



# Federal Emergency Management Agency

Washington, D.C. 20472

OCT - 4 1984

MEMORANDUM FOR: Edward L. Jordan  
Director  
Division of Emergency Preparedness  
and Engineering Response  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission

FROM: *Richard W. Krimm*  
Richard W. Krimm  
Assistant Associate Director  
Office of Natural and Technological  
Hazards Programs

SUBJECT: Status Update on the Offsite Radiological Emergency  
Preparedness of New Jersey Relative to the Salem  
Nuclear Generating Station

The purpose of this memorandum is to provide a further update to our August 30, 1984, memorandum on the status of offsite radiological emergency preparedness of the State of New Jersey for responding to an accident at the Salem Nuclear Generating Station.

Attached is the remedial action schedule for deficiencies cited in the Federal Emergency Management Agency (FEMA) Region II Post Exercise Assessment (Revision 2, dated March 12, 1984). This reflects the latest status of the continuing negotiations between the State of New Jersey and the Regional Assistance Committee (through FEMA). As we mentioned in our previous memorandum, many actions are being coordinated with preparations for the October 23, 1984, full-scale exercise at Salem. The final verification of the completion of remedial actions will be made during the exercise itself. This is the primary reason why, although a State response may be adequate, actions are termed incomplete in the last column of the schedule. The completion of a few other actions is contingent upon FEMA's receipt of appropriate plan revisions. At the present time, the State plans on submitting revisions in the next few months.

Finally, some items have already been tested in a medical drill which was held on September 27, 1984. The evaluation of this drill will be included in the report on the October 23, 1984, full-scale exercise.

In addition to some completed items highlighted in the August 30, 1984 memorandum, you may be interested in several others which have been completed or clarified since then. Although problems with bus driver availability are not anticipated from the New Jersey Transit Authority, New Jersey State Police enlisted personnel

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will serve as drivers, should any problems occur. Although plan revisions must be checked to see that they reflect this additional level of back-up support, training in exposure control procedures for the police was held on September 28, 1984.

FEMA has also been informed that New Jersey Transit is in the process of equipping its buses with radios. Until this is completed, the State Police will continue to escort the buses. The current estimate for completing the installation of radios in the buses is September 1986. The contract for the statewide system is now scheduled to be awarded by October 1984, with an 18-month installation period and a 3--6 month test period.

FEMA Region II has requested further clarification from the State about the inventory and the procedures for distribution of dosimeters to congregate care shelters and Salem County bus drivers. However, it is FEMA's belief that the State of New Jersey is making satisfactory progress in addressing deficiencies previously cited in assessments of past exercises.

I hope this information has been helpful. If we can be of any further assistance, please feel free to contact me or Robert S. Wilkerson, Chief, Technological Hazards Division, at 287-0200. We will, of course, send the Nuclear Regulatory Commission a complete report on the October 1984 exercise and September 1984 medical drill as soon as possible.

Attachment  
As Stated

NURSIC Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C)
E.1	<p><u>I. State of New Jersey</u></p> <p>1. The PCF radio operator did not always indicate that the transmissions were part of the exercise. The PCF radio operator should always include "this is a drill..." in the transmissions. Perhaps rubber stamping the information on the message form will enhance the transmission of this information.</p>	<p>The BRP is aware of this problem and will stress proper radio procedures during their pre-exercise training of all DEP emergency response personnel on 9-18 - 9-20-84.</p>	9/20/84	<p>The response is generally acceptable. However, provide a course description prior to the training. By 10/5/84 provide an attendance list. In addition, the state has informed the RAC that the checklists referenced in #5 are also pertinent here. Provide these checklists to the RAC by 10/5/84. Actual performance of the operators will be verified at the next exercise.</p>	A	I
E.5	<p>2. Care should be taken to have the siren sound before the EBS is activated. A procedural change requiring that, prior to EBS activation, the county emergency management coordinator notify the state that the sirens had sounded would ensure the timely sequencing of alerting and notification.</p>	<p>The State OEM will coordinate with the Salem County OEM to insure that there will be a gap of at least four minutes between the siren sounding to the actual EBS broadcast.</p>	10/23/84	<p>The response is acceptable. Procedures have been provided. However, by 10/5/84, provide revisions to both the EBS procedure and SOP503 indicating that there will be a gap of at least four minutes between the siren sounding and the actual EBS broadcast. Actual timing of the sirens and EBS will be observed at the next exercise.</p>	A	I
E.4.a	<p>3. The receiver in the SEOC was not sensitive enough to pick up the EBS test message. The SEOC should obtain a receiver sensitive enough to pick up the EBS test message.</p>	<p>The State OEM receiver can pick up the EBS broadcast from the satellite stations.. Due to the signal of Philadelphia radio station, NJ cannot receive the signal from the primary EBS station.</p>		<p>The satellite stations broadcast the message for the first hour after an exercise activation of the EBS system. Federal observers will verify whether this is being received in the SEOC.</p>	A	I

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NUREG Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
F.1.d O.4.j	4. Duplicate explanations of plant events, current meteorology, and dose projection checks to BRP were delayed. Procedures for the prompt receipt of such data by BRP headquarter should be improved.	PSE & G is installing a hard-copy data transmission system with drops at the State EOC (Operations Room and Accident Assessment) and BRP Headquarters to insure accurate and timely passage of plant information. PSE & G has indicated that the system will be in place and operational by 10/15/84. The State OEM will provide a system description to FEMA upon its receipt from the utility.	10/23/84	The response is adequate. Federal observers will verify the adequacy of the BRP's receipt of data at the next exercise.	A	I
F.1.d O.4.j	5. Notification of emergency protective actions was not always relayed to the field teams. Specifically, the order to evacuate was not transmitted. Protective action notification must be relayed to the field teams. Such notification would aid the teams in knowing which evacuation routes are in use, better enabling them to move from assignment to assignment.	by the utility  Bureau of Emergency Response Coordination The (BERC) has indicated that procedural checklists for operations and communications will be in place for the 10/23/84 exercise. (See enclosed letter and attachments).	10/23/84	Provide the procedural checklists by 10/5/84. The state has also advised us that the courses referenced in # 1 are pertinent here. Provide a course description prior to the training and provide an attendance list by 10/5/84. The capability to transmit protective action decisions to the field teams will be verified at the next exercise.	A	I
F.1.d	6. Radio communications between the FCP and all of the field monitoring teams should be assured. Radio equipment should be evaluated and improved to eliminate difficulties in maintaining contact with the Vanguard-A team.	Department of Environmental Protection The (DEP) radio committee considers operational communications problems on a regular basis to assure performance. However, the problem in Vanguard-A team communications did not hamper overall response since the necessary information was relayed through the Vanguard-B team. It should be stressed that only one (1) of nine (9) teams was affected.	Completed	The response is acceptable. At the next exercise, federal observers will evaluate the effectiveness of radio communications between the FCP and the field teams.	A	I



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El.e	7. The BRP was not notified of the escalation of the plant emergency action level (EAL) from unusual event to alert. The BRP was unaware of the change until it contacted the utility approximately 30 minutes after the change. The plan provisions for notifying each response organization of the plant ECL must be followed.	The Licensee has concluded that it followed proper procedure. The State cannot concur since there is no record of the Alert notice in the State Police Communications Bureau Log (see attached log sheet).  The Licensee did change its backup notification procedure (via 882-2000) to insure that the communicator establishes contact with the Bureau Shift Supervisor (Communications Sergeant).		Although the utility believes they followed correct procedures, the state maintains that they know they were not properly notified by the licensee of the Alert notification, and therefore that BRP was not notified, because there is no entry in the State Police Communications Bureau log. This, however, does not prove the State's point because if the call was received in the OEM there presumably would be no entry in the subject log. By 10/5/84, provide revised procedures to assure that only the appropriate individual receives notification calls from the utility. At the next exercise, federal observers will confirm whether notification calls from the utility are properly handled by OEM and whether OEM makes proper notification calls to BRP.	I	I
10 0.4	8. The bus drivers had no training in radiation record keeping or knowledge of exposure control procedures. No dosimeter chargers were available at the mustering point. The bus drivers should receive further training in radiological exposure control.	The New Jersey Transit drivers will be trained by the State RADEF Officer in the use of dosimetry, exposure control procedures and the use of KI. (See attached training schedule and KI Procedures.)	10/16/84	The NJ Transit drivers will receive training on 10/16/84. State Police, who will drive the evacuation buses if necessary (see #11 below), will receive training on 9/28/84. Provide course descriptions by 10/5/84. Prior to 10/23/84, provide lists of those who attended the courses. Federal observers will verify the drivers' capabilities regarding exposure control at the next exercise. Also, the State has indicated that the chargers are distributed at the terminal and are not required at the mustering point.	A	I
1.8	9. Very little dose projection, plant condition, or protective action information was transmitted back to the BRP-FCP from BRP headquarters. More open exchange of data and information should be maintained between BRP headquarters and the BRP-FCP.	The BRP has been apprised of this situation and will endeavor to keep the FCP better informed. The BRP has indicated that the FCP will receive information directly from the expanded Accident Assessment team at the EOF during the 10/23/84 exercise.	10/23/84	Provide revised procedures which reflect this new information flow by 10/5/84. Also, this should be included in the DEP training on Sept. 18 and 20th. Provide course descriptions and a list of those who attended each course by 10/5/84. Federal observers will evaluate the quality of information received at the FCP at the next exercise.	A	I

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J.10.a	10. Improper instructions and training have been given regarding the authorization and administration of KI to emergency bus drivers have been made. Improved procedures and training are required for the use of radioprotective drugs by emergency workers.	See Item 8		NJ Transit bus drivers will receive training on 10/16/84. State police, who are the back-up drivers (see #11), will receive training on 9/28/84. Provide course descriptions by 10/5/84. Provide attendance rosters prior to 10/23/84. Also, KI distribution procedures have been submitted. At the next exercise, federal observers will verify whether the bus drivers know KI procedures.	A	I
J.10.g A.3	11. NJOEM and NJ Transit should finalize a MOU regarding the availability of buses.	The State of New Jersey OEM and New Jersey Transit have finalized an MOU. A copy was provided to FEMA on February 29, 1984. (Copy Enclosed). Should any problems arise in driver availability, this function will be fulfilled by New Jersey State Police enlisted personnel.	Completed	As stated in the RAC's 8/10/84 review of the Salem plan revisions, the statement in the MOU that "NJ Transit will make every effort to provide buses and drivers" is not sufficient. Assurance must be given that NJ Transit will provide the necessary buses and drivers. Also, by 10/5/84, provide a plan/revision regarding the role of the State police as back-up drivers.	A	I
J.10.g	12. There is a need for improved coordination between the NJSP and NJ Transit during exercises in executing evacuation of the general public. Procedures need to be clarified between NJSP and NJ Transit designating lead and dispatch responsibilities for evacuation buses.	The State OEM is initiating a complete revision of the RERP Plan on June 1, 1984 with an estimated completion of September 28, 1984. New Jersey Transit has been instructed to revise its annex and procedures as a part of this revision. The State OEM will assist and advise New Jersey Transit as necessary to accomplish their revisions prior to the 10/23/84 exercise. (See Attached Draft Procedure).	10/23/84	Draft procedures have been provided. Provide complete procedures to the RAC upon completion. Federal observers will evaluate coordination between the NJSP and NJ Transit at the next exercise.	A	

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J.11	13. No messages were posted in the accident assessment area or the SEOC regarding protective actions implemented for the ingestion pathway. Protective actions implemented should be clearly posted on the status boards and maps.	The BRP will be advised to improve posting of pertinent actions taking place in the field. The State OEM will assure that the necessary information is passed to Accident Assessment when the State EOC is in operation. (See Attached Procedure).	10/23/84	OEM posting procedures have been submitted. By 10/5, advise whether BRP was advised to improve posting and provide BRP posting procedures. At the next exercise, federal observers will verify whether protective actions, including those for the ingestion pathway, are posted in the accident assessment area and in the SEOC.	A	I

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F.1.a	14. Communications capability between the NJ transit dispatcher and evacuation buses is lacking. NJ transit buses should be equipped with radios. The interim use of state police escort vehicles should continue until the radios are installed.	New Jersey Transit is in the process of equipping its buses with radios. Until this is completed, the State Police will continue to escort the buses. The current estimate for equipping New Jersey Transit buses with radios is 9-86. The statewide system will go to bid in 9-84 with approximately 18 months installation and 3 to 6 months test period. (Based on conversation with New Jersey Transit Southern Division, Deputy General Manager Roy Thomas on 8/28/84). (See Attached Letter).	No Completion Date Available	The RAC endorses the approach outlined in Colonel Pagano's 9/6/84 letter, of equipping the potential evacuation buses first. By 10/5/84, advise the RAC of a tentative installation schedule based on this approach. At the next exercise, observers will evaluate the interim use of state police escort vehicles.	A	I
J.10.a	II. <u>Emergency Operations Facility</u>	PSE & G passes information on the plume affected area to the State OEM using compass sectors. The State OEM then converts these sectors to the associated evacuation planning areas. This did not present any operational problems during the exercise.		The state has indicated that PSE & G now uses compass sectors in communicating with OEM. By 10/5/84, provide revised PSE & G procedures to that effect. Also, the state has indicated that they currently utilize both EPA's and compass sectors, but that this may change as a result of an ongoing revision of the evacuation model. By 10/5/84, provide a schedule for completion of the revised evacuation model.	A	I
	III. <u>Joint News Center and Public Education</u>			At the next exercise, federal observers will verify whether PSE & G conveys data utilizing compass sectors. Also, it will be observed whether OEM's use of both compass sectors and EPA's is effective.		



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C.1, G.2	<p>16. Public information materials have been developed indicating evacuation routes and the location of congregate care centers. These materials have not been distributed by PSEG due to printing problems. Distribution of public information informing residents of protective actions should be continued. In addition, information should be disseminated to those locations where transients might be: e.g., Salem Golf and Country Club, and the Salem Motor Lodge.</p>	<p>The licensee has mailed public information materials to the EPZ residents. In order to assess the level of public awareness the state and licensee are conducting a survey among the EPZ residents. The state is developing a RERP program which will be presented to EPZ residents and groups. The thrust of the program will be to emphasize the proper steps to take in an emergency and an overall awareness of the NGS and the offsite public safety plans. The state has ordered the printing of transient placards to be posted throughout the EPZ. (See Attached Card). The placards will be in place prior to the 10/23/84 exercise. The State further intends to order and have installed road signs designed to direct transients to listen to the designated EBS stations during emergency or exercise situations. This will be accomplished during FY 1985.</p>	10/23/84	<p>Several positive steps have been taken regarding public awareness. The public information brochures were distributed February 7-10, 1984. NJOEM has also indicated that a public information placard for transients will be distributed prior to 10/23/84. In addition, a slide presentation is being developed, a survey is being conducted to measure the level of public awareness, and public information road signs will be installed. By 10/5/84, please advise the RAC when the slide program will be ready and provide a schedule for presenting it throughout the EPZ. Also, by 10/5/84, inform us when the survey will be completed.</p> <p>Further public information efforts are encouraged including the use of TV, radio and the print media. Federal observers will interview residents, transients, and business people at the next exercise to gauge the effectiveness of the public information campaign to date.</p>	A	I
G.1, G.2	<p>17. Residents of Salem and Cumberland Counties must be made aware of protective actions to be taken during a radiological emergency.</p>	See item 16.		See above.	A	I

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A.d 2.a	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
A.d 2.a	<p>IV. Salem County</p> <p>18. The SCEOC emergency activities were not always well integrated and the appropriate organizations were not consistently involved in decision-making. A more effective management system including better information dissemination among the staff and better use of staff resources should be provided.</p>	<p>The Salem County Coordinator has been apprised to expand the county staff and to involve more elements of the county government. The importance of the action was enforced at the bi-monthly state/county meeting on May 16, 1984; at this meeting the county and municipalities were instructed to provide the state with a plan for remedial actions. The County EMC has indicated that the Freeholder Director for Salem County will endorse additional participation in a letter to all County response organizations prior to the 10/23/84 exercise. (See Attached Letter).</p>	10/23/84	<p>By 10/5/84, provide the RAC with the county's plan for remedial actions. The state should assist the county in this task. Also, by 10/5/84, provide an assessment of efforts to increase participation. Include a copy of the Freeholder Director's letter which was not attached. The state's operations training course, September 21-23, 1984, should stress the management techniques in which the SCEOC is weakest. By 10/5/84, provide a course description and an attendance roster with agency affiliations.</p>	A	I
A.3	<p>19. The county EOC did not have an emergency log, and the accident classification and the protective action in effect was not listed on the EOC status board. Not all messages were posted. Maps were not always used to plot information. The county EOC should have an emergency log, and the accident classification and the protective action in effect should be listed on the EOC status board. All messages should be posted. Maps should be used to plot information.</p>	<p>The state will review the county procedures and recommend changes that should be made in logging and posting. The state will forward revised procedures to FEMA. The State OEM has arranged a meeting for 9/13/84 with the Salem EMC to assure effective utilization of the new County EOC. This meeting will also be used to review the County procedures manual to assure that checklists cover those areas found deficient in prior exercises.</p>	9/30/84	<p>At the next exercise, federal observers will evaluate the effectiveness of the SCEOC.</p> <p>Revising the procedures and providing training (as discussed above) are appropriate steps toward improving the operation of the county EOC. By 10/5/84, inform the RAC regarding the results of the 9/13/84 meeting and provide revised procedures, as appropriate. At the next exercise, federal observers will evaluate whether there has been improvement in the operation of the county EOC.</p>	A	I

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A.4	20. The Salem County congregate care shelter should be able to demonstrate management capability over a prolonged period. An assistant or standby shelter manager should be designated and trained.	The American Red Cross (ARC), the lead agency for congregate care, was advised to expand staffing for congregate care shelters. The Regional ARC representatives will be scheduling a meeting to discuss this issue and additional training. FEMA will be apprised of the meeting. (The ARC meeting has been scheduled for 9/19/84 and will include State OEM representation to assure that this issue is adequately addressed.)	10/23/84	The meeting with the ARC is scheduled for 9/19/84 (after several postponements due to heavy storms). The meeting should result in a commitment to designate and train an assistant manager in time for the next exercise. By 10/5/84, inform the RAC about the results of the meeting. At the next exercise, federal observers will verify whether there is management capability for a prolonged period.	A	I
E.2	21. Activation of the 4B traffic control point was neither simulated nor demonstrated. The ability to activate traffic control points should be tested in future exercises.	Traffic control will be demonstrated in conjunction with municipal and county operations necessary to deal with FEMA initiated impediments to evacuation during the 10/23/84 exercise.	10/23/84	The upcoming exercise will demonstrate the response to impediments to evacuation with attendant traffic control.	A	I
F	22. The Salem County congregate care shelter was not well-informed of the progress of the exercise, or apprised of when and how many evacuees to expect. The ARC representative at the SCEOC should keep the congregate care shelters up-to-date and advise them when an evacuation has begun, when the evacuees can be expected, and how many evacuees are involved.	The state has purchased radios for each congregate care shelter. The State OEM will review the county's procedures and insure that provisions are instituted to inform the shelters. Revised procedures will be forwarded to FEMA should the need for such procedures be identified. This issue will be addressed at the 9/19/84 RAC meeting.	9/28/84	The response is acceptable. However, there should also be training. A training schedule covering this issue should be provided by 10/5/84. Also, by 10/5/84 advise the RAC of the outcome of your review of the procedures and provide any necessary revisions. At the next exercise, federal observers will verify whether there has been improvement in keeping the congregate care shelter informed of the progress of the exercise.	A	I

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F.1.b	23. Communications within the SCEOC were limited and telephone traffic did not flow smoothly. Salem County should consider more space to accommodate an efficient placement of telephones in the SCEOC. The county should also consider implementing a more effective telephone message control system to facilitate the flow and use of emergency information.	The county will be advised to send its communications officers to the July training course at Rutgers. A new phone system will be implemented when the county occupies its new EOC. (See item 19).	7/15/84	The state has indicated that the new EOC was partially activated 8/31/84 and will be fully operational prior to the October exercise. A new phone system is being installed. Also, two county personnel attended the communications course. (See attachment.)  At the next exercise, federal observers will evaluate the county's capabilities in message control and telephone traffic flow.	A	I
F.1.d	24. Elsinboro, Mannington, and Quinton reported that requests for information and other assistance from the SCEOC did not always receive a prompt response. Implement a procedure for more efficient responses by the SCEOC to requests for information and assistance to local EOCs.	See Item 23 and Item 18.		See 18 and 23. At the next exercise, federal observers will evaluate whether the SCEOC has improved its capability to respond to the municipalities.	A	I



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H.3	25. Briefing procedures at the SCEOC were not sufficient or timely and the public address system was not consistently used to notify staff of the emergency situation. Salem County should review internal communications with the intent of improving briefing procedures and consistent use of the public address system to notify the staff of changes in the emergency classification level.	The county procedures for internal communications will be reviewed and revised accordingly to improve the flow of information to staff members. (See Item 19 and Communication Procedure.)	9/28/84	By 10/5/84, provide the revised procedures for internal communication. This is in addition to the EOC manual previously submitted. (The referenced Communication Procedures are not relevant to the issues of EOC internal briefing procedures and use of the public address system.) The operations training, September 21-23, 1984, should also address this issue. By 10/5/84, provide a course description and an attendance roster with agency affiliations. Federal observers will evaluate briefing procedures and the use of the public address system at the next exercise.	A	I
H.7	26. The appropriate equipment for monitoring vehicles was not available at the decontamination center. The decontamination center should be equipped with all necessary radiological monitoring devices to effectively perform their function.	The state did provide adequate instrumentation for monitoring vehicles. All decontamination facilities are provided with equipment needed to perform their function. (See enclosed list of equipment and procedures.)	Completed	The state has informed the RAC that the equipment was given to the county but that the county did not distribute it. Therefore, the State has indicated that this year they will assure distribution at the 10/13/84 decontamination training session. Also, the enclosed list has the right type of equipment. At the next exercise, federal observers will verify whether there is appropriate equipment at the decontamination center.	A	I
H.10	27. The radiological monitoring equipment at the Salem County congregate care shelter had not been calibrated within the past year. Equipment should be calibrated at the time intervals recommended by the supplier.	The State Radiological Officer (SRO) has been advised that instruments at the shelter were not calibrated. A schedule for calibration is included in the FEMA/State Comprehensive Cooperative Agreement. However, the SRO indicates that properly calibrated instruments were in the SCEOC but not distributed to the shelter locations.	5/30/84	Advise the RAC, by 10/5/84, what measures are being taken to assure that the calibrated instruments are distributed to the shelter locations. At the next exercise, federal observers will verify whether the radiological monitoring equipment had been properly calibrated.	I	I

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NUSLE Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
K.3.a	28. Although the state indicated that distribution had been made, Radiological exposure control dosimeters were not issued by the County for the bus driver involved in the evacuation of transit dependent individuals. Moreover the driver appeared to have had no training in the use of dosimeters. Radiological exposure control dosimeters and training in their use is required for personnel involved in evacuation busing.	The county bus drivers will be included in training program for exposure control (See training schedule.)	10/2/84	None of the training courses appear to cover the use of dosimeters by county bus drivers. By 10/5/84, establish a date for such training and provide a course description. Following the training provide an attendance roster with agency affiliations. By 10/5/84, provide the RAC with revised procedures which assure the proper distribution of dosimeters. Also, by 10/5/84, respond to the RAC's question in our 9/3/84 letter requesting clarification as to who the county bus drivers are, and under what circumstances they are utilized. If appropriate, provide an MOU. At the next exercise, federal observers will evaluate the county bus drivers' knowledge of exposure control.	I	I
K.3.a	29. At the 5A traffic control point, dosimetry equipment was not observed. Police officers assigned to traffic control points should be equipped with personal dosimeters and should be trained in their use.	Police officers will be provided training in exposure control. (See training schedule.)	10/2/84	Police officers will be trained on Sept. 28th. By 10/5/84, provide a course description and an attendance roster with agency affiliations. The course should cover distribution as well as use of dosimeters. By 10/5/84, provide revised procedures which assure the proper distribution of dosimeters. At the next exercise, federal observers will verify whether police officers have dosimeters and whether they are knowledgeable in their use.	A	I

## SALEM NUCLEAR GENERATING STATION EXERCISE-REMEDIAL ACTIONS

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K.3 a	30. Rescue squad personnel need additional self reading dosimeters. An adequate supply of self reading dosimeters is required for the rescue squad.	The State will purchase additional self-reading dosimeters for all responsible organizations. This purchase was initiated on 3/28/84 for 500 0-200 mR dosimeters. The State expects these to be in place prior to the 10/23/84 exercise. (See Consignment Forms and Purchase Order).	10/23/84	By 10/5/84, advise the RAC as to the current status of the dosimeter purchase. Also, advise what measures are being taken to assure distribution to rescue personnel. At the next exercise, federal observers will verify whether all appropriate emergency workers have dosimeters.	A	I

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NRC Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Radiation Action Complete (C) Incomplete (I)
1.3.a	31. Personnel at the Salem County decontamination center were not provided with personal dosimeters. Workers at the decontamination center should be supplied with personal dosimeters.	See Item 30.		By 10/5/84, advise the RAC as to the current status of the dosimeter purchase. Also, advise what measures are being taken to assure distribution to the Salem County decontamination center. At the next exercise, federal observers will verify whether workers at the Salem County decontamination center have personal dosimeters.	A	I
1.5.a	32. Emergency workers at the Salem County congregate care shelter did not know the contamination level for determining the need for decontamination. Emergency workers should receive additional training on contamination level for determining the need for decontamination.	The state radiological officer will conduct decontamination training. This will include knowledge of contamination thresholds. See attached schedule.	9/29/84	Salem County decontamination training is scheduled for 10/13/84. Prior to 10/23/84, provide a copy of the attendance roster with agency affiliations. At the next exercise, federal observers will verify whether congregate care workers are well trained in decontamination.	A	I
.5.a	33. Personnel at the decontamination center did not know the contamination level for decontamination. Additional training should be provided for decontamination center personnel who are responsible for determining whether emergency field workers need to be decontaminated.	See Item 32.		See Item 32.	A	I



NUREG Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
K.5.a L.1	34. The hospital had one instrument available for radiological monitoring and the available staff did not demonstrate adequate knowledge of contamination levels. Available written procedures were not referenced. Hospital staff members require additional radiological monitoring equipment. Further, the staff requires additional training for determining the need for decontamination.	The state Radiological Officer and the BRP have conducted training at Salem Hospital. Additional training will be given to hospital staff in area of decontamination and health physics. (See attached schedule.) An updated medical training schedule was forwarded to FEMA by letter dated 8/23/84.	9/27/84	Provide course descriptions and attendance rosters with affiliations for all pertinent training by 10/5/84. There is no indication what measures are being taken to provide additional radiological monitoring equipment. At the 9/27/84 medical drill, the federal observer will verify whether equipment is available and whether the staff is adequately trained.	I	I
K.5.a L.1	35. The hospital staff did not demonstrate monitoring and decontamination of the ambulance and its staff. The monitoring and decontamination of the ambulance and crew should be demonstrated in a future emergency drill.	This has been included in the exercise objectives approved by FEMA as of 8/14/84.	9/27/84	Monitor and decontamination of an ambulance and its crew will be demonstrated and observed at the medical drill on 9/27/84.	A	I

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L.1	<p>36. A health physicist was not available to hospital staff during the exercise for consultation. Because this was an off-site accident, a health physicist would have to be acquired from Philadelphia, approximately 30 minutes away. Salem County should review the availability of health physics expertise for medical support and consider the use of utility assistance with off-site accidents.</p>	<p>Utility assistance is available for off-site accidents when these are not concurrent with on-site emergencies. The utility has a contract with Radiation Management Company of Philadelphia for consultation. The training outlined in the State's 8/23/84 letter to Roger Kowieski is designed to fully prepare the SCMH staff for independent radiation emergency response.</p>	9/27/84	<p>By 10/5/84, provide course descriptions and attendance rosters with affiliations for all pertinent training. At the 9/27/84 medical drill the federal observer will evaluate whether the SCMH staff is capable of independent radiation emergency response.</p>	A	I
A.1.e A.4	<p>V. <u>Salem County Municipalities:</u></p> <p>37. A 24-hour call list for EOC staffing was not available in the Mannington EOC. A 24-hour call list should be prepared and used. Sufficient emergency response personnel should be recruited and trained to provide 24-hour continuous emergency response operations.</p>	<p>All municipalities were advised at the May 16, 1984 State/County meeting to respond to the remedial actions. The schedule will be provided to the state on May 30, 1984 and forwarded to FEMA. Each municipality has designed their emergency response organization to fit the availability of emergency workers. The public information survey referenced in Item 16 identified approximately 80 individuals willing to volunteer as emergency workers. Their names and addresses have been provided to the County Coordinator for dissemination to the municipal OEM's. Since the previous exercise, Mannington has appointed a new Deputy EMC and a full Emergency Management Council. They have assured the State OEM that a 24 hour staffing pattern will be in place on 10-23-84. (See Attached Letter)</p>	10/23/84	<p>Progress has been made on this issue. However, the state has not forwarded the referenced municipal remedial action schedule. This should be forwarded by 10/5/84 along with a copy of Mannington's 24 hour call list. Also, by 10/5/84, provide a training schedule, including course descriptions, for Mannington personnel. Following the training and prior to 10/23/84 provide an attendance roster with affiliations. All individuals on the 24-hour call list should receive training and therefore their names should be on the attendance rosters indicating they have received appropriate training. At the next exercise, federal observers in Mannington will verify whether there are sufficient trained personnel and whether a 24-hour call list is being utilized.</p>	A	I

NUMERIC Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
.2.a	38. The Elsinboro EOC needs to improve their participation levels, information management, and coordination of protective actions. A system to improve the Elsinboro participation levels, information management, and coordination of protective actions should be developed.	The State OEM requested a meeting with the Elsinboro Township coordinator and governing body to discuss corrective measures. This meeting was held on 8/20/84. At that meeting, Elsinboro agreed to provide two (2) people for the Operations Course on 9/21 - 23-84 and two (2) people for the Communications Course on 9/19/84. They also agreed to review their EOC operations with the State following the Operations Course and make necessary changes. However, Elsinboro expressed some wonder at the prior assessment since the Federal observer did not spend any significant amount of time in their EOC.	10/23/84	By 10/5/84, advise whether progress has been made in improving the level of participation. Also, by 10/5 provide course descriptions and attendance rosters with affiliations as well as any required changes in EOC operations/procedures. At the next exercise, federal observers will evaluate the effectiveness of the Elsinboro EOC.	A	I
D.3	39. As a result of the 1981 exercise, posters displaying the current emergency class were prominently displayed in most EOCs. The Elsinboro EOC did not display or use the required emergency preparedness posters. This EOC should post and use the required posters including status boards, the plume EPZ, population distribution, evacuation routes, access control points and relocation centers.	The State OEM will provide training to the Elsinboro Township in operations, communications and exposure control. The state will also provide additional EAL posters. (Completed) See attached schedule.	10/2/84	By 10/5/84, provide course descriptions as well as attendance rosters with affiliations. The state has indicated that they have provided additional posters to Elsinboro. Federal observers will verify whether Elsinboro utilizes the required posters at the next exercise.	A	I
D.4	40. Procedural checklists were not used at the Elsinboro EOC. Procedural checklists should be designed and used.	The State OEM and County OEM have developed procedural manuals for all EPZ municipalities. Elsinboro's is included.	Completed	Procedural checklists are included in the municipal procedures manual. Also, the use of checklists should be included in the operations course discussed in #'s 38 and 39 and should be included in the course descriptions when these are forwarded to the RAC. If appropriate, this issue should be included in the submission of changes in EOC operations/procedures discussed in #38. At the next exercise, federal observers will verify whether procedural checklists are being properly utilized.	A	I

NUREG Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
F.3	41. The Elsinboro EOC staff lacked some of the necessary training to perform all of the correct communications procedures. Elsinboro EOC staff members who are responsible for implementing the required communication procedures should attend training sessions.	The State OEM will provide Elsinboro Township with communication training. (See attached schedule and Item 38.)	10/23/84	By 10/5/84, provide a course description and an attendance roster with affiliations. At the next exercise, federal observers will evaluate Elsinboro's communications capability.	A	I
H.3	42. A security program was not in place at the Elsinboro EOC. A security system should be developed at the Elsinboro EOC.	All EPZ municipalities were advised to ensure security measures are in their EOC's. The State OEM has made provisions for picture identification cards for all responders through the Salem County OEM. However, the necessity for security should be judged on a case by case basis in relation to the area and organizations involved. (See Attached Procedure).	10/23/84	By 10/5/84, advise the RAC regarding the status of providing photo identification cards. Also, by 10/5/84, indicate what training will be provided, including course descriptions. Following the training, and prior to 10/23/84, provide attendance rosters with affiliations. The security procedures have been provided. However, by 10/5/84, provide a revised procedure indicating that individuals seeking access to the EOC will be monitored and that contaminated individuals will be prohibited from entering. At the next exercise federal observers will evaluate Elsinboro's security measures.	A	I



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Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action
H.3	43. The Pennsville EOC is too small for effective operation. Consideration should be given to relocation of the Pennsville EOC to a larger facility.	Pennsville Township was apprised to seek larger accommodations for an EOC. It was noted that other municipalities have done so and the state will provide funds for renovations.	5/16/84	The state has indicated that they advised Pennsville at a 5/16/84 meeting to seek a larger EOC. Provide a status report on this situation by 10/5/84. Federal observers will evaluate the adequacy of the EOC at the next exercise.	I	I
K.3.a K.3.b	44. Inadequate supplies of dosimeters were observed at Elsinboro, and Pennsville. Self-reading dosimeters of both low-range (0-200 mR) and intermediate-range (either 0-5 R or 0-20 R) sensitivity and a permanent record device should be provided to all emergency workers.	The State OEM is purchasing additional self reading dosimeters. The county will be advised to insure that this equipment is delivered into the field. (See attached purchase order.)	10/23/84	The purchase order <sup>was only</sup> for low range dosimeters. By 10/5/84, advise the RAC of the current status of this purchase. Also, by 10/5/84, inform the RAC what measures have been taken to obtain additional high-range dosimeters (they do not use intermediate range) and permanent record devices. In addition, by 10/5, provide a status report on the delivery of this equipment to all field locations (including but not limited to Elsinboro and Pennsville). Target dates should be provided if delivery has not been made yet. As stated in our 9/3/84 letter: "If appropriate, provide a statement that there will be sufficient (i.e., in accordance with plan requirements) low-range dosimeters, high-range dosimeters and permanent record devices once the referenced purchase and distribution is completed." At the next exercise, federal observers will check on the adequacy of equipment at all locations in the EPZ including Elsinboro and Pennsville.	I	I

NURC Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response Adequate (A) Inadequate (I)	Remedial Action Complete (C) Incomplete (I)
D.3  A.1.b A.2.a	VI. <u>Cumberland County</u>  45. The EMC held briefings of the staff only infrequently. The EOC staff would benefit from periodic briefings and status updates.	The County EMC was advised to keep the EOC staff apprised of events through more frequent briefings. The Cumberland County EMC has indicated that updated county and municipal procedures manuals will be in place for the 10/23/84 exercise. The Communications Course of 7/13 - 15/84 was completed by two (2) representatives each from Salem and Cumberland County. (See Attached Class Roster).	10/23/84	The EMC was advised to hold more frequent briefings. However, it appears from the course description that training in briefings was not covered at the July communications course. Therefore, such training should be covered at the operations course. By 10/5/84, provide a course description and an attendance roster with affiliations. It should be noted that the procedures identify briefings as a continuous function. This should be stressed at the upcoming operations course.  Some instructions in the municipal manual are directed towards county personnel. By 10/5/84, provide a corrected municipal manual.  At the next exercise, federal observers will evaluate the adequacy and frequency of briefings.	I	I

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F.1 F.1 e F.3	b. 46. Changes in plant status and other important exercise developments were not promptly relayed by the CCEOC to the Greenwich and Stow Creek EOCs. Communications procedures with local EOCs should be clarified, and communications personnel trained. The CCEOC should review its plan to assure that appropriate messages are transmitted to the local EOCs, and participate in communications training drills with the local EOCs.	The County EOC was advised of the importance of timely release of the EAL's. He was also advised to send the county communications officer to the July communications course. (See Attached Class Roster).		Steps have been taken to improve communication of information to the municipalities. However, I is not clear whether this issue was covered at the July communications course. Clarify this by 10/5. (If it was not covered, indicate what training/drills will cover this material and provide a course description by 10/5. An attendance roster should be provided before 10/23.) It should be noted that other important developments should be relayed to the local EOC's in addition to the EAL's. Also, by 10/5 provide revised plans/procedures pursuant to the original RAC comment. At the next exercise, federal observers will evaluate the county's capability in this area.	I	I

NUREG Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response (A) Adequate (I) Inadequate	Remedial Action (C) Complete (I) Incomplete
D.3	VII. Cumberland County Municipalities 47. A status board indicating the emergency classification level and important messages should be utilized at Stow Creek. The status board indicating the emergency classification level and important messages should be used at the Stow Creek EOC.	The Stow Creek Coordinator was informed that greater use should be made of the status board in posting important messages. EAL's should be indicated through the posters provided by state. The coordinator was asked to attend the Operations Training Class.	Completed	Revised procedures providing for the on-going use of both a status board indicating important messages and the EAL posters should be submitted to the RAC by 10/5/84. Also, by 10/5, provide a course description of the operations course and an attendance roster with affiliations. At the next exercise, federal observers will evaluate Stow Creek's use of status boards and posters.	A	I
H.3	48. Emergency back up power supplies were either inadequate or lacking at the Greenwich and Stow Creek municipal EOCs. Emergency generators of appropriate capacity should be procured to assure uninterrupted operation of these local EOCs.	The State is currently awaiting the award of a bid to provide each EPZ with an emergency generator. Installation of these generators should be completed by 1/1/85 according to the terms of the State Contract.	1/1/85	The state has advised the RAC that the contract has been awarded and that the generators will be in place by the end of the year. Please make every effort to expedite this action. Advise the RAC when the generators are installed.	A	I
K.3.b	49. Stow Creek firefighters were not adequately trained in radiological exposure control procedures, including the use of personal dosimeters and dose record keeping. Also, they did not have KI. Firefighters should receive periodic training in radiological exposure control procedures. They should also have KI.	The State Radiological Officer will provide fire fighters in both counties with contamination, exposure control and monitoring training. (See Attached Schedule). KI was and is still in place in the municipal and county EOC's, and at the Bridgeton and Woodstown State Police Barracks. Individual and team Kits with KI, dosimetry, and protective clothing will be available during the 10-23-84 exercise.	10/23/84	Provide course descriptions and attendance rosters with affiliations. Procedures should be reviewed to assure that they instruct the Stow Creek firefighters when and how to obtain KI. Provide the results of this review with procedural changes, if appropriate, by 10/5/84. At the next exercise, federal observers will evaluate the adequacy of the firefighters' knowledge of exposure control procedures and ascertain whether they have KI. They will also check whether all EOC's have KI.	A	I



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Element	RAC Recommendation Corrective Action	State (S)/County (C) Response (ACTION)	Proposed Completion Date	FEMA Evaluation of State/County Response	Response (A) Adequate (I) Inadequate
A.12	<p>The following items were inadvertently omitted from the original table. Roger Kowieski's 9/3/84 letter, however, asked the state to respond to these issues by 9/12/84:</p> <p>50. (#42 in the 1983 Post Exercise Assessment, Revision 2, March 12, 1984)</p> <p>Even though there was acceptable coordination of protective or parallel actions from the state perspective, directives were not effectively acted upon at the county and local level. Information management was weak and coordination of protective actions inefficient.</p> <p>(The Assessment lists this as incomplete for Salem County, Cumberland County, Salem City, Elsinboro, Greenwich and Stow Creek)</p>	No state response		The state should respond to this.	I

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A.4	<p>51. (#43 in the 1983 Post Exercise Assessment, Revision 2, March 12, 1984)</p> <p>Although a letter was sent to all Mayors and Boards of Chosen Freeholders as a result of the 1981 exercise, the level of participation of emergency personnel in the exercise was disappointing. Every effort should be made by the Mayors and Board of Freeholders to educate their emergency personnel of the importance of the exercise experience. (The Assessment lists this as incomplete for Elsinboro.)</p>	No state response		The state should respond to this.	I	I

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J.10.J.	<p>52. (#57 in the 1983 Post Exercise Assessment, REvision 2, March 12, 1984) The 1982 Post Exercise Assessment stated "Salem County must demonstrate the capability to implement protective measures. The county should demonstrate its capability to participate to relocate the populace, evacuate residents from the EPZ, and control access."</p> <p>At the 1983 exercise, the county demonstrated the ability to evacuate residents from the EPZ. Access control was not an objective for the county for this exercise and should be demonstrated in a future exercise.</p> <p>(The Assessment lists this as incomplete for Salem County)</p>	<p>The county demonstrated it's ability to evacuate the population in the 1983 exercise. Access control points are the responsibility of the State Police, the county has no assigned role. The state will revise the Salem County Plan to indicate that the sheriff does not have an active role in access control. Access Control was not an objective in the 1983 Exercise.</p> <p>(The above was provided in the state's March 2, 1984 letter regarding remedial actions.)</p>		<p>Roger Kowieski's September 3, 1984 letter requested that the referenced plan revision should be provided and that, if appropriate, a similar revision should be provided for Cumberland County. To date, the plan revisions have not been submitted. They should be submitted by October 5, 1984.</p>	A	I