



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

JUN 22 1984

Report Nos.: 50-413/84-54 and 50-414/84-24

Licensee: Duke Power Company  
 422 South Church Street  
 Charlotte, NC 28242

Docket Nos.: 50-413 and 50-414

License Nos.: CPPR-116 and CPPR-117

Facility Name: Catawba 1 and 2

Inspection Dates: May 14-18, 1984

Inspection at Catawba site near Rock Hill, South Carolina

Inspectors: J. L. Kreh  
 J. L. Kreh

6-20-84  
 Date Signed

A. L. Cunningham  
 A. L. Cunningham

06/15/84  
 Date Signed

Accompanying Personnel: F. N. Carlson

Approved by: D. M. Montz  
 for W. E. Cline, Section Chief  
 Emergency Preparedness Section  
 Division of Radiation Safety and Safeguards

6/20/84  
 Date Signed

SUMMARY

Scope: This special announced inspection involved 95 inspector-hours on site in the area of emergency preparedness. The purpose of this inspection was to evaluate the licensee's responses and corrective actions related to the deficiencies, improvement items, and incomplete areas identified during the emergency preparedness appraisal conducted November 8-18, 1983 (NRC Report Nos. 50-413/83-42 and 50-414/83-35). The licensee's responses and planned corrective actions were documented in the attachment to an April 10, 1984 letter to the Regional Administrator.

Results: No violations or deviations were identified.

8407180135 840622  
 PDR ADOCK 05000413  
 Q PDR

## REPORT DETAILS

### 1. Persons Contacted

- \*J. W. Hampton, Station Manager
- \*M. E. Bolch, Emergency Preparedness Coordinator
- \*J. W. Cox, Superintendent of Technical Services
- \*C. W. Graves, Superintendent of Operations
- \*G. T. Smith, Superintendent of Maintenance
- \*W. P. Deal, Station Health Physicist
- \*C. L. Hartzell, Licensing & Projects Engineer
- \*S. W. Dressler, Projects Engineer
- M. J. Brady, Shift Supervisor
- S. S. Cooper, Shift Supervisor
- J. Hill, Shift Supervisor
- M. Ravan, Shift Supervisor
- C. Skinner, Shift Supervisor
- R. D. Kinard, Health Physics Staff Coordinator
- G. T. Mode, Health Physics Supervisor
- F. L. Wilson, Health Physics Supervisor
- C. V. Wray, Health Physics Supervisor
- R. G. Wright, Health Physics Supervisor
- G. L. Courtney, Associate Health Physicist
- T. K. Anderson, Security and Contract Coordinator
- L. J. Ryley, Security Support Supervisor
- \*W. H. Barron, Senior Instructor
- P. C. McAnulty, Training and Safety Coordinator
- G. G. Barrett, Training Supervisor
- P. A. McIntyre, I&E Engineer
- C. R. Harrington, Associate Engineer
- H. Smith, Test Engineer
- M. J. Geer, Assistant Engineer, Nuclear Technical Services (Corporate)
- \*W. W. Hicks, Westinghouse Consultant
- L. Earle, Westinghouse Consultant

NRC Resident Inspector

\*P. H. Skinner, Senior Resident Inspector, Operations

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on May 18, 1984, with those persons indicated in Paragraph 1 above.

### 3. Licensee Action on Emergency Preparedness Deficiencies

Licensee action on deficiencies identified during the November 1983 emergency preparedness appraisal was evaluated. (NOTE: The sequential numbers in brackets correspond to the item numbers used in Appendix A to the

December 28, 1983 letter which transmitted Report Nos. 50-413/83-42 and 50-414/83-35.)

[1a] (Closed) Deficiency (413/83-42-04, 414/83-35-04): Establish and train repair/recovery teams. The inspector reviewed Emergency Plan (EP) Section 0.4,<sup>1</sup> which specifies that training will be given to Repair and Recovery Teams. An outline for training of such teams is provided in Figure 0-2.7, and Section 0.5 specifies annual retraining. As of 2-13-84, 23 persons had been trained for Repair and Recovery Teams, according to training records.

[1b] (Closed) Deficiency (413/83-42-05, 414/83-35-05): Include or reference in the EP descriptions of the emergency response training programs for Security personnel and the Fire Brigade. The inspector determined that EP Section 0.4 references Catawba Nuclear Station (CNS) Security Procedure for information on emergency training for Security personnel, and CNS Directive 2.12.2 for information on training for the Fire Brigade.

[2] (Closed) Deficiency (413/83-42-32, 414/84-35-32): Make provisions to insure availability of 4 vehicles for Field Monitoring Teams. The inspector reviewed CNS Directive 2.11.13, Rev. 1 ("Use of Station Vehicles"), which designates the Chemistry vehicle and the Operations vehicle as the station radiological emergency vehicles, and restricts their use such that neither may leave the exclusion area without permission of the Station Health Physicist. HP/O/B/1009/04 ("Environmental Monitoring for Emergency Conditions") now requires that keys to all station vehicles be maintained by Security at the Personnel Access Point, and provides for the voluntary use of personal vehicles if necessary.

[3] (Closed) Deficiency (413/83-42-43, 414/83-35-43): Identify the means for providing onsite (out-of-plant) survey coverage during emergencies. The inspector reviewed HP/O/B/1009/09 ("Guidelines for Accident and Emergency Response"), which now requires the Surveillance and Control Coordinator to "coordinate in-plant and on-site monitoring in support of TSC needs". Onsite surveys are to be done by "borrowing" OSC Monitoring Teams and/or Field Monitoring Teams, as needed.

[4a] (Closed) Deficiency (413/83-42-44, 414/83-35-44): Establish a procedure considering the overall responsibilities and priorities for health physics support of potential emergency activities. The inspector reviewed HP/O/B/1009/09 and discussed this extensively revised and expanded procedure with licensee personnel. The procedure now provides direction for both "initial response" and "continuing response" for the various supervisory/coordinating positions staffed by Health Physics personnel.

<sup>1</sup>All Emergency Plan (EP) references in this report are to Revision 4, April 1984.

[4b] (Closed) Deficiency (413/83-42-45, 414/83-35-45): Provide adequate protection for emergency workers via a "buddy system". Section 5.13.3 of HP/O/B/1009/09 indicates that the Health Physics Supervisor, in coordinating OSC activities that require preplanning, should place emphasis on (among other things) the "need for Buddy System because of safety hazard (radiological and non-radiological)".

[5] (Closed) Deficiency (413/83-42-54, 414/83-35-54): Change exposure guidelines so as to be consistent with the EPA's Protective Action Guides for emergency workers and lifesaving activities. Closed by findings of NRC Report No. 50-413/84-41.

[6] (Closed) Deficiency (413/83-42-61, 414/83-35-61): Upgrade site assembly/evacuation procedures to establish habitability criteria and monitoring provisions for assembly areas and relocation sites. The inspector's review of HP/O/B/5000/10 ("Conducting a Site Assembly") determined that a new section (1.1.4) provides suitable numerical guidance on dose rates and airborne radioactivity levels for initiating a site assembly. Section 5.14.2 of HP/O/B/1009/09 assigns responsibility for the formation of personnel monitoring teams for all onsite assembly areas and the 2 relocation sites. Section 4.1.3 of HP/O/B/1009/05 ("Personnel Monitoring for Emergency Conditions") provides for monitoring of assembly areas and for initiating protective action when dose rates approach 2 mR/hr. Licensee representatives stated that radiation surveillance at the relocation sites could probably not be provided before the TSC is activated, since on-shift Health Physics personnel would be involved with supporting and providing information to the Emergency Coordinator. The inspector acknowledged the licensee's response and had no further comments on this program area.

[7] (Closed) Deficiency (413/83-42-64, 414/83-34-64): Define unambiguously the responsibilities for search and rescue. Based on review of CNS Directive 3.0.7, Rev. 2 ("Site Assembly/Evacuation"), Medical Procedure M-11 ("Contaminated Injury"), Security Guideline No. 6 ("Medical Emergencies"), and the shift roster/assignment system used to control Security responsibilities, the inspector determined that duties of individuals within the Security organization are now clearly defined with respect to responsibilities for search and rescue.

[8] (Open) Deficiency (413/83-42-65, 414/83-35-65): Define unambiguously the responsibilities of security personnel during emergencies. The inspector conducted a detailed evaluation of the response to this deficiency as contained in the attachment to the licensee's April 10, 1984 letter (previously referenced), and determined, through review of appropriate procedures and interviews with licensee personnel, that all aspects of this deficient area were resolved except one: Review of CNS Directives 3.8.4 ("Onsite Emergency Organization") and 3.0.7 showed that they have not been revised to consider the radiological protection of security personnel remaining onsite following a site evacuation. The licensee is in the process of revising the aforementioned Directives, which will be reviewed during a future inspection.

## 4. Licensee Action on Emergency Preparedness Improvement Items

Through review of applicable plans and procedures, interviews with licensee personnel, and examination of facilities and equipment, the inspector evaluated the licensee's response to the improvement items identified during the November 1983 appraisal. (NOTE: The sequential numbers in brackets correspond to the item numbers used in Appendix B to the December 28, 1983 letter which transmitted NRC Report Nos. 50-413/83-42 and 50-414/83-35.)

[1] (Closed) Improvement Item (413/83-42-01, 414/83-35-01): Indicate in the EP and EPIPs those who are assigned the responsibility for decontamination activities. EP Section B.5 assigns primary responsibility for decontamination activities to the Health Physics organization, with assistance from other station groups as necessary. CNS Directive 3.8.4, Rev. 7, Section 4.3.2, states that the Station Health Physicist shall be responsible for directing decontamination activities.

[2] (Closed) Improvement Item (413/83-42-02, 414/83-35-02): Assure meeting the minimum staff augmentation criteria in NUREG-0654, Table B-1. CNS Directive 3.8.4, Rev. 7, specifies that Phase I activation is to occur within 45 minutes, and Phase II activation within 75 minutes.

[3] (Closed) Improvement Item (413/83-42-03, 414/83-35-03): Verify ability to meet the staff augmentation criteria in NUREG-0654, Table B-1. A memo dated 3-7-84 to File No. CN-750.25 from M. E. Bolch documented the results of a survey of all members of the onsite emergency organization. The survey verified the licensee's ability to achieve the Table B-1 goals. One person who had been assigned to Phase I indicated in his survey reply that he could arrive within 75 minutes but not 45 minutes, and was on that basis re-assigned to Phase II.

[4] (Closed) Improvement Item (413/83-42-07, 414/83-35-07): Specify that specialized training for the emergency organization will be given annually. CNS Directive 3.8.4, Section 7.3, was revised to delete the inconsistency with EP Section 0.5.

[5] (Closed) Improvement Item (413/83-42-08, 414/83-35-08): Establish criteria for the selection and qualification of instructors. Training Procedure T-6 ("Instructor Qualifications, Instructor Responsibilities, and Support Requirements"), dated 1-4-84, provides suitable criteria. An "Instructor Qualification Sheet" is being developed for use in conjunction with T-6.

[6] (Closed) Improvement Item (413/83-42-16, 414/83-35-16): Include telephones in the periodic inventory of TSC emergency equipment. The "TSC Kit Checklist" in EP Figure H-4 includes 45 telephones.

[7] (Closed) Improvement Item (413/83-42-17, 414/83-35-17): Evaluate the effect of the small size of the OSC. A memo dated 3-7-84 to File No. CN-750.25 from M. E. Bolch documented an evaluation of the OSC size based on 3 training drills involving that facility. The evaluation concluded that the OSC as presently designated in the CNS EP is sufficient for the assigned function.

[8] (Closed) Improvement Item (413/83-42-21, 414/83-35-21): Use controlled copies of procedures in emergency kits instead of the present "information" copies. The emergency kits are now supplied with "controlled distribution" procedures.

[9] (Closed) Improvement item (413/83-42-36, 414/83-35-36): Specify setpoint parameters for the process radiation monitor values that currently state "in alarm" when used as emergency action levels. Procedure HP/O/B/1000/10 ("Determination of Radiation Monitor Setpoints") establishes acceptable practice whereby most setpoints will vary as functions of background level.

[10] (Closed) Improvement Item (413/83-42-37, 414/83-35-37): Include in appropriate procedures the off-duty telephone number for the State of South Carolina and the commercial telephone number for NRC. Procedures RP-02 through -05 now include the suggested telephone numbers.

[11] (Closed) Improvement Item (413/83-42-39, 414/83-35-39): Provide training for the Field Monitoring Teams in the use of the Canberra-10 and in site-area-specific features. The inspector examined records of training sessions on the Canberra-10 given in January-February 1984; 47 HP personnel were trained, including 13 from the McGuire Nuclear Station. Records also showed that approximately 30 persons were trained during October-November 1983 in the use of survey equipment, radios, maps, locations of survey points, and the application of monitoring team procedures.

[12] (Open) Improvement Item (413/83-42-40, 414/83-35-40): Provide sufficient equipment for all Field Monitoring Teams. This item was not inspected.

[13] (Closed) Improvement Item (413/83-42-41, 414/83-35-41): Coordinate the Field Monitoring Team's turnover location based on existing conditions. Section 5.11.2.2 of HP/O/B/1009/09 provides the following direction to the Field Monitoring Coordinator: "Turnover of TSC FMT's TO CMC Control shall occur at the intersection of SC 274 and SC 49. Should plume location interfere, alternate turnover location may be established".

[14] (Open) Improvement Item (413/83-42-42, 414/83-35-42): Modify HP/O/B/1009/05 to incorporate certain considerations. This item was not inspected.

[15] (Closed) Improvement Item (413/83-42-46, 414/83-35-46): Use in-plant maps to document radiological conditions. Maps (enclosed in poly sheets) are now available in the TSC and OSC.

[16] (Closed) Improvement Item (413/83-42-47, 414/83-35-47): Use in-plant maps showing predetermined/expected radiological conditions to aid in determining the most dose-saving routes. The suggested maps were included in the supporting material used by a Health Physics Supervisor during a walk-through of his responsibilities. Such maps are now available in the TSC and OSC.

[17] (Closed) (413/83-42-48, 414/83-35-48): Specify minimum protective-equipment requirements for monitoring support activities. HP/O/B/1009/09 provides guidance in this area for the Support Functions Coordinator (Enclosure 5.7) and for the Health Physics Supervisor (Enclosure 5.13). In addition, the licensee pointed out that actual specification of minimum protective clothing for a particular activity is provided by the Radiation Work Permit (RWP).

[18] (Closed) Improvement Item (413/83-42-49, 414/83-35-49): Complete the Control Room initial dose assessment procedure. Via walk-throughs with Shift Supervisors, the inspector verified the availability of the OAC Dose Assessment Program, known as "Nuclear-23", and the manual backup procedure RP/O/A/5000/11 ("Protective Action Recommendations without the OAC"). Both the computerized and manual procedures yield only protective action recommendations for use by the Shift Supervisor. The inspector discussed with licensee personnel the possibility of upgrading Nuclear-23 to produce information on stability class and projected dose rates so that this data can be provided to offsite authorities to aid their protective action decision-making.

[19] (Closed) Improvement Item (413/83-42-50, 414/83-35-50): Analyze the reliability and availability of the alternate method for determining dose rates in the reactor building. A memo dated 1-22-84 from G. L. Courtney to File No. CN-134.10 documents the derivation of the correction factor used in HP/O/B/1009/06 ("Alternate Method for Determining Dose Rate Within the Reactor Building"). In accordance with HP/O/B/1009/09, availability of the alternate method would depend on preplanning analyses of projected dose to the worker(s) and the urgency of obtaining the information for protection of the public health.

[20] (Closed) (413/83-42-51, 414/83-35-51): Modify procedures to include (a) a method for determining a true projected dose and comparing it to the EPA PAGs, (b) guidelines for determining the expected duration of a release, and (c) guidelines for reassessing the projected dose based on changed conditions. Parts (a) and (c) are addressed by Enclosure 5.9 to HP/O/B/1009/09. As for part (b), the licensee intends to rely upon the judgment and expertise of its Health Physics staff in the TSC, supplemented by available resources and information.

[21] (Closed) Improvement Item (413/83-42-52, 414/83-35-52): Describe the assumptions and constants used in developing the equations in HP/O/B/1009/15 ("Offsite Dose Projection - Uncontrolled Release of Gaseous Radioactive Material Other Than Through the Unit Vent"). A memo dated 1-25-84 from G. L. Courtney to File No. CN-134.10 delineates the assumptions and derives the constants that are used in the equations of HP/O/B/1009/15. The memo shows explicitly that the whole-body and thyroid dose projections produced by the procedure are based on a 2-hour period.

[22] (Closed) Improvement Item (413/83-42-55, 414/83-35-55): Localize the responsibilities for authorizing emergency exposures. Table K-1 of the Crisis Management Plan, Rev. 12, delegates the responsibility in question to the Recovery Manager or the Emergency Coordinator.

- [23] (Closed) Improvement Item (413/83-42-56, 414/83-35-56): Remove from HP/O/B/1009/09 the implication that Class 2 personnel may be subject to emergency exposure. Closed by findings of NRC Report 50-413/83-41.
- [24] (Closed) Improvement Item (413/83-42-57, 414/83-35-57): Make emergency workers aware of the emergency exposure limitations. A letter of 1-23-84 from the Station Health Physicist to all CNS personnel discussed quarterly administrative limits as well as limits for planned emergency exposures.
- [25] (Closed) Improvement Item (413/83-42-58, 414/83-35-58): Make provisions for expanding the respiratory protection supplies and equipment. Closed by the findings of Section 4.2.2.1 of NRC Report Nos. 50-413/83-42 and 50-414/83-35.
- [26] (Closed) Improvement Item (413/83-42-59, 414/83-35-59): Develop maximum dose and dose-rate guidelines for performing the upper-personnel-hatch measurement. See discussion of improvement item [19] above.
- [27] (Open) Improvement Item (413/83-42-60, 414/83-35-60): Clarify the authorization and distribution of KI. This item was not inspected.
- [28] (Closed) Improvement Item (413/83-42-62, 414/83-35-62): Develop a workable method for assuring the designation of the Site Evacuation Coordinator. CNS Directive 3.8.4, Rev. 6, designates for normal working hours a primary and 2 alternates for the position of Site Evacuation Coordinator. During off-normal hours, that position is filled at the discretion of the Emergency Coordinator (since few or no persons would be considered non-essential, a site evacuation during off-normal hours would involve minimal coordination).
- [29] (Closed) Improvement Item (413/83-42-63, 414/83-35-63): Modify HP/O/B/1009/05 to address certain concerns relating to a site evacuation (details in Section 5.4.3.2 of the appraisal report). The inspector verified the licensee's response (as found in the attachment to the April 10, 1984 letter) to this improvement item insofar as subparts (1) through (5) are concerned. The licensee's response to subpart (6) (which requested clarification of the policy regarding use of privately owned, contaminated vehicles for transport to the relocation site) referenced CNS Directive 3.0.7. The inspector determined, however, that the requested clarification was addressed in Sections 4.4.1, 4.4.2.4, and 4.5.5 of HP/O/B/1009/05. The inspector informed licensee representatives that the latter 2 sections incorrectly referenced the first section as 4.3.1 instead of 4.4.1.
- [30] (Closed) Improvement Item (413/83-42-66, 414/83-35-66): Provide a reference or requirement in RP/O/A/5000/12 ("Control of Assessment and Repair Teams") that CNS Directive 3.8.8 ("Radiological Work Practices") be addressed to assure the radiological safety of the repair or assessment teams. RP/O/A/5000/12 specifies that teams will be coordinated by the OSC Health Physics Supervisor and the TSC Surveillance and Control Coordinator (both HP staff members), who are to be informed of any entries into the Auxiliary Building or containment, and who will provide guidance to those teams based on the standard operating procedures of Directive 3.8.8.



[31] (Closed) Improvement Item (413/83-42-69, 414/83-35-69): Include in the EP a statement that the EIPs will be reviewed and/or revised annually. EP Section P.4 states: "Review and updating of the Emergency Plan and the Emergency Plan Implementing Procedures shall be certified to be current on an annual basis."

5. Licensee Action on Incomplete Emergency Preparedness Areas

Through review of applicable plans and procedures, interviews with licensee personnel, and examination of facilities and equipment, the inspector evaluated selected areas of the licensee's emergency preparedness program that were found to be incomplete during the November 1983 appraisal. (NOTE: The sequential numbers in brackets correspond to the item numbers used in Appendix C to the December 28, 1983 letter which transmitted NRC Report Nos. 50-413/83-42 and 50-414/83-35.)

[1] (Open) Incomplete Area (413/83-42-06, 414/83-35-06): Establish and implement training programs for (1) operator personnel in dose projection methods, and (2) chemistry personnel in procedures related to the Post-Accident Sampling System (PASS). Licensee representatives anticipated that training in dose projection will be completed by 8-1-84. The inspector noted, however, that input from the meteorological instrumentation is not yet available for use with the computerized dose projection system. The training program for Chemistry personnel will be examined following completion of the PASS and associated procedures.

[2a] (Closed) Incomplete Area (413/83-42-09, 414/83-35-09): Implement training in emergency classification and protective action recommendations. According to records, training in this area was given to Operators in August and October 1983, and to Emergency Coordinators in February 1984.

[2b] (Closed) Incomplete Area (413/83-42-10, 414/83-35-10): Implement training in information transmission to offsite agencies. Review of records indicated that this training (based on the outline of EP Figure 0-2.4) was given to approximately 60 CNS personnel during January-February 1984. In addition, training according to the outline of EP Figure 0-1.4 was given to five dispatchers with the York County Sheriff's Department.

[3a] (Closed) Incomplete Area (413/83-42-11, 414/83-35-11): Provide the Control Room with approved copies of all emergency procedures. All EIPs, EOPs, APs, and RPs were issued and were available in the Control Room as controlled copies.

[3b] (Open) Incomplete Area (413/83-42-12, 414/83-35-12): Complete installation of the communications equipment for the Control Room. All communications equipment is installed except the ENS phone.

[3c] (Closed) Incomplete Area (413/83-42-13, 414/83-35-13): Complete the training of Control Room personnel in emergency procedures and the use of communications equipment. See discussion of item [14] below.

[4a] (Open) Incomplete Area (413/83-42-14, 414/83-35-14): Complete the installation and testing of the TSC emergency ventilation process radiation monitoring equipment. Records of testing done under TP/0/8/1450/03 and /04 indicated that most testing was completed with acceptable results; however, several portions of the testing (e.g., air flows and pressures at 125% dirty filter) were not completed satisfactorily.

[4b] (Open) Incomplete Area (413/83-42-15, 414/83-35-15): Complete the installation and testing of the TSC communications system. The ENS and FTS phones were not installed.

[5] (Closed) Incomplete Area (413/83-42-18, 414/83-35-18): Complete the medical treatment facilities. This area was reviewed during a previous inspection (see NRC Report No. 50-413/84-47, paragraph 7).

[6] (Open) Incomplete Area (413/83-42-19, 414/83-35-19): Complete the decontamination facilities. Onsite decontamination facilities were evaluated during a previous inspection and found to be adequate (see NRC Report No. 50-413/84-47, paragraph 7). However, the overall area of decontamination facilities remains open pending inspection of provisions for personnel decontamination at the relocation sites ("Alpha" and "Bravo").

[7] (Open) Incomplete Area (413/83-42-20, 414/83-35-20): Complete preparation and procurement of emergency kits and emergency survey instrumentation. This area was not inspected.

[8a] (Open) Incomplete Area (413/83-42-22, 414/83-35-22): Complete the installation, calibration, and preoperational tests of the area radiation monitors (ARMs) and the process monitors (PMs). ARMs were installed and calibrated, but preoperational testing has not been done. PMs are installed and calibration has commenced.

[8b] (Open) Incomplete Area (413/83-42-23, 414/83-35-23): Complete the installation, calibration, and preoperational tests of the high-range containment and steam-line monitors. Installation of the monitors was completed; however, they were neither calibrated nor tested.

[8c] (Closed) Incomplete Area (413/83-42-24, 414/83-35-24): Establish technical bases for the alarm settings of ARMs and high-range containment and steam-line monitors for Site Area and General Emergencies. See discussion under improvement item [9] in paragraph 4 above.

[8d] (Closed) Incomplete Area (413/83-42-25, 414/83-35-25): Establish the posting of EALs for Site Area and General Emergencies on or near the applicable radiation monitor readout. The licensee has determined that such postings would be inappropriate because they would not be subject to the same level of control as are copies of procedures.

[9] (Open) Incomplete Area (413/83-42-26, 414/83-35-26): Nonradiation process monitors. This area was not inspected.

[10a] (Open) Incomplete Area (413/83-42-27, 414/83-35-27): Install, make operational, and calibrate the meteorological tower sensors and associated equipment. The meteorological instrumentation system was deactivated during the fourth quarter of 1982 and was returned to operability less than 3 weeks prior to inspection. Initial instrument/sensor calibrations were performed on 5-16-84. The current operational status of the system is such that it cannot be adequately appraised at this time.

[10b] (Closed) Incomplete Area (413/83-42-28, 414/83-35-28): Ensure that the NOAA radio is installed and operational in the Control Room. The NOAA radio was installed and operational.

[10c] (Open) Incomplete Area (413/83-42-29, 414/83-35-29): Establish a program to ensure that data availability goals are met. See discussion under related item [10a] above.

[10d] (Open) Incomplete Area (413/83-42-30, 414/83-35-30): Ensure ability to transfer data from the OAC system to the VAX system. See discussion under related item [10a] above.

[11] (Closed) Incomplete Area (413/83-42-31, 414/83-35-31): Respiratory protection program. This program is essentially complete. On 5-14-84 a Work Request was issued for deployment of 8 SCBAs on a wall outside the Control Room. Equipment which has already been acquired for storage in the Respiratory Facility (at elevation 594) includes 18 SCBAs, 200 filter-type respirators, and 100 air-line respirators. The Respiratory Facility is in the process of being equipped with washers, dryers, and a demineralized water system for rad/nonrad respiratory equipment cleaning.

[12] (Closed) Incomplete Area (413/83-42-33, 414/83-35-33): Complete all APs, EOPs, and EIPs. All APs, EOPs, and EIPs have been approved and issued.

[13] (Closed) Incomplete Area (413/83-42-34, 414/83-35-34): Issue approved versions of EOPs (01 and 03) and APs (11, 17, 18, 19, 20). All EOPs and APs have been issued in approved versions.

[14] (Closed) Incomplete Area (413/83-42-35, 414/83-35-35): Issue all EIPs in final, approved versions and train facility personnel in the use of these procedures. All EIPs have been approved and issued. Review of training schedules showed that emergency preparedness training is now incorporated into routine operator training and is part of the ongoing training program for other plant staff included in the emergency organization.

[15] (Open) Incomplete Area (413/83-42-38, 414/83-35-38): Assessment actions. This area was not inspected.

[16] (Open) Incomplete Area (413/83-42-53, 414/83-35-53): Complete the development of the Class A dose assessment model and make it available for the use of dose assessment personnel. The inspector interviewed the engineer responsible for the development of the Class A model and conducted

a walk-through of the computerized dose assessment technique. The licensee uses a puff-advection model which allows the input of updated meteorological parameters (i.e., stability class, wind speed and direction) at 15-minute intervals. The inspector was informed that the software is completed but debugging of the program has not been verified, and the program is not yet available for the use of dose assessment personnel.

[17a] (Open) Incomplete Area (413/83-42-67, 414/83-35-67): Implement the program for annual review of the EP and EIPs. This area was not inspected.

[17b] (Open) Incomplete Area (413/83-42-68, 414/83-35-68): Implement the program for verification of the phone numbers listed in the EIPs. This area was not inspected.

[18a] (Closed) Incomplete Area (413/83-42-70, 414/83-35-70): Disseminate emergency plan booklets to the general public and other specified groups. A licensee representative informed the inspector that about 35,000 copies of the 1984 edition of the emergency plan booklet were mailed to households and distributed in selected locations for the transient population during January-February 1984. This task was completed prior to the licensee's first full-scale exercise of the CNS emergency preparedness program. In addition, a concise booklet entitled "Student Emergency Plan" has been distributed to schools in the area to inform students what to do if they hear the emergency sirens while at school or while at home alone.

[18b] (Open) Incomplete Area (413/83-42-71, 414/83-35-71): Place emergency signs at boat docks and other applicable locations. This area was not inspected.

[19] (Closed) Incomplete Area (413/83-42-72, 414/83-35-72): Walk-through observations. A limited assessment of this area was made during the November 1983 appraisal. A reevaluation was performed during the current inspection.

Walk-throughs were conducted with 5 Operations personnel who were just completing cold-license training and designated to be Shift Supervisors or Assistant Shift Supervisors. Their performance in situational questioning involving their roles as Emergency Coordinator varied from fair to good. The average was considered to be satisfactory. Areas which were noted to be well handled were:

1. Familiarity with procedures and facility with procedure use.
2. Plant knowledge, including parameters associated with Emergency Action Levels.
3. Limitations and extent of authority and responsibility.
4. Classification of emergencies.
5. Ability to provide justification of actions.

6. Use of support groups.
7. Cross-referencing to the EP from plant procedures.

An area which was noted to require improvement was:

Use of the manual dose procedure (RP/O/A/5000/11), in particular the tables for determining zones in which to recommend protective actions.

Additionally, a problem was noted during the walk-throughs with some incorrect data in readings for EMF 35 and 36 on page 5 of Enclosure 4-1 to RP/O/A/5000/01.

No evaluations or walk-throughs of the licensee's post-accident sampling capabilities were performed. That area will be evaluated during a future inspection following completion of the PASS and associated procedures and training.