APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

NRC Inspection Report: 50-313/82-23
50-368/82-20

License: DRP-51
NPF-6

Category: C

Licensee: Arkansas Power and Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Facility Name: Arkansas Nuclear One, Units 1 and 2

Appraisal Followup At: Arkansas Nuclear One, Russellville, Arkansas

Appraisal Followup Conducted: July 19-23, 1982

Team Members:

Charles G. Hackney — 10/7/82
C. A. Hackney, Emergency Preparedness Analyst, Region IV (Team Leader) — Date

Charles G. Hackney for — 10/7/82
K. Washington, Summer Intern, NRC — Date

Charles G. Hackney for — 10/7/82
T. Earle, Battelle Northwest Laboratories — Date

Charles G. Hackney for — 10/7/82
W. Hawley, Battelle Northwest Laboratories — Date

Charles G. Hackney for — 10/7/82
W. Thomas, Battelle Northwest Laboratories — Date

Reviewed:

W. D. Johnson — [illegible]
W. D. Johnson, Chief, Reactor Project Section C — Date

Inspection Summary

Inspection conducted July 19-23, 1982, (Reports: 50-313/82-23 and 50-368/82-20)

Areas Inspected: Routine, announced followup of the Emergency Preparedness Appraisal Appendix A and Appendix B items. This inspection involved 210 inspector-hours onsite by five NRC auditors.

Results: There are 39 open items to be addressed.

DETAILS

1. Persons Contacted

Licensee Personnel

L. J. Dugger, Manager, Special Projects
T. C. Baker, Technical Analysis Superintendent
E. C. Ewing, Manager, Engineering and Technical Support
D. Boyd, Emergency Planning Coordinator
J. Levine, General Manager
T. Pugh, Lead Trainer, Administration/Technical Support
D. James, Licensing Engineer/Contingency Plan Coordinator
J. Marshall, Manager of Licensing
B. Baker, Operations Manager

State of Arkansas, Nuclear Planning and Response Program

Bill Lawton, Planning Specialist
Jack Storey, Training and Education Coordinator

2. Licensee Action on Previous Inspection Findings

a. Confirmatory Action Letter

(1) Onsite Emergency Organization Augmentation (Closed)

Required Action

Pursuant to the requirements of the generic letter dated February 18, 1981, to all licensees from Mr. D. Eisenhut regarding the minimum staffing requirements for Nuclear Power Plant Emergencies, Arkansas Power and Light (AP&L) shall demonstrate by an unannounced drill that the 30 and 60 minute minimum staff augmentation for emergencies can be achieved. Further, augmentation deficiencies identified by the drill shall be documented and forwarded to the NRC for review and evaluation.

Comments

Emergency Plan Procedure 1903.10 was revised to provide explicit recall instruction. An unannounced drill was conducted on September 17, 1981, and the ability to augment the onsite emergency organization (NUREG 0654, Revision 1, Table B-1) was reported to the NRC.

(2) Offsite Radiological Monitoring Capability (Closed)

Required Action

The licensee shall describe its capabilities to perform offsite radiological monitoring to a sufficient level of detail to demonstrate that the offsite radiological monitoring teams can find and characterize an airborne release plume and obtain the necessary information with which the licensee can perform dose calculations, consequence assessment, and provide input to the decisionmaking for recommending offsite protective actions to appropriate officials. The licensee's response shall include, at a minimum, location, availability, and capability of vehicles which would be used by the offsite radiological monitoring team during an emergency; location, availability, and capability of necessary radiological detection and measurement instrumentation and equipment; location and capability of offsite laboratories for radiological analysis of samples taken during an emergency; the time and methods used to determine and transmit the field data to the location where the licensee will perform the dose assessment calculations; and the licensee's provisions for training and retraining members of the offsite radiological monitoring teams sufficient for them to be able to perform their assigned tasks.

Comments

During the appraisal followup, this confirmatory action item and AP&L's response were reviewed. Tours were conducted of emergency response facilities and the contents of offsite field monitoring kits were examined. Discussions were held with the health physics supervisor. The following procedures were reviewed: the environmental radiation monitoring program; the radiological air sampling program; and the airborne Iodine-131 determination, using a RM-14/HP210.

As a result of this review, it was concluded that adequate facilities, equipment, and personnel were available for the performance of environmental monitoring, including airborne release monitoring and plume characterization information sufficient to perform dose calculations and consequence assessment for protective action recommendations.

AP&L has purchased a four-wheel drive vehicle, which is dedicated for use as an ANO emergency response vehicle. The vehicle was parked near the main guard station. The offsite radiation monitoring team has priority use of this vehicle to conduct field surveys in the event of a radiological accident at ANO. If the four-wheel drive vehicle becomes unavailable, the ANO General Manager must designate a replacement vehicle.

Four offsite emergency monitoring team kits were stored at the Emergency Control Center (ECC). The kits were dedicated for emergency team use only. The kits contained instrumentation capable of meeting the sensitivity requirements of NUREG-0654 for environmental radiological monitoring under emergency conditions.

AP&L has contracted with the Oak Ridge National Laboratory to provide offsite laboratory analytical services to ANO in the event that onsite and backup laboratories become unusable. A copy of the agreement dated March 10, 1981, was reviewed.

State-of-the-art methods of radiological analysis of environmental samples were in use; transmission of data to the Technical Support Center (TSC) or ECC would be by two-way radio from the monitoring vehicle or by hand held two-way radio if another vehicle were used. The radios were on the AP&L secure radio system and were in direct contact with the TSC and ECC.

Training requirements for the offsite monitoring teams consisted of practical instrumentation and field use training sessions for the monitoring team members. Requalification will be annual, and new team members will be trained prior to assignment for team duty.

(3) Personnel Accountability (Closed)

Required Action

The licensee shall demonstrate that the administrative and physical means exist to perform accountability of all potential persons within the exclusion area within 30 minutes of the start of the accountability process and provide continuing accountability of licensee controlled emergency workers thereafter.

The licensee shall submit by September 19, 1981, corrections of their Emergency Plans and appropriate Emergency Plan Implementation Procedures and submit any additional information you deemed necessary to demonstrate that 30-minute personnel accountability capability exists.

Comments:

The auditors reviewed the Emergency Plan Implementing Procedures that were updated in response to this item (1903.30, Revision 3; 1903.31, Revision 2; 1903.32, Revision 2; 1903.33, Revision 1; 1903.40, Revision 3; 1903.41, Revision 3; 1903.42, Revision 3; 1903.43, Revision 4) and concluded that these procedures appear to provide adequate means to assure that accountability can be performed for persons in the exclusion area and that potential persons in the exclusion area (e.g., fishermen at the public

access area) can be evacuated in a timely fashion. The auditors also observed the modified badge racks in the guard houses. Means to perform continuing accountability for licensee controlled emergency workers are described in the procedures referenced above and in Procedure 1903.44, Revision 2, "Duties of the Emergency Recovery Team." Therefore, this item is closed.

(4) Public Education and Information (Closed)

Required Action

The licensee shall disseminate to members of the public population within the 10-mile Emergency Planning Zone (EPZ) material to inform and educate the population concerning how they will be notified and what their actions should be in an emergency. This information shall include educational information on radiation; contacts for additional information, protective measures such as evacuation routes and relocation centers, sheltering, respiratory protection and special needs for the handicapped. In the dissemination process, the licensee shall make special provisions to place this information at points where the transient population will have access to it. Further, the licensee shall prepare preplanned initial and followup messages to the public for broadcast over the Emergency Broadcast System (EBS) immediately following initiation of the siren/tone alert radio warning system and shall identify the individuals by title who are responsible for transmittal of such messages to the EBS radio station during an emergency.

Comments

The auditors determined that there are instructions for the public and transient population available via brochures and the telephone directory. The Duty Emergency Coordinator shall make recommendations to the State Staff Duty Officer who in turn will notify the EBS radio station to transmit any recommendations or protective guidelines.

(5) Corporate and Site Emergency Plan (Closed)

Required Action

The licensee's Corporate Emergency Plan shall be integrated into the Site Emergency Plan or submitted to the NRC as a separate plan which is referred in the Site Emergency Plan. The Corporate Plan must interface with the Site Emergency Plan such that areas of authority and responsibilities are defined.

Comments

The AP&L Nuclear Contingency Plan and procedures were submitted to the NRC along with Revision 3 to the ANO Emergency Plan on September 18, 1981. Section 5.3.1 of Revison 4 to the ANO Emergency Plan (May 3, 1982) contains a reference to the Nuclear Contingency Plan.

(6) Emergency Action Levels (Closed)

Required Action

The licensee's Emergency Action Levels (EAL's) shall be integrated into the present operating procedures such that they are site specific. The flow of procedures shall be written to reflect continuity from normal operations, to abnormal operations, into emergency plan implementing procedures.

Comments

The ANO Emergency Operation Procedures, Series 1202 and 2202, have been revised to include specific references to the Emergency Plan Implementing Procedure 1903.10. These revisions allow the reactor operators to proceed effectively through the emergency procedures to the emergency plan implementing procedures.

Issue 1

Protection Factor Calculation (TSC) (Open)

Provide shielding calculations and other appropriate information to demonstrate that the permanent Emergency Control Center provides a dose protection factor of five with regard to the design basis criteria of immersion in a cloud of 0.7 Mev. gamma radiation.

Comments:

With the primary and backup Emergency Operations Facility (EOF) option, which the licensee has selected, the primary EOF can have a dose protection factor of less than five as long as both EOF's meet certain criteria. The licensee's primary EOF does have ventilation isolation with HEPA filters but the shielding calculations as provided by the licensee produce a protection factor of 4.3 which, after correcting the arithmetical errors, is reduced to 4.0. The auditors toured the licensee's backup EOF, the local AP&L office building in Russellville. While the facility appears to be adequate for a backup EOF, there was no evidence of planning to provide for continuity as required for a backup EOF; e.g., transfer of people and equipment from the EOF to the alternate EOF. Therefore, this issue is open pending

development of appropriate plans and procedures to ensure the continuity of dose projection and decisionmaking. The auditors also note that an Emergency Response Facility review will be conducted in the near future for evaluating the adequacy of the licensee's EOF's.

Issue 2

Post-Accident Sampling (Closed)

Provide a description of your interim provisions for post-accident sampling and methodology which describes obtaining representative primary coolant sample and representative containment air samples for Unit 1 and Unit 2. Demonstrate that capabilities exist for obtaining post-accident samples safely. In addition, the licensee shall verify that appropriate portable shielding and equipment as described in your post-accident sampling procedure can be erected in a safe and timely manner until the permanent post-accident sampling system is initiated in accordance with NUREG-0737.

Comments:

At the time of the followup appraisal, the auditors noted that the Post-Accident Sampling System (PASS) previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this issue refers to the PASS that is no longer used, this item is closed.

Issue 3

Installation of Closed Circuit TV in TSC (Open)

In a letter to D. Eisenhut dated January 17, 1980, AP&L proposed the use of closed circuit television and that this system would be installed in the Permanent Technical Support Center. To date, the equipment has not been installed. Provide information as to why the system is not installed and what you intend to use in its place.

Comments:

The licensee sent a letter to Mr. Eisenhut dated September 4, 1981, stating their intent to not install the closed circuit television system, after the appraisal team questioned the status of the proposed equipment. AP&L has sent a letter to Mr. Eisenhut; however, there has been no response from Mr. Eisenhut. This item is open pending resolution of this item with Mr. Eisenhut.

b. Appendix A

(1) Onsite Emergency Organization Augmentation

Specific Finding: 313/81-22-18 and 368/81-21-18 (Closed)

Define and demonstrate the capability to augment response capabilities; e.g., NUREG-0654, Revision 1, Table B-1. (Section 2.2)

Comments:

Emergency Plan Procedure 1903.10 was revised to provide explicit recall instructions. An unannounced drill was conducted on September 17, 1981, and the ability to augment the onsite emergency organization (NUREG-0654, Revision 1, Table B-1) was reported to the NRC.

(2) Onsite Emergency Organization

Specific Finding: 313/81-22-21 and 368/81-21-21 (Open)

Revise the Emergency Plan to include the augmentation of emergency personnel specified in NUREG-0654, Revision 1, Table B-1, and provide a method to verify that there is reasonable assurance that the augmentation times can be met for the specific minimum augmentation staff. (Section 3.0)

Comments:

The Emergency Plan will be revised to include the specification of emergency augmentation personnel. This revision will be submitted following the implementation of shift coverage for maintenance, chemistry, and health physics, which was due July 1, 1982. The licensee has written a letter to the NRC explaining the reason for not meeting the July 1, 1982, implementation date.

(3) Offsite Laboratory Facilities

Specific Finding: 313/81-22-34 and 368/81-21-34 (Open)

Provide for fixed or mobile offsite laboratory facilities capable of providing sample analysis capabilities in the likely event of exceeding maximum instrument radiation background levels under severe accident conditions in the normal laboratory facility. The backup laboratory facility shall have the capability to analyze high activity post-accident samples. (Section 4.1.1.5.5)

Comments:

AP&L has contracted with the Oak Ridge National Laboratory (ORNL) to provide offsite laboratory analytical services to Arkansas Nuclear One in the event onsite laboratory facilities become usable. A copy of Post-Accident Services to AP&L; MSOF Agreement No. ERD-81-116 dated March 10, 1981, was reviewed. This agreement provided for a blanket authorization under which ORNL would perform post-accident analytical services on grab type samples of reactor coolant water, other water samples, and containment atmosphere samples. The contract also provided for the following analyses:

(a) alpha, beta, gamma scans for fission products;

(b) mass spectrometric measurement of actinide isotopes and the corresponding assay;

(c) quantitative boron measurements via mass spectrometry and/or micro-titration;

(d) general corrosion and fission product measurements via spark-source mass spectrometry;

(e) H_2, O_2, and N_2 measurements in pressurized water; and

(f) general measurements such as pH, conductivity, and anion analyses.

This item is open pending its inclusion in the ANO Emergency Plan as per OCAN048205 dated April 8, 1982.

(4) Assessment Equipment

Specific Finding: 313/81-22-45 and 368/81-21-45 (Closed)

Provide the capability for detecting and measuring radioiodine concentrations of at least 1E-07 μ/Ci/cc under field conditions in the presence of noble gases. (Section 4.2.1.1)

Comments:

The auditors surveyed the licensee's emergency equipment and reviewed the health physics operation Procedure 1632.027, "Airborne Iodine-131," determination using an RM-14/HP-210. It was concluded that adequate instrumentation and procedures were available to detect and measure under field conditions Iodine-131 concentrations of at least 1E-07 μ/Ci/cc in the presence of noble gases.

(5) Transportation

Specific Finding: 313/81-22-56 and 368/81-21-56 (Closed)

Provide procedures describing the type, number, equipment, and availability of vehicles for emergency response; e.g., truck, car, four-wheel drive, two-way radio, winches, DC-AC converters, etc. (Section 4.2.6)

Comments:

A vehicle was purchased and dedicated for use as an ANO emergency response vehicle. This vehicle, a four-wheel drive Dodge Ramcharger, is normally parked in the area just west of the main guard station (along with the AP&L van, guard trucks, etc.). The offsite Radiation Monitoring Team has priority use of this vehicle to conduct field surveys in the event of a radiological incident at ANO. For nonemergency use, this vehicle has certain restrictions placed upon it as dictated by Standing Order 3000.01 dated April 20, 1982. The keys are available at the main guard station. The vehicle is equipped with a winch and a two-way radio. In the event that the four-wheel drive vehicle becomes unavailable, the ANO General Manager must dedicate another AP&L vehicle as the emergency response vehicle until the four-wheel drive vehicle becomes available. The replacement vehicle will have the same restrictions placed upon it for the period of time it is considered in the "available" status.

(6) Radiological and Environmental Monitoring Program

Specific Finding: 313/81-22-71 and 368/81-21-71 (Closed)

Provide adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition. (Section 5.4.2.12)

Comments:

Silver zeolite cartridges have been placed in offsite monitoring kits. Environmental sample containers are available from onsite storage and offsite supplies. Manual TLD counting equipment has been moved to the Emergency Control Center to serve as a backup in the event the administration building becomes uninhabitable.

(7) Personnel Accountability

Specific Finding: 313/81-22-72 and 368/81-21-72 (Closed)

Develop and implement specific procedures to assure that all persons in the owner-controlled area, including the public access area, are informed of the need to evacuate during an

emergency and to ensure that such evacuation is completed and verified in a timely manner. (Section 5.4.3.2)

Comments:

The auditors reviewed the Emergency Plan Implementing Procedures that were updated in response to this finding (1903.30, Revision 3; 1903.31, Revision 2; 1903.32, Revision 2; 1903.33, Revision 1; 1903.40, Revision 3; 1903.41, Revision 3; 1903.42, Revision 3; 1903.43, Revision 4) and concluded that these procedures appear to provide adequate means to assure that persons in the owner-controlled area, including the public access area, are notified to evacuate and that such evacuation is completed and verified in a timely manner. Therefore, this finding is closed.

(8) Personnel Accountability

Specific Finding: 313/81-22-73 and 368/81-21-73 (Open)

Provide adequate markings both inside and outside of the plant to guide all persons, including the public, as to the proper evacuation routes to assembly and accountability stations. (Section 5.4.3.2)

Comments:

The auditors toured the licensee's evacuation routes that are shown in Figure 4 of the Emergency Plan and reviewed Emergency Plan Implementing Procedures 1903.30, "Plant Evacuation," and 1903.31, "Exclusion Area Evacuation." The auditors noted that the sign identifying the Training/Response Center as the ECC (identified as licensee action item INPO-82-06-20) had not yet been installed. A further concern is that a portion of evacuation route one is blocked (from normal traffic) and the turn is not marked by a sign. The auditors did not observe an instruction in the procedures that will assure a guard is dispatched, prior to plant evacuation, to that location to open the barrier and direct traffic.

The AP&L Emergency Planning Coordinators indicated to the auditors that an evaluation and work effort to improve the effectiveness (audibility) of the PA systems inside the plant were not yet completed.

Therefore, this item is open pending resolution of the concern with evacuation route one and completion of the PA projects underway.

(9) Personnel Accountability

Specific Finding: 313/81-22-74 and 368/81-21-74 (Open)

Develop implementing instructions for taking badge records to the ECC in the event of Central Alarm Station (CAS) and Secondary Alarm System (SAS) being evacuated. (Section 5.4.3.3)

Comments:

This section may contain information that the licensee considers proprietary or private.

The auditors reviewed Security Administration Procedures 1043.02, "Access Control," 1043.34, "Security at ANO and the ECC During Emergency," Emergency Plan Implementing Procedures 1903.30, "Plant Evacuation," Revision 3, dated March 7, 1982, and 1903.31, "Exclusion Area Evacuation," Revision 2, dated August 26, 1981.

Section 8.13 of 1903.31 states that the badges and badge racks should be taken to the west end of the ECC ground floor should there not be time for completing accountability onsite.

The Personnel Accountability Section of Procedure 1043.02 contains an equivalent statement.

Section 9.3.6.E of 1903.30 states that badge boards and a computer printout of personnel should be carried to the ECC as the guards evacuate the guard houses. This finding is open and contingent upon incorporation of clear and consistent instruction among the appropriate procedures as to what computer printout is meant; e.g., the master list of all badged personnel, the available printout of remaining onsite personnel, or both.

(10) Public Education and Information: News Center

Specific Finding: 313/81-22-41 and 368/81-21-41 (Closed)

Develop and implement procedures to provide for the prompt initial and followup notification and instructions to the public within the 10-mile EPZ during emergencies at ANO. (Section 4.1.4)

Comments:

The licensee and the State have addressed initial notification and initial followup messages via information releases.

(11) Public Education and Information

Specific Finding: 313/81-22-42 and 368/81-21-42 (Closed)

Provide for the initial and annual dissemination of information to the public. (Section 4.1.4)

Comments:

The licensee has mailed brochures and had emergency information printed in the telephone directory.

(12) Communication With Offsite Groups (General Public)

Specific Finding: 313/81-22-93 and 368/81-21-93 (Closed)

Disseminate information for the permanent and transient population on an annual basis on how they would be notified and what their initial actions would be in an emergency at ANO and general information as to the nature and effects of radiation. (Section 6.2)

Comments:

Information to the permanent and transient population has been distributed via the telephone directory and brochures mailed and distributed to the public and made available to public facilities.

(13) General Public

Specific Finding: 313/81-22-94 and 368/81-21-94 (Closed)

Ensure that the telephone number in the information brochure to the public on nuclear emergencies is accompanied by information regarding limits and restrictions on its use. (Section 6.2)

Comments:

The auditors discussed the toll free telephone number with the licensee and a state representative. There are several methods being considered for persons living outside the toll free area. It is recommended that persons living outside the toll free area should have a toll free number to call for rumor control and to receive consultation on emergency problems.

(14) Corporate and Site Emergency Plan

Specific Finding: 313/81-22-22 and 368/81-21-22 (Closed)

Submit to the NRC the AP&L Corporate Nuclear Contingency Plan and Procedures. (Section 3.0)

Comments:

The AP&L Nuclear Contingency Plan and Procedures were submitted to the NRC along with Revision 3 to the ANO Emergency Plan on September 18, 1981. Section 5.3.1 of Revision 4 to the ANO Emergency Plan (May 3, 1982) contains a reference to the Nuclear Contingency Plan.

(15) Emergency Action Levels

Specific Finding: 313/81-22-57 and 368/81-21-57 (Closed)

Correct the ANO Emergency Operations Procedures to enable the reactor operations personnel to effectively move through the emergency procedures and into the Emergency Plan Implementing Procedures (EPIP's). (Section 5.1)

Comments:

The ANO Emergency Operations Procedures, Series 1202 and 2202, have been revised to include specific references to the Emergency Plan Implementation Procedure 1903.10. These revisions allow the reactor operators to proceed effectively through the emergency procedures to the emergency plan implementing procedures.

c. Appendix B

(1) Emergency Planning Organization

Specific Finding: 313/81-22-01 and 368/81-21-01 (Open)

Develop and implement explicit and specific functional responsibilities and authorities for the various emergency preparedness planning and coordination functions. (Section 1.5)

Comments:

The response to this item dated May 7, 1982, was found to be inadequate due to two general shortcomings. First, the various descriptions of the individual planning positions are inconsistent; e.g., Position Task Analysis, Site Emergency Plan and Procedures, and Nuclear Contingency Plan and Procedures. Second, no information regarding the relationships between the various planning positions (particularly the Emergency Planning Coordinator and the Contingency Planning Coordinator) was provided. This item is open pending the development of consistent and coordinated descriptions of the functional responsibilities and authorities of the emergency preparedness planning and

coordination functions, and their inclusion in the appropriate plans and procedures.

(2) Training for Emergency Planning Personnel

Specific Finding: 313/81-22-02 and 368/81-21-02 (Open)

Develop and implement a program for training individuals who are assigned emergency planning responsibilities which will enable them to attain and maintain a state-of-the-art knowledge in the field of emergency preparedness. (Section 1.5)

Comments:

The response in the letter of May 7, 1982, is inadequate since a program for training emergency planning personnel is not described. This item is open pending development, implementation, and description in the appropriate plans and procedures of such a program. ANO Training Administrative Procedures 1063.21 addresses Emergency Planning Coordinator training; this procedure is presently under review.

(3) Adequacy of Emergency Preparedness Staff

Specific Finding: 313/81-22-03 and 368/81-21-03 (Open)

Evaluate the adequacy of the existing staff assigned responsibility for emergency preparedness planning and coordination and develop a means to augment existing staff when necessary. (Section 1.5)

Comments: The response in the letter of May 7, 1982, is inadequate since no documentation of the adequacy of the emergency preparedness staff is provided. The proposed Technical Analysis-Emergency Response 1983 budget includes funds for an additional Emergency Planning Coordinator. Technical and Environmental Services has included a full-time Contingency Plan Coordinator in its 1983 budget.

(4) Staff Input to Emergency Planning

Specific Finding: 313/81-22-04 and 368/81-21-04 (Open)

Develop and implement a method to provide substantive input from plant staff, down to the working level, to emergency preparedness plans and procedures development. (Section 1.5)

Comments:

The response in the letter of May 7, 1982, indicates that several methods are available for staff input to emergency

planning. These methods are not adequately documented in the appropriate plans and procedures. This item is open pending demonstration of such documentation.

(5) Selection Criteria for Emergency Planning Personnel

Specific Finding: 313/81-22-05 and 368/81-21-05 (Open)

Develop and implement specific selection and qualification criteria for individuals performing emergency preparedness development activities. (Section 1.5)

Selection and qualification criteria for the Emergency Planning Coordinator are provided in the Position Task Analysis (PTA). No such criteria exist for the Contingency Plan Coordinator. The latter criteria will be developed when a full-time Contingency Plan Coordinator is hired in 1983.

(6) Emergency Organization Authorities, Responsibilities, and Entries

Specific Finding: 313/81-22-06 and 368/81-21-06 (Open)

Unambiguously define the authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization. (Section 2.1.1)

Comments:

New letters of assignment, including identification of authority, have been drafted but have not been issued. The letters are due to be issued by August 20, 1982.

(7) Staffing the Initial Response Organization

Specific Finding: 313/81-22-07 and 368/81-21-07 (Open)

Revise the description of the Initial Response Organization to reflect functional areas of emergency activity, reporting chains (management structure), and interrelationship of the functional areas, down to the working level, consistent with Table B-1, of NUREG-0654, Revision 1. (Section 2.1.2)

Comments:

Figure 10 of the ANO Emergency Plan will be modified to reflect the minimum number of personnel onsite at all times and the number of personnel available for staff augmentation. This figure will be submitted as Amendment 5 by August 31, 1982. This response is contingent upon union contract negotiations.

(8) Functional Responsibilities and Authorities

Specific Finding: 313/81-22-08 and 368/81-21-08 (Open)

Develop and implement explicit and specific functional responsibilities and authorities for the various emergency action functions and all persons assigned to those functions. (Section 2.1.2)

Comments:

The ANO Emergency Plan and Procedures, AP&L Nuclear Contingency Plan and Procedures, and draft letters of assignment adequately address this item. The draft letters of assignment are due to be issued by August 20, 1982.

(9) Emergency Preparedness Training

Specific Finding: 313/81-22-09 and 368/81-21-09 (Open)

Develop and implement a program for training individuals who are assigned emergency action responsibilities which will enable them to attain and maintain a state-of-the-art knowledge in the field of their assigned emergency action areas. (Section 2.1.2)

Comments:

An Emergency Preparedness Training Program has not been developed. Such a program will be developed by December 31, 1982.

(10) Identification of Emergency Personnel

Specific Finding: 313/81-22-10 and 368/81-21-10 (Closed)

Include an approved list of licensee personnel (by name) in the Plan Implementing Procedures who have been selected and are qualified to perform activities within the functional areas of the onsite emergency organization to which they are assigned. (Section 2.1.2)

Comments:

Key personnel are identified by name in the Nuclear Contingency Plan and Procedures. Team leaders, alternates, and members are identified by name in the Emergency Plan Implementing Procedures.

(11) Functional Areas Specified

Specific Finding: 313/81-22-11 and 368/81-31-11 (Open)

Evaluate the adequacy of the station staff assigned responsibility for emergency actions, by functional area, and develop a means to augment staff when necessary. (Section 2.1.2)

Comments:

The emergency response team members are informally accounted for via emergency exercises and periodic discussions with station personnel. However, there is no formal mechanism to determine emergency team status due to attrition, vacations, etc. Emergency team status could be tracked on an action item list similiar to the NRC action item list.

(12) Functional Areas Specified

Specific Finding: 313/81-22-12 and 368/81-21-12 (Open)

Develop and implement specific selection and qualification criteria for individuals assigned to perform emergency actions and decisionmaking. (Section 2.1.2)

Comments:

Presently the selection criteria is based on normal duty assignments. Personnel assigned emergency team positions do not have documented required training in order to acquire the position and maintain that position other than to attend unspecified training courses.

(13) Functional Areas Specified

Specific Finding: 313/81-22-13 and 368/81-21-13 (Open)

Develop and implement quality assurance procedures to evaluate the effectiveness of the emergency action training for the various functional areas. (Secion 2.1.2)

Comments:

The Emergency Plan does not reflect the Training Coordinator as responsible for evaluating the effectiveness of both in-house and vendor training. The Emergency Plan should reflect the job description of the Training Coordinator and his/her authorities and responsibilities.

(14) State, Local, and Technical Support Organization

Specific Finding: 313/81-22-14 and 368/81-21-14 (Closed)

Revise the Emergency Plan and implementing procedures to clearly identify the primary responsibilities for emergency response by State and local organizations on which ANO would depend for technical support during an emergency. (Section 2.2)

Comments:

The ANO Emergency Plan and the Nuclear Contingency Plan identify the offsite agencies that may be requested to supply support to ANO during an emergency. The primary responsibilities for emergency response of State and local organizations within the EPZ's are described, and letters of agreement with the State and local agencies are appended to the Emergency Plan.

(15) Relations Between Offsite Support and the State Emergency Organization

Specific Finding: 313/81-22-15 and 368/81-21-15 (Closed)

Revise the Emergency Plan and implementing procedures to clearly identify the functional areas of emergency support to be provided to the station organization, reporting chains, and the interfaces between the corporate and nonlicensee augmentation organizations and the station emergency organization down to the working level. (Section 2.2)

Comments:

The functional areas of emergency support to be provided to the station organization are described in the Nuclear Contingency Plan and the ANO Emergency Plan. The interfaces between the offsite organization and the station organization are described in Figures 13 and 14 of the ANO Emergency Plan. The reporting chains between offsite organizations and the station organization are given in Section IV, C.3, of the Nuclear Contingency Plan.

(16) Augmented Organization (Recovery Planning)

Specific Finding: 313/81-22-16 and 368/81-21-16 (Closed)

Develop and implement general plans and procedures for the recovery of ANO after an accident, including consideration of criteria for reentry of the facilities and methods to be used to guide recovery operation until plant operation could be resumed. (Section 2.2)

Comments:

Section 9.0 of the Emergency Plan and Procedure 14 of the Nuclear Contingency Plan discussed general plans and procedures for recovery operations. Reentry guidelines were discussed in GPP 1903.33. Recovery team operations and duties were discussed in Procedure 1903.44.

(17) Letters of Agreement from Offsite Organizations

Specific Finding: 313/81-22-17 and 368/81-21-17 (Open)

Provide in the Emergency Plan copies of letters of agreement or contracts which demonstrate that arrangements have been made with offsite organization to supply specifically defined support or cooperation during an emergency. (Section 2.2)

Comments:

Appendix A of the ANO Emergency Plan contains the necessary letters of agreement with State and local agencies, but the Nuclear Contingency Plan (as referenced in the ANO Emergency Plan) does not contain written agreements with the identified private emergency support organizations. This item is open pending the inclusion of these letters.

(18) Augmented Organization

Specific Finding: 313/81-22-19 and 368/81-21-19 (Open)

Develop and implement methods to augment and supplement the ANO Health Physics Staff to assure the capability exists to provide 24-hour-per-day coverage of the emergency health physics needs for protracted periods. (Section 2.2)

Comments:

ANO has demonstrated that the capability exists to obtain health physics coverage 24-hours per day and to augment that coverage in the event of a protracted response. However, full shift staffing has not been accomplished due to union negotiation problems. This item is open pending settlement of union negotiations.

(19) Training/Retraining

Specific Finding: 313/81-22-20 and 368/81-21-20 (Open)

Provide initial training and at least annual retraining to all individuals, organizations, and agencies that are expected to respond to an emergency at an ANO facility. This training shall

include, but not be limited to, normal classroom training, hands-on experience, drills (as described in NUREG-0654, Item 0.2), and demonstrations of proper techniques. The material and subject matter to be covered shall include, but not be limited to, the Emergency Plan, all relevent emergency procedures, duties, authorities, responsibilities, emergency equipment, hazards associated with performing emergency functions, and communications. (Section 3.0)

Comments:

Emergency plan training which has been provided to emergency response personnel includes the review of the emergency plan and associated implementing procedures, duties, responsibilities, authorities, the use of emergency equipment, communications, and generic radiation hazards. This item is open pending development of lesson plans and training schedules for this training. As outlined in response to Specific Findings 313/81-22-09 and 368/81-21-09, these will be developed by December 31, 1982.

(20) Control Room

Specific Finding: 313/81-22-23 and 386/81-21-23 (Open)

Provide radiation monitoring equipment with both audible and visual alarms in the control room to determine the presence of both direct radiation and airborne radioactive contamination. (Section 4.1.1.1)

Comments:

Appropriate radiation monitoring equipment with both audible and visual alarms were provided. Direct radiation is monitored by RE-8001 located in Unit 1 control room. Airborne radioactive contamination was monitored by 2RE-8750-1 located in the common ductwork. Upon isolation of 2RE-8750-1, airborne contamination within the control rooms would be measured by taking an air sample. The portable air samplers are located in the control room emergency kit located in Unit 1. The samples would be counted on the Eberline SAM-2 (or RM-14/HP-210) located in the rear of Unit 1 control room.

During the appraisal followup, discussions held with the day shift reactor supervisors indicated that a thorough knowledge of the air sampling capability within both control rooms did not exist. ANO should assure that all control room shift supervisors are aware of the air sampling capability and that adequately trained personnel are available on all shifts to operate and interpret the results of the airborne sampling and monitoring equipment.

(21) Technical Support Center (TSC)

Specific Finding: 313/81-22-24 and 368/81-21-24 (Closed)

Provide continuous radiation monitoring devices, with both visual and audible alarms, in the TSC for both direct radiation and airborne radioactive contamination. (Section 4.1.1.2)

Comments:

NMC-16 gaseous and particulate count rate meter was available for continous monitoring of the TSC. This instrument provides both audible and visual alarms. The TSC also contained an RM-14/HP-210 and a SAM-2.

(22) Operations Support Center (OSC)

Specific Finding: 313/81-22-25 and 368/81-21-25 (Closed)

Provide continuous radiation monitoring devices, with both visual and audible alarms, for both airborne activity and direct radiation inside of the OSC's. (Section 4.1.1.3)

Comments:

Appropriate portable air monitoring and direct reading radiation monitoring instrumentation was contained in the onsite radiation monitoring kits located on the first floor of the administration building. Adequate procedures existed to initiate appropriate radiation monitoring activity.

(23) Operations Support Center (OSC)

Specific Finding: 313/81-22-26 and 368/81-31-26 (Closed)

Provide respiratory protection equipment and protective clothing for the maximum number of persons who may report to each OSC. (Section 4.1.1.3)

Comments:

(In discussion with Mr. John Collins on April 8, 1982, this item was clarified to include only personnel which would remain following a complete evacuation.)

Protective clothing and respiratory protective equipment were maintained on the first floor of the administration building and the first level of the turbine hall as described in the ANO Emergency Plan. This equipment was designated for use by the onsite survey team members and the fire brigade, but could be

used after initial assessment of local conditions to outfit personnel to reenter the plant and retrieve additional supplies and equipment from routine stock as necessary. Respiratory protection equipment is currently stored in an area that is expected to be accessible under initial accident conditions. Additional protective clothing is currently maintained offsite.

Initial protective clothing and respiratory protection equipment is maintained in the control rooms for use by the operators. Equipment for the CAS/SAS operators (if remaining) can be requested from the Onsite Radiological Monitoring Section. Normally, if the administration building is evacuated, these personnel would also be evacuated.

(24) Emergency Operations Facility

Specific Finding: CAL Issue 1 (Open)

Perform dose calculations based on the as-built configuration of the ECC with its associated room assignments to assure a radiation protection factor of at least 5.0 exists for the dose assessment and decisionmaking functions. The dose calculation shall be based on the full immersion of the ECC in a cloud of 0.7 Mev. gamma radiation. (Section 4.1.1.4)

Comments:

With the primary and backup Emergency Operations Facility (EOF) option, which the licensee has selected, the primary EOF can have a dose protection factor of less than five, as long as both EOF's meet certain criteria. The licensee's primary EOF does have ventilation isolation with HEPA filters but the shielding calculations, as provided by the licensee, produce a protection factor of 4.3 which, after correcting the arithmetical errors, is reduced to 4.0. Therefore, the auditors toured the licensee's backup EOF, the local AP&L office building in Russellville. While the facility appears to be adequate for a backup EOF, there was no evident planning to provide the continuity of dose projection and decisionmaking as required for a backup EOF. Therefore, this finding is open pending development of appropriate plans and procedures to ensure the continuity of dose projection and decisionmaking. The auditors also noted that an Emergency Response Facility review will be conducted in the near future for evaluating the adequacy of the licensee's EOF's.

(25) Post-Accident Sampling and Analysis

Specific Finding: 313/81-22-28 and 368/81-21-28 (Closed)

Install the portable shielding and reach tools as called for in Procedures 1607.01 and 2607.01 so that post-accident sample of primary coolant may be taken safely. (Section 4.1.1.5.1)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(26) Post-Accident Sampling and Analysis

Specific Finding: 313/81-22-29 and 368/81-21-29 (Closed)

Review all post-accident sampling and analysis procedures to assure that ALARA considerations have been fully implemented. (Section 4.1.1.5.1)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(27) Post-Accident Sampling and Analysis

Specific Finding: 313/81-22-30 and 368/81-21-30 (Closed)

Evaluate and correct the existing systems used to obtain a sample of the containment atmosphere to assure that representative samples can be safely taken and analyzed within a 3-hour time frame, and that personnel exposures do not exceed the guidance contained in NUREG-0737. (Section 4.1.1.5.2)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(28) Post-Accident Sampling and Analysis

Specific Finding: 313/81-22-31 and 368/81-21-31 (Closed)

Upgrade the existing sampling system as necessary to ensure that the provisions for sampling capability as specified in NUREG-0737 are met. This includes considerations for procuring and analyzing a representative sample and ensuring that personnel exposures do not exceed 3 and 18-3/4 rem to the whole body or extremities, respectively. (Section 4.1.1.5.3)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(29) Post-Accident Liquid Effluent Sampling and Analysis

Specific Finding: 313/81-22-32 and 368/81-21-32 (Closed)

Ensure that adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use. (Section 4.1.1.5.4)

Comments:

The auditors discussed the need and intent of post-accident liquid effluent sampling and analysis with licensee personnel (Radiochemistry Supervisor and Emergency Planning Coordinator). The auditors concluded that the methods and equipment for the sampling and analysis appear to be adequate but that changes to the applicable procedures are required to ensure their applicability to post-accident sampling and analysis.

The changes made to the following procedures were reviewed and appear to be adequate: 1607.028, "Sampling the Unit One Turbine Building Sump, Neutralizing Tank, and Oily Water Separator"; 2607.028, "Sampling the Regenerative Waste Tanks (2T92);" and 2607.028, "Sampling the Unit Two Turbine Building Sump."

(30) Post-Accident Liquid Effluent Sampling and Analysis

Specific Finding: 313/81-22-33 and 368/81-21-33 (Closed)

Provide for sampling of containment sump, ECC's pump room sumps, and other similar auxiliary building sump liquid samples. (Section 4.1.1.5.4)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. The new PASS system does contain provisions for sampling the containment sumps (Unit 1 and Unit 2) and sampling the Turbine Building sump has been included in the provisions for liquid effluent release sampling. Therefore, this item is closed.

(31) Assembly/Reassembly Areas

Specific Finding: 313/81-22-35 and 368/81-21-35 (Closed)

Provide sufficient respiratory protection equipment for all onsite emergency workers in the assembly/reassembly areas. (Section 4.1.2.1)

Comments:

(In discussion with Mr. John Collins on April 8, 1982, this item was clarified to include only personnel which would remain following a complete evacuation.)

See Item 23 above, sufficient respiratory protective equipment was maintained in the administration building OSC to allow reentry for procurement of additional respiratory protective equipment to supply CAS and SAS if required.

(32) Assembly/Reassembly Areas

Specific Finding: 313/81-22-36 and 368/81-21-36 (Closed)

Provide radiological monitoring equipment in all assembly/reassembly areas to determine both direct radiation and airborne radioactive contamination. (Section 4.1.2.1)

Comments:

Radiation monitoring equipment was located in the onsite emergency team kit located in the administration building. This equipment would be used by the onsite emergency team to determine the direct and airborne radiation levels in the activated emergency response centers as per EPIP-1903.43.

(33) Medical Treatment Facilities

Specific Finding: 313/81-22-37 and 368/81-21-37 (Closed)

Assess the adequacy of the existing first-aid facility and the path to it to assure that an injured person on a stretcher can be moved to and treated at the first-aid facility. (Section 4.1.2.2)

Comments:

Preliminary inspection of the first-aid station area indicated that equipment in the hall has been removed, therefore, allowing a stretcher to be taken into the area without undue difficulty.

(34) Emergency Facilities and Equipment

Specific Finding: 313/81-22-38 and 368/81-21-38 (Closed)

Provide instructions for diverting normal shower drains to the radioactive waste retention tank when the facilities are used for decontamination purposes. (Section 4.1.2.3)

Comments:

Instructions have been provided in the Emergency Operations Facility (Emergency Control Center) shower access for diverting the decontamination shower from the storage drain to the normal shower drain.

(35) Emergency Facilities and Equipment

Specific Finding: 313/81-22-39 and 368/81-21-39 (Closed)

Provide towels and soap at both decontamination facilities. (Section 4.1.2.3)

Comments:

During the Emergency Preparedness Appraisal, the decontamination shower facilities were visited three times and there were no towels available for personnel taking a shower. Further, on July 20, 1982, following shift change, a visit was made to the Unit 1 decontamination shower and there were no towels in the immediate vicinity of the shower stall.

Personnel should be designated to ensure that towels are available for all personnel at all times.

On July 23, 1982, a letter was written by the Health Physics Superintendent and distributed to all Health Physics Supervisors

that the decontamination facility at Unit 1 controlled access point will be inspected for soap and towels. If additional supplies are needed, the Plant Services Supervisor is to be notified.

(36) Decontamination Facilities

Specific Finding: 313/81-22-40 and 368/81-21-40 (Closed)

Provide instructions for decontamination at both personnel decontamination facilities. (Section 4.1.2.3)

Comments:

Appropriate personnel decontamination procedures were contained in Radiation Protection Procedure 1622.010, Revision 2, "Personnel Decontamination." Copies of this procedure were available at both personnel decontamination facilities.

(37) Emergency Kits and Emergency Survey Instrumentation

Specific Finding: 313/81-22-43 and 368/81-21-43 (Closed)

Provide additional emergency kits and radiation detection instruments to adequately equip the emergency teams as described in Section 5.2.5 of the ANO Emergency Plan. (Section 4.2.1.1)

Comments:

All 11 emergency kits described in Appendix E of the Emergency Plan were in place. Onsite and offsite monitoring kits were examined and found to contain appropriate instrumentation and supplies required for emergency monitoring activities.

(38) Emergency Kits and Emergency Survey Instrumentation

Specific Finding: 313/81-22-44 and 368/81-21-44 (Closed)

Provide high range radiation survey instruments with extendable probes for inplant monitoring under emergency conditions. (Section 4.2.1.1)

Comments:

Ten high range radiation survey instruments (teletectors) were available for use at the controlled access point adjacent to the ANO Unit 2 turbine building.

(39) Nonradiation Process Monitors

Specific Finding: 313/81-22-46 and 368/81-21-46 (Closed)

Provide a remote readout to the control room of the emergency feedwater suction pressure for Unit 2. (Section 4.2.1.3)

Comments:

Control room instrumentation to assess emergency feedwater pump operation appeared adequate.

(40) Meteorological Instrumentation

Specific Finding: 313/81-22-47 and 368/81-21-47 (Open)

Resolve the matter of exposure of the meteorological sensors at the 10-meter level of the tower with regard to the likelihood of the effects from the trees to the east of the tower. (Section 4.2.1.4)

Comments:

This item is open pending tentative completion on August 31, 1982. The auditors noted that the area is presently being cleared.

(41) Meteorological Instrumentation

Specific Finding: 313/81-22-48 and 368/81-21-48 (Open)

Identify the means to be used for determining the magnitude of and for continually assessing the impact of the release of radioactive materials, including dose projections using realtime meteorological information and consideration of terrain affected flow conditions. (Section 4.2.1.4)

Comments:

This item is open pending tentative response on August 31, 1982.

(42) Meteorological Instrumentation

Specific Finding: 313/81-22-49 and 368/81-21-49 (Open)

Develop a dose calculation and assessment capability that includes a treatment of meteorological factors, source characteristics, and building configuration effects to provide realistic transport and diffusion estimates for inclusion in the dose calculational methodology. This capability shall be outlined in a technical bases

document discussing the entire dose calculation scheme. (Section 4.2.1.4)

Comments:

This item is open pending tentative response on August 31, 1982.

(43) Meteorological Instrumentation

Specific Finding: 313/81-22-50 and 368/81-21-50 (Open)

Provide direct telephone access by NRC to the individual responsible for making offsite dose projections and develop and implement procedures for establishing contact and identification of contact individuals. (Section 4.2.1.4)

Comments:

This item is open pending a meteorological specialist's review after August 31, 1982.

(44) Meteorological Instrumentation

Specific Finding: 313/81-22-51 and 368/81-21-51 (Open)

Establish a QA program to provide the mechanism for review and evaluation of the quality of data obtained for the meteorological monitoring systems. (Section 4.2.1.4)

Comments:

This item is open pending a meteorological specialist's review after August 31, 1982.

(45) Meteorological Instrumentation

Specific Finding: 313/81-22-52 and 368/81-21-52 (Open)

Develop and implement mechanisms to simplify the calculational requirement of the dose projection methods. (Section 4.2.1.4)

Comments:

This item is open pending a meteorological specialist's review after August 31, 1982.

(46) Meteorological Instrumentation

Specific Finding: 313/81-22-53 and 368/81-21-53 (Open)

Establish procedures to determine stability class from available date from offsite locations (e.g., NWS) rather than presuming "G" stability independent of actual conditions. This procedure ould consider parameterization schemes such as the Pasquill or Pasquill Turner Solar Index Scheme. (Section 4.2.1.4)

Comments:

This item is open pending a meteorological specialist's review after August 31, 1982.

(47) Respiratory Protection

Specific Finding: 313/81-22-54 and 368/81-21-54 (Closed)

Provide sufficient respiratory protection equipment for all onsite emergency workers. (Section 4.2.2.1)

Comments:

See Items 23 and 32 above. Sufficient respiratory protection equipment appears to be adequate for emergency workers.

(48) Emergency Communications Equipment

Specific Finding: 313/81-22-55 and 368/81-21-55 (Closed)

Provide an HPN telephone in the TSC (this will require NRC action). (Section 4.2.3)

Comments:

The HPN telephone has been installed and confirmed to be operational.

(49) Organization and Content of Emergency Plan Implementation Procedures

Specific Finding: 313/81-22-58 and 368/81-21-58 (Open)

Correct the EPIP's by providing sections in each procedure on prerequisites, precautions, limitations of actions, and checklists to assure that the procedure steps have been followed. (Section 5.1)

Comments:

Existing EPIP's do not identify the prerequisites necessary for following the procedure (e.g., equipment); not all procedures contain necessary special precautions to take during an incident; not all procedures contain action checklists; and procedure volumes are not indexed by title.

(50) Identification of Individuals in the Emergency Organization

Specific Finding: 313/81-22-59 and 368/81-21-59 (Closed)

Correct the EPIP's by specifically identifying those individuals by title and name who have the authority, responsibilities, and qualifications necessary to perform the tasks governed by the procedures. (Section 5.1)

Comments:

Existing EPIP's identify by title the individuals who have the authority and qualifications necessary to perform the tasks governed by the procedures.

(51) Guidelines for Exercising Judgment

Specific Finding: 313/81-22-60 and 368/81-21-60 (Open)

Correct the EPIP's by providing specific guidelines to be used in exercising judgment in the implementation of specific actions and the development of offsite recommendations of protective actions for the public. (Section 5.1)

Comments:

Existing EPIP's do not provide specific guidelines for exercising judgment in implementing specific actions or in developing protective action recommendations.

(52) Human Factors Considerations in EPIP's and EOP's

Specific Finding: 313/81-22-61 and 368/81-21-61 (Open)

Correction of the EPIP's and Emergency Operating Procedures (EOP's) to incorporate human factor considerations such as indexes, color coding, tabs, and different type styles (fonts) to highlight important items. (Section 5.1)

Comments:

The EPIP and EOP volumes do not incorporate a number of devices that would facilitate their use in an emergency. Particularly

effective would be the inclusion of indexes in each volume, color coding of tabs and contents, and use of varying type styles (fonts). The licensee has made some improvement in human factor considerations by including color tabs in the EPIP's and noting important steps in procedures. The improvements should be made consistent in all procedure volumes and carried through in each volume. Finally, pervasive need is to write procedures taking into account the point of view of the workers who will be reading and using them.

(53) Onsite (Out-of-Plant) Radiological Surveys

Specific Finding: 313/81-22-62 and 368/81-21-62 (Closed)

Provide a high-range survey instrument with an extendable probe for inclusion in one of the onsite emergency kits. (Section 5.4.2.2)

Comments:

The original intent of this finding was to provide an instrument with an extendable probe for use in estimating the containment source term. Since high-range containment monitors have been installed, this item is no longer applicable.

(54) Primary Coolant Sampling

Specific Finding: 313/81-22-63 and 368/81-21-63 (Closed)

Develop and implement the specific and explicit procedures, methods, systems, and equipment for obtaining a representative reactor coolant sample that shall not require an isolated auxiliary system to be placed in operation in order to use the sampling system and for which exposures to personnel in obtaining and analyzing the sample do not exceed the criteria of GDC 19. (Section 5.4.2.4)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(55) Primary Coolant Sample Analysis

Specific Finding: 313/81-22-64 and 368/81-21-64 (Closed)

Develop and implement procedures that will provide for analysis of representative post-accident samples of the primary coolant to include explicit provisions for sample preparation, adequate data collection and processing counting of high level samples with ALARA considerations. (Section 5.4.2.5)

Comments:

At the time of the followup appraisal the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(56) Containment Atmosphere Sampling

Specific Finding: 313/81-22-65 and 368/81-21-65 (Closed)

Develop and implement specific and explicit procedures for the acquisition of representative samples of the containment atmosphere under accident conditions consistent with NRC guidelines contained in NUREG-0737. (Section 5.4.2.6)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(57) Containment Atmosphere Sample Analysis

Specific Finding: 313/81-22-66 and 368/81-21-66 (Closed)

Develop and implement specific and explicit procedures for the preparation and analysis of representative samples of the containment atmosphere consistent with the NRC guidance contained in NUREG-0737. (Section 5.4.2.7)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods,

and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(58) Gaseous and Particulate Effluent Sampling

Specific Finding: 313/81-22-67 and 368/81-21-67 (Closed)

Develop and implement specific and explicit procedures for the acquisition of representative gaseous and particulate (stack) effluent samples, under accident conditions, consistent with the NRC guidance contained in NUREG-0737. (Section 5.4.2.8)

Comments:

At the time of the followup appraisal, the auditors noted that the PASS previously appraised is no longer used for post-accident sampling. New (and unappraised) equipment, facilities, methods, and procedures exist for post-accident sampling. Since this finding refers to the PASS that is no longer used, this item is closed.

(59) Liquid Effluent Sampling

Specific Finding: 313/81-22-68 and 368/81-21-68 (Closed)

Identify liquid effluent release points or potential release points that may cause offsite radiological consequences as a result of an emergency condition. (Section 5.4.2.10)

Comments:

The licensee has identified the following items as liquid effluent release points that should be considered for post-accident sampling: the oil/water separator, the neutralizing tanks, and the turbine building sumps. The changes to the sampling (and analysis) procedures for these liquid effluent release points are covered in Appendix B, Items 60 and 61. Therefore, this item is closed.

(60) Liquid Effluent Sampling

Specific Finding: 313/81-22-69 and 368/81-21-69 (Closed)

Develop and implement specific and explicit procedures for the acquisition of representative samples from liquid effluent release points or potential release points under emergency conditions consistent with the NRC guidance contained in NUREG-0737. (Section 5.4.2.10)

Comments:

The routine procedures that cover the sampling for the liquid effluent release points identified for Item 59 (Specific Finding 313/81-22-68 and 368/81-21-68) were modified for post-accident liquid effluent sampling. The modifications include precautionary notes for health physics coverage; potential for smaller volume notes for health physics coverage; potential for smaller volume samples; and extra shielding for the sample. The modifications appear to be adequate; therefore, this item is closed.

(61) Liquid Effluent Sample Analysis

Specific Finding: 313/81-22-70 and 368/81-21-70 (Closed)

Develop and implement specific and explicit procedures for the analysis of post-accident samples of liquid effluents. (Section 5.4.2.11)

Comments:

The routine procedures that cover the analysis of liquid effluent samples, which include samples from the release points identified in item 53 (Specific Finding 313/81-22-68 and 368/81-21-68), contain provisions for performing analyses on samples that may have a variety of volumes and dilution factors, such as post-accident type samples. These provisions appear to be adequate; therefore, this item is closed.

(62) Personnel Monitoring and Decontamination

Specific Finding: 313/81-22-75 and 368/81-21-75 (Closed)

Develop and implement specific procedures which govern the radiological monitoring and decontamination of personnel and use of special decontamination aids; e.g., potassium permanganate, etc. (Section 5.4.3.4)

Comments:

See Item 36 above. Appropriate personnel decontamination and monitoring procedures governing the use of special decontamination aids (e.g., $KMnO_4$, etc.) were discussed on Radiation Protection Procedure 1622.010, Revision 2.

(63) Onsite First Aid/Search and Rescue

Specific Finding: 313/81-22-76 and 368/81-21-76 (Closed)

Correct the emergency implementation procedures to explicitly identify the "appropriate medical kit" as discussed in Procedure 1903.42. (Section 5.4.3.5)

Comments:

The first-aid kits are identified in Procedure 1903.42 and reflect that they will be used as necessary.

(64) Onsite First Aid/Search and Rescue

Specific Finding: 313/81-22-77 and 368/81-21-77 (Closed)

Provide adequate first-aid supplies throughout the plant and develop a method to ensure that adequate stocks of such supplies are maintained and immediately available for emergency use. (Section 5.4.3.5)

Comments:

The licensee has distributed five first-aid kits for personnel use. Each kit is checked quarterly by a health physics technician for content and resupplied as needed.

(65 Repair/Corrective Actions

Specific Finding: 313/81-22-78 and 368/81-21-78 (Closed)

Develop and implement provisions for briefings of emergency reentry teams to include maps, decisional aids, conduct of walk-throughs, and special radiation protection considerations prior to reentry into accident areas. (Section 5.4.5)

Comments:

Procedure 1903.44 defining the duties of the Emergency Recovery Team required that the recovery team members be briefed prior to reentry as to expected dose rates, stay times, duties, actions to perform, and other information as appropriate.

(66) Recovery

Specific Finding: 313/81-22-79 and 368/81-21-79 (Closed)

Develop and implement plans and procedures which will govern the operations of the ANO Recovery Organizations and criteria for

its initiation and transfer of command authority and responsibilities. (Section 5.4.6)

Comments:

Plan and procedures governing the operations of the ANO Recovery Organization were contained in Procedure 1 of the Contingency Plan. Criteria for initiation, transfer of authority, and responsibilities were contained in Procedure 1 and Procedure 14 of the Contingency Plan.

(67) Recovery

Specific Finding: 313/81-22-80 and 368/81-21-80 (Closed)

Develop and implement procedures with specific criteria upon which the emergency class will be downgraded and provisions for notification of Federal, State, and local officials prior to entering a downgraded mode. (Section 5.4.6)

Comments:

Specific criteria for downgrading emergency class based upon EAL classifications is not required by NUREG-0654. The organizational authority for declaring the recovery phase was contained in Procedure 14 of the Nuclear Contingency Plan. Provisions for evaluation of plant operating, and inplant and out-of-plant radiological conditions were contained in EPIP 1903.33. Notification procedures prior to downgrading were discussed in the Contingency Plan Procedure 14. Key positions in the recovery organization are identified in Contingency Plan Procedure 1.

(68) Public Information (Rumor Control)

Specific Finding: 313/81-22-81 and 368/81-21-81 (Open)

Develop and implement procedures to handle rumors and provide the public with accurate information during emergencies. (Section 5.4.7)

Comments:

Pursuant to 10CFR50.47(5)(6)(7) and the recommendations set forth in NUREG-0654 G.4.C, there are no provisions made to handle inquiries from the public within the 10-mile EPZ. The current telephone number is not toll free, is not normally available on holidays, and is available only during working hours of the State. Presently, there are people living in the 10-mile EPZ who must pay to call AP&L for information concerning an emergency. The AP&L Contingency Plan Number 5 reflects that

persons may call Little Rock or Russellville which would be toll calls for many persons living in the 10-mile EPZ.

The response to Item 68 (313/81-22-81 and 368/81-21-81) that "Employees in the various offices will have authority to read these most recent news bulletins," is not adequate. Toll free numbers should be provided, and office location designated and the support group should be identified.

(69) Public Information

Specific Finding: 313/81-22-82 and 368/81-21-82 (Closed)

Develop provisions to assure continuity of news releases during the time required to move the corporate news contracts from the corporate offices to the news center at ANO. (Section 5.4.7)

Comments:

The licensee had developed provisions to ensure continuity of news releases as noted in the ANO Nuclear Contingency Plan, Procedure 5.

(70) Correction of Deficiencies Identified in Exercises

Specific Finding: 313/81-22-83 and 368/81-21-83 (Closed)

Compile, document, and correct deficiencies noted in the drill and/or exercise critiques, and maintain such records on file. (Section 5.5.2)

Comments:

The ANO Emergency Plan and Procedures adequately discuss the compilation, documentation, and correction of deficiencies identified in drills and exercises.

(71) Guidelines for Emergency Preparedness Exercises and Drills

Specific Finding: 313/81-22-84 and 368/81-21-84 (Closed)

Develop and implement procedures which specify guidelines for emergency preparedness exercises and drills. (Section 5.5.2)

Comments:

The guidelines for emergency preparedness exercises and drills in the ANO Emergency Plan and Procedures were reviewed and appear to be adequate.

(72) Communications Drills

Specific Finding: 313/81-22-85 and 368/81-21-85 (Closed)

Perform communications drills with State and local governments at frequencies corresponding to the communication test frequencies specified in Section 8.3 of the Emergency Plan and/or frequencies specified in NUREG-0654, Revision 1, Item N.2.a for all emergency response organizations and agencies. (Section 5.5.2)

Comments:

Provisions for the communications drills specified in NUREG-0654 were reviewed in the ANO Emergency Plan and Procedures and appeared to be adequate.

(73) Review of Emergency Plan and Procedures

Specific Finding: 313/81-22-86 and 368/81-21-86 (Closed)

Review the Emergency Plan and its implementing procedures at least annually and establish a means to assure that up-to-date copies of the appropriate sections of the Plan and its EPIP's are available for immediate access to offsite response organizations. (Section 5.5.3)

Comments:

The ANO Emergency Plan provides for annual review of the Emergency Plan and its Procedures and for the distribution of revisions.

(74) Audits of Emergency Plan and Procedures

Specific Finding: 313/81-22-87 and 368/81-21-87 (Closed)

Conduct at least yearly audits of the Emergency Plan, Emergency Plan Implementing Procedures, and all supplementary procedures necessary for full emergency response. (Section 5.5.4)

Comments:

The ANO Emergency Plan and Procedures are audited annually according to Quality Assurance Procedure 13.

(75) Audits of Drills and Exercises

Specific Finding: 313/81-22-88 and 368/81-21-88 (Closed)

Provide for QA personnel audit emergency preparedness drills and exercises. (Section 5.5.4)

Comments:

Quality Assurance Procedure 13 provides for QA personnel to audit emergency preparedness drills and exercises.

(76) Human Factors Considerations

Specific Finding: 313/81-22-89 and 368/81-21-89 (Open)

Review and evaluate the usability of existing documents and instruments which would be used during an emergency for human factors engineering considerations. (Section 5.6)

Comments:

The licensee provides no documentation regarding the review and evaluation of human factors considerations in the usefulness of existing documents and instruments. The licensee states that an evaluation concerning these matters will be conducted by December 31, 1982.

(77) Training of Offsite Response Personnel

Specific Finding: 313/81-22-90 and 368/81-21-90 (Open)

Evaluate the status of training of offsite response personnel, develop a listing and course description of the types of training the licensee could provide for offsite response personnel, and offer initial training and annual retraining classes (in addition to the training received by participation in exercises and drills) to all offsite response organizations. (Section 6.1)

Comments:

The licensee's response is inadequate in that no evaluation of the training of offsite personnel is provided. In order to achieve an adequate training program of offsite personnel, the licensee should develop a listing of all courses provided, descriptions of their contents, documentation of attendance, and evaluation of course effectiveness. Training and Administration Procedure 1063.21 (Section 6.4) describes licensee offsite training. This procedure is currently under review.

(78) Letters of Agreement

Specific Finding: 313/81-22-91 and 368/81-21-91 (Open)

Review all letters of agreement with offsite support organizations to ensure that all are still acceptable and will be

honored, and ensure that adequately detailed letters of agreement exist for all organizations the licensee will depend on for aid during an emergency. (Section 6.1)

Comments:

The licensee states that letters of agreement are reviewed every two years in accordance with the ANO Emergency Plan. The letters currently contained in the plan will be reviewed and reprinted, as necessary, by December 31, 1982.

(79) Coordination with Offsite Groups

Specific Finding: 313/81-22-92 and 368/81-21-92 (Open)

Ensure that the EAL's are discussed and agreed on by the licensee, State and local governmental authorities, and develop and implement a method to review the acceptability of the EAL's with the State and local governmental authorities on an annual basis. (Section 6.1)

Comments:

Completion of discussions with State and local governmental officials and a method for assuring that an annual review of the EAL's is performed with the State of Arkansas will be effective by August 31, 1982.

(80) Schedule of Exercises and Drills

Specific Finding: 313/81-22-95 and 368/81-21-95 (Closed)

Provide for adequate and timely drills and exercises to test the licensee's capabilities to effectively perform the various emergency response functions as identified in the Emergency Plan and its Implementation Procedures. (Section 7.1)

Comments:

The ANO Emergency Plan and Procedures provide for adequate and timely drills and exercises as described in NUREG-0654. Documentation at exercises and drills that have been conducted has been reviewed and appeared to be adequate.

(81) Formal Critique of Emergency Drills and Exercises

Specific Finding: 313/81-22-96 and 368/81-21-96 (Closed)

Provide for formal critique of all emergency drills and exercises and methods to correct deficiencies identified. (Section 7.1)

Comments:

The ANO Emergency Plan and Procedure provides for formal critiques following all emergency drills and exercises. These provisions were reviewed and appeared to be adequate by the auditors.

(82) Dose Calculations

Specific Finding: 313/81-22-97 and 368/81-21-97 (Open)

Ensure that personnel are sufficiently trained in their respective emergency procedures, locations, and use of emergency equipment for offsite/onsite dose calculations. (Section 7.2.1)

Comments:

This finding refers to the error in the Magnitude of Release Procedure 1904.03, Revision 0, "Auxiliary Building Ventilation Exhaust Emergency Radiation Monitor." The auditors discovered, during the August 1981 appraisal and the walk-throughs, the licensee personnel from Unit 1 and Unit 2 did not demonstrate adequate familiarity with the location of the monitor and procedures governing its use.

During this followup appraisal, the auditors discovered the correction factor in 1904.03, Revision 1, to be in error, and during similar walk-throughs, discovered that the Shift Administrative Assistants (SAA's) had not yet received the necessary training for using the emergency radiation monitor and procedure. Licensee personnel told the auditors that such training is scheduled for August 1982.

This item is open pending correction of 1904.03 and completion of training of the SAA's.

(83) Post-Accident Coolant Sampling and Analysis

Specific Finding: 313/81-22-98 and 368/81-21-98 (Closed)

Ensure that the appropriate personnel are properly trained to take samples of primary coolant safely and efficiently during an incident. (Section 7.2.2)

Comments:

The auditors reviewed training records and discussed the training given the radiochemistry personnel during July 1982. The training covered reactor coolant sampling using the new

PASS equipment and procedures including the grab sample process. Furthermore, the auditors observed photographs of the training conducted with the old (and no longer used) PASS. Therefore, this item is closed.

(84) Containment Atmosphere Sampling and Analysis

Specific Finding: 313/81-22-99 and 368/81-21-99 (Closed)

Ensure that all personnel are properly trained to perform their emergency tasks safely and efficiently during an incident. (Section 7.2.3)

Comments:

This finding refers to training for the (containment air) PASS. The licensee's response to Appendix B, Item 83, Specific Finding 313/81-22-98 and 368/81-21-98, states that such training is expected to be completed by August 31, 1982. The auditors reviewed training records of training conducted in July 1982 that covered containment air sampling for the new PASS. Therefore, this item is closed.