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May 25, 1983

Mr. James P. Patterson
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Jim:

MONTICELLO EMERGENCY PREPAREDNESS INSPECTION FOLLOWUP

Enclosed is the finalized report of A. L. Smith and W. V. Thomas who were the Pacific Northwest Laboratory (PNL) participants during the Monticello Emergency Preparedness Inspection Followup, May 16 - May 20, 1983. Only minor changes were made from the rough draft given to you, prior to leaving Monticello. Areas covered by PNL are as follows:

Appendix A, Appraisal Improvement Items, Appraisal Open Items
February 23, 1983 Emergency Exercise Improvement Items
Annual Inspection Module Items

If you have any questions regarding the content of this report, please contact W. V. Thomas on (FTS) 509-375-2088.

Very truly yours,

J. B. Martin
for J. B. Martin
Technical Leader
Health Physics Technology Section

W. V. Thomas
W. V. Thomas
Senior Research Scientist
Health Physics Technology Section

JBM/WVT/mae

Enclosure

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263/82-05-18 (CLOSED)

ITEM

Procedures for permanent containment air sampling system have not been completed.

FINDING

The procedures for containment air sampling have been completed and implemented. The procedures were contained in EPIP A.2-415 and A.2-416.

DISPOSITION

This item is considered closed.

263/82-05-15 (CLOSED)

ITEM

Permanent post-accident coolant sampling system will be installed and operational by August 1, 1982. As licensee committed to NRR in letter of December 29, 1981.

FINDING

The permanent post-accident coolant sampling system was installed and operational at the time of this inspection.

DISPOSITION

This item is considered closed.

263/82-05-16 (CLOSED)

ITEM

Licensee committed in letter of December 29, 1981 to NRR that their permanent post-accident containment air sampling system will be installed and operational by August 1, 1982.

FINDING

The permanent post-accident containment air sampling system was installed and operational at the time of this inspection.

DISPOSITION

This item is considered closed.

263/82-05-17 (CLOSED)

ITEM

Procedures for permanent primary coolant sampling system have not been completed.

FINDING

Procedures for the primary coolant sampling system have been completed and implemented EIPs A.2-413 and A.2-414 covered primary coolant sampling.

DISPOSITION

This item is considered closed.

APPENDIX A

PREPAREDNESS IMPROVEMENT ITEMS

ITEM 4 (CLOSED)

The number of qualified persons available on shift for dose assessment calculations on both the computer and hand calculational methods should be expanded (Section 3.2).

EVALUATION

The number of qualified persons available on shift for dose assessment calculations on both the computer and hand calculators has been increased. Dose assessment calculation has been added to the qualification card for radiation protection specialists and is a requirement for shift work. All specialists have received this training. Normally two specialists are on each shift so backup capability is provided. A total of seven specialists were qualified by training to perform dose calculations. EPIP A.2-406 Offsite Dose Projection was reviewed for compatibility with state-of-the-art offsite dose calculation methodology and found to be compatible. Walk throughs of the dose assessment procedure and sample calculations were performed by shift specialists and observed by the inspectors. All shift specialists observed demonstrated knowledge of the dose assessment procedure and promptly and correctly performed the calculations using the computer in the Technical Support Center.

APPENDIX A

IMPROVEMENT ITEM

ITEM 10 (CLOSED)

The licensee should provide at least one enclosed vehicle with four wheel drive for emergency response functions (Section 4.2.6).

EVALUATION

A walkthrough by the inspector verified that two dedicated enclosed vehicles were available for emergencies, however, neither of the vehicles were four wheel drive as recommended in the NRC Appraisal Report. It was noted that the plant maintains a fleet of vehicles for general use which included a four wheel drive vehicle that could be used in an emergency. Keys for the two dedicated vehicles were assigned to the Emergency Planning Coordinator and the RSP Coordinator.

Based on the above findings, this portion of the licensee's program is acceptable. This item is closed.

ITEM 6 (CLOSED)

First aid supplies, shock blankets, and stokes stretchers should be located on each of the five floors of the reactor building (Section 4.1.2.2).

EVALUATION

A walkthrough and inspection was conducted by the inspector to verify the location of first aid supplies, shock blankets and stretchers in the Reactor

Building. Two emergency first aid supply kits were located in the Access Control Area and a stokes or long backboard stretcher plus shock blankets were located on each of the five reactor floors.

Based on the above findings, this portion of the licensee's program is acceptable. This item is closed.

ITEM 9 (CLOSED)

A shock blanket and splint should be included with the medical supplies in the vicinity of the Control Room (Section 4.2.1.1).

EVALUATION

A walkthrough by the inspector verified that shock blankets and splints were included as a part of the medical supplies located in a cabinet in the Reactor Control Room.

Based on the above findings, this portion of the licensee's program is acceptable. This item is closed.

APPENDIX C (Open Items)

ITEM 1 (OPEN)

Letter dated December 10, 1981 and February 5, 1982 regarding Minimum Shift Staffing, SROs and an addition to the Control Room were sent to the Office of Nuclear Reactor Regulation (NRR), requesting an extension to February 1983. At the time of this appraisal, NRR is evaluating this as a generic issue (Section 2.2 and 4.1.1.1)(263/82-05-12).

EVALUATION

The inspector reviewed the licensee's response to Minimum Shift Staffing regarding SROs and their request for schedule relief until February 15, 1983. The licensee Shift Staffing Implementation was not achieved by the February 15, 1983 date, however, a March 14, 1983 letter from NRC to NSP addresses item 1.A.1.3.2 regarding Minimum Shift Crew Staffing which now becomes dependent on a separate rule making. This item will be addressed by the licensee when a final rule on Licensed Operator Staffing at Nuclear Power Units is issued.

The above referenced letter is attached for detailed information. (An original copy-only.)

Based on the above findings, this portion of the licensee's program remains open.

SHIFT STAFFING AND AUGMENTATION (82205)

The inspector reviewed the licensee's shift staffing and augmentation to determine its adequacy in numbers and in functional capability and that administrative and physical means were available and maintained to augment the emergency organization in a timely manner.

These requirements were discussed and reviewed with the Emergency Planning Coordinator and the results were as follows:

1. Plant shift staffing numbers and functional capabilities were reviewed against the goals of Table B-1 of NUREG-0654, Rev. 1. As of February 1, 1983 a chemistry technician was assigned to each shift. With this addition, NSP minimum shift staffing meets the criteria in Table B-1 of NUREG-0654, Rev. 1.
2. It was determined by the inspector that an administrative system was in place so that adequate numbers of shift personnel were available or on call if needed in an emergency condition. At the time of this inspection there were 67 alert radios assigned to key plant personnel. These radios were located in the homes of the individual employees and the 30 to 60 minute time factor for reporting was determined by distance from the plant. Details of this capability are specified in Attachment I.
3. Call-in procedures to determine the type of notification the licensee utilized were reviewed by the inspector. This capability was initiated by use of the Alert radios discussed in Item 2 above. A list of names,

positions, addresses, etc. of all key personnel who were assigned alert radios was available for use by the Emergency Coordinator. This procedure appears to be effective for meeting the Table B-1 of NUREG-0654, Rev. 1 goals for Plant EMergency Staffing.

4. By interview and record review the inspector determined that the licensee could perform augmentation of key personnel in a timely manner. On March 10, 1982 an unannounced shift augmentation test was conducted. The test demonstrated the capability for meeting the minimum staffing levels within the 30 and 60 minute time periods. This type of shift augmentation test plus information from drills will continue to be initiated on a periodic basis. Details of the shift augmentation test were indicated in Attachment II.

Based on the above findings this portion of the licensee's program is acceptable.

KNOWLEDGE AND PERFORMANCE OF DUTIES (TRAINING) (82206)

The inspectors reviewed the licensee's training program, include development and maintenance of course outlines, lesson plans, training schedules, individual training records, drills, written exams, and other necessary emergency training material. These emergency training program components were discussed with the Training Supervisor and a Technical Instructor of Health Physics Production Training. Individual records of Shift Supervisors, Shift Radiation Protection Specialists, and Shift Chemistry Technicians were reviewed to verify that initial training and retraining were provided. Training and retraining records for offsite support emergency organizations, such as, ambulance/rescue and fire department service were also reviewed and found to be documented. During the inspection it was noted by the inspectors that some emergency training records were located in files other than the individuals training folder, however, these requested records were easily located by the training instructor.

The Training Center is in the process of developing a Radiation Protection Specialist (RPS) Plan which will establish requirements for a training progression program for Radiation Protection specialists. It appears that this plan will provide a marked improvement in a portion of the Emergency Training Program. The Training Center is also in the process of microfilming the individual training files of NSP employees to reduce the ever increasing filing space requirements.

Walkthroughs and interviews were conducted with key personnel which included Shift Supervisors, Shift Chemistry Technicians and Offsite Firemen to determine their roles in an emergency condition. Selected emergency functions

such as Emergency Classification, Dose Assessments, Post-Accident Sampling and Analysis, and offsite organization response were used by the inspectors to determine that these individuals were properly trained and that they did understand their emergency responsibilities and that they could perform their assigned emergency functions.

Based on the above findings, this portion of the licensee's program is acceptable.

DOSE CALCULATION AND ASSESSMENT (82207)

INSPECTION OBJECTIVE

To determine that there is an adequate method for assessing consequences caused by a radiological release.

EVALUATION

It was determined during the inspection that adequate procedures existed for offsite dose calculations and assessment under actual and potential release conditions that are consistent with the procedures used by the state of Minnesota. Emergency plan implementing procedure A.2-406 "Offsite Dose Projection" was reviewed during the inspection. This procedure provided guidance and instructions for estimating offsite doses resulting from actual or anticipated releases. The procedure utilized a computer projection method (MODCOM) or a hand calculator. Input for either calculation method was from the meteorological tower computer system, the plant stack and the Reactor Building ventilation effluent release rate information acquired from effluent monitors or dose rate readings converted to release rates. The Turbine Building vents have been sealed and the only release path is through the Reactor Building vents or the plant stack.

Meteorological information was available to the Control Room, TSC, and EOF. Backup information was available from the National Weather Information Service. Dose rate values were printed out in mrem/hr at the site boundary, the nearest receptor, and out to 10 miles in 1 mile increments. The printout also displayed the dose guidelines for the site boundary and nearest receptor. Data is accumulated in the computer program at 15, 30, or 60 minute intervals

and can be converted to accumulated dose at a preselected time for whole body and infant thyroid for a selected sector. The accumulated doses are then keyed to a specific emergency plan implementing procedure for offsite protective action decisionmaking.

During the inspection the training records of Shift Radiation Protection Specialists were reviewed for completion and qualification in dose assessment and found to be up to date. The computer equipment was demonstrated by the specialists who performed dose calculations based upon information supplied by the inspectors. The dose assessment equipment was available and maintained in proper working order. All Shift Specialists observed demonstrated knowledge of the dose assessment procedure and promptly and correctly performed the calculations using the computer in the Technical Support Center. Computer equipment for dose calculations was also in the place in the EOF. In the event the computers were inoperable dose calculations could be performed using hand calculators as per Attachment 2 to EPIP A.2-406.

During the inspection it was noted that the licensee was installing a new computer system for dose calculations (MIDAS). Terminals for access to this system were in place in the TSC, EOF, Control Room, and Chemistry Supervisor's office. The MIDAS system was expected to be fully operational by the end of Summer 1983.

POST-ACCIDENT MEASUREMENTS AND INSTRUMENTATION (82208)

INSPECTION OBJECTIVE

To determine that methods and instrumentation exist for assessing the magnitude of the release or potential release of radioactive material and for continuously assessing the impact of that release.

EVALUATION

Radiological and meteorological instrumentation described in the emergency plan and procedures used for assessment of plant radiological conditions during an accident were available and maintained. The plant ARMS and meteorological systems were maintained by the Plant Technical Support Staff. Instrumentation was calibrated quarterly by the Instrumentation and Calibration staff. High range portable instrumentation was contained in the emergency kits described in the plan and were also calibrated quarterly. Two MCAs were in place in the counting laboratory, these were calibrated daily. The high range containment monitor was installed, calibrated and operable.

Emergency Preparedness Implementing procedure A.2-101 related off normal radiological instrumentation readings to classification of emergencies using the plant installed ARMS, Reactor Building vent readings, and the plant stack readings. The Post-Accident Sampling System for sampling primary coolant and containment atmosphere was in place and PASS operation procedures were contained in EIPs A.2-414 through A.2-418. PASS analysis procedures were contained in EIPs A.2-419 through A.2-421. Walkthroughs of the PASS sampling and analysis procedures were conducted by the Radiation Protection Specialists

and observed by the Inspectors. All Specialists observed demonstrated a thorough knowledge of the sampling and analysis procedures and familiarity with the equipment.

Stack and Reactor Building vents sampling and analysis procedures were contained in EIPs A.2-422 and A.2-423. Additional counting and analysis facilities were located in the EOF. EOF counting room procedures were contained in EIP A.2-424.