14.1. Individuals were assigned MPC-hrs. based on this information. The highest MPC-hr. assignment to an individual was 28.2 MPC-hrs. This is below the 40 MPC-hr. required weekly limit of 10 CFR 20.103.

The licensee has reviewed operations which may have caused the air line to become contaminated. At the time of the inspection, licensee personnel had examined potential causes but were unable to draw a definite conclusion as to the actual cause. The licensee appears to have adequately reviewed the incident and has initiated corrective action.

In a telephone conversation on August 30, 1983, the manager of Environmental and Radiation Control stated that they would review the contamination of the breathing air system and determine if additional administrative controls are needed for connections of clean end contaminated systems. Licensee action in this area will be reviewed during a subsequent inspection. (83-17-01)

No violations or deviations were identified.

#### 9. Posting, Labeling and Control

The inspector selectively reviewed the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive material areas, and the labeling of radioactive material during tours of the plant. No violations or deviations were identified.

The inspector toured the spent fuel pool area with a licensee representative and discussed the method of surveying for the diving operation, when the survey information is given to the divers and conduct of the operation. The inspector reviewed the survey documentation for the spent fuel pool. The licensee, each day prior to diving, performs a radiation survey of the diver work area and surrounding areas. The surveys are performed with TLD's at various depths in the water and by the use of an underwater ion chamber. The results are compared and communicated to the divers each morning before a dive.

During the dive an HP observes the divers at all times, another HP observes a rate meter connected to a detector on the diver. The diver also has a chirping/alarming dosimeter in his helmet. There is also communications equipment in the diver's helmet. The Radiation Control Foreman in the area stated that the operation would be halted if the HP observing the diver lost visual contact. The sighting of air bubbles is not considered visual contact. Due to the cutting operation the water becomes cloudy and diving is terminated to filter the water. Controls over the dive appear to be adequate to prevent an overexposure.

No violations or deviations were identified.