U.S. Department of Homeland Security
26 Federal Plaza, 13th Floor
New York, New York 10278

FEMA

April 21, 2004

Mr. Eric Weiss, Chief
Emergency Preparedness and Health Section
Operator Licensing Human Factors
And Plant Support Branch
Division of Inspection Program Management
Office of U.S. Nuclear Regulatory Commission
Nuclear Regulatory Commission
Mail Stop 06H16
Washington, D.C. 20555-0001

Dear Mr. Weiss:

Please find enclosed five copies of the Final Exercise Report for the Oyster Creek NPS Plume Exposure Pathway Exercise conducted on September 9, 2003, and the Ingestion Phase Exercise conducted September 23-25, 2003.

The State of New Jersey and local emergency response organizations successfully demonstrated the capabilities to implement their off-site radiological emergency response plans and procedures, based on the evaluation of these exercises by the Regional Assistance Committee and a team of Federal evaluators. There were no deficiencies. There were four Areas Requiring Corrective Actions and five planning issues identified. The planning issues arising from the exercises are enclosed.

In addition, please note that the Regional Assistance Committee is currently reviewing the state and local plans and will provide its suggestions for improvement under separate cover when this review is completed.

The State and local preparedness is adequate to protect the health and safety of the public living in the vicinity of the Oyster Creek NPS and provide reasonable assurance that appropriate measures can be taken offsite in the event of a radiological emergency.

If you have any questions regarding this matter, please contact Robert F. Reynolds, Chair of the Regional Assistance Committee at (212) 680 – 3621.

Sincerely,

Joseph F. Picciano
Acting Regional Director

Enclosures

EXERCISE REPORT
OYSTER CREEK
NUCLEAR GENERATING STATION

Licensee: AmerGen

Exercise Date: September 9, 2003 - Plume Phase
September 23-25, 2003 – Ingestion Phase

Report Date: March 30, 2004

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION II
26 Federal Plaza
New York, New York 10278

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I. EXECUTIVE SUMMARY

On September 9, 2003 an emergency response exercise was conducted in the 10-Mile Plume Exposure Pathway, Emergency Planning Zone (EPZ) around the Oyster Creek Nuclear Power Station and evaluated by the Federal Emergency Management Agency (FEMA), Region II. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERPs) and procedures.

In addition, on September 23-25, 2003, an emergency response exercise was conducted in the 50-mile Ingestion Pathway Zone (IPZ) around the Oyster Creek Nuclear Power Station and evaluated by the Federal Emergency Management Agency (FEMA), Region II. The purpose of the Ingestion Pathway Exercise was to assess the level of State and local preparedness in responding to a radiological emergency within the IPZ. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures. The Extent of Play for the Ingestion Pathway was modified due to the occurrence of an actual emergency on September 23, 2003: Trenton and the surrounding area were impacted by a series of tornadoes. Consequently, several demonstrations were rescheduled to later in the week and it was agreed that the Joint Information Center did not have to be demonstrated for the ingestion phase since it had been evaluated in the plume phase.

The most recent full-scale plume pathway exercise at this site was conducted on June 4, 2002. The qualifying emergency preparedness exercise was conducted on March 16, 1982.

FEMA wishes to acknowledge the efforts of the many individuals in the State of New Jersey and Ocean County who participated in this exercise. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

This report contains the final evaluation of the biennial plume phase exercise, the ingestion pathway exercise, and the evaluation of the following out-of-sequence activities:

OCNPS Out of Sequence Demonstrations – Ocean County

Function	Date	Location
Emergency Worker Decontamination Center	5/14/03	Triboro FAS
Reception Center	7/15/03	Pinelands High School
Congregate Care	8/02/03	Lakewood Middle/High School
General Population Evacuation - Transportation Dependant	7/15/03	
Hearing Impaired Notification	5/14/03	Surf City Borough
Mobility Impaired Evacuation	5/14/03	Ship Bottom Borough
Route Alerting	5/14/03	Barnegat Light Borough
School Evacuation	7/15/03	12 Schools in the EPZ
School Interviews	7/31/03, 8/01/03	12 Schools in the EPZ
Traffic and Access Control	9/16/03	Water Borne
Medical Drill (MS-1)	10/16/03	

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. Two prior Areas Requiring Corrective Action were successfully addressed and there are no unresolved prior Areas Requiring Corrective Action. There were no Deficiencies and four new Areas Requiring Corrective Action (ARCA) identified as a result of this exercise.

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear planning and response. FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351 and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

FEMA Rule 44 CFR 350 establishes the policies and procedures for FEMA's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local government participation in joint exercises with licensees.

FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in offsite emergency planning and in the review and evaluation of the RERP and associated procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;

- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

    - U.S. Department of Commerce,
    - U.S. Nuclear Regulatory Commission,
    - U.S. Environmental Protection Agency,
    - U.S. Department of Energy,
    - U.S. Department of Health and Human Services,
    - U.S. Department of Transportation,
    - U.S. Department of Agriculture,
    - U.S. Department of the Interior, and
    - U.S. Food and Drug Administration.

Representatives of these agencies serve on the FEMA Region II Regional Assistance Committee (RAC), which is chaired by FEMA.

The State of New Jersey formally submitted their RERPs for the OCNGS to FEMA Region II on June 16, 1983. FEMA granted formal approval of the RERPs, under 44 CFR 350, on April 30, 1990. The qualifying emergency preparedness exercise was conducted on March 16, 1982.

A REP Plume Phase exercise was conducted on September 9, 2003, and an Ingestion Phase exercise was conducted on September 23-25, 2003, and evaluated by FEMA Region II to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Oyster Creek Nuclear Power Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region II RAC Chairperson, and approved by the Regional Director.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 (hereafter referred to as NUREG-0654);

- FEMA Interim REP Program Manual, August 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities, which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise objectives at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions for each identified exercise issue and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the September 9, 2003 and September 23-25, 2003 exercises to test the offsite emergency response capabilities in the area surrounding the Oyster Creek Nuclear Power Station. This section of the exercise report includes a description of the Plume Pathway EPZ and the Ingestion Phase. A listing of all participating jurisdictions and functional entities, which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities are included in this report.

A. Plume Emergency Planning Zone Description

The Oyster Creek Nuclear Power Station site is located on a 1,416-acre plot in both Lacey and Ocean Townships in a broad lowland and tidal marsh area along the coast of New Jersey and is flanked on the east by Barnegat Bay. Barnegat Bay is a shallow, narrow body of water, having an average depth of five feet and a maximum width of four miles.

Overland access to the site is provided by US Route 9, which bisects the site into an eastern or bay section of 661 acres and a western section of 755 acres. US Route 9 is one quarter mile east of the facility and passes over the coolant intake and discharge canals, which flow into Barnegat Bay two miles away. The administration building is located adjacent to the site directly west on a plot of land referred to as Forked River Site.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Oyster Creek Nuclear Power Station exercise on September 9, 2003.

FEDERAL AGENCIES

Environmental Protection Agency
Department of Agriculture
Department of Energy
Department of Transportation
Food and Drug Administration
Nuclear Regulatory Commission

STATE of NEW JERSEY

New Jersey Bureau of Nuclear Engineering
New Jersey Department of Agriculture
New Jersey Department of Environmental Protection

New Jersey Department of Environmental Radiation
New Jersey Department of Health and Human Services
New Jersey Department of Radiological Health
New Jersey Department of Transportation
New Jersey Office of Emergency Management Office
New Jersey State Police

OCEAN COUNTY

Ocean County Office of Emergency Management
Ocean County Department of Engineering
Ocean County Department of Public Health
Ocean County Department of Roads
Ocean County Department of Schools
Ocean County Emergency Medical Services
Ocean County Sheriffs Department
Ocean County Social Services Group
Ocean County Veterinarian Office

Bayville Elementary School
Beachwood Elementary School
Central Regional High School
Central Regional Middle School
Clara B. Worth Elementary School
Island Heights Elementary School
Lakewood Middle/High School
Ocean Gate School
Pinelands High School
Pine Beach Elementary School
South Toms River Elementary School
Toms River High School – South

RISK JURISDICTIONS

Barnegat Light Borough
Barnegat Township
Beachwood Borough
Berkley Township
Lacey Township
Lakehurst Borough
Lakewood Township
Manchester Township
Ocean Gate Borough
Ocean Township

Ship Bottom Borough
Surf City Borough

PRIVATE/VOLUNTEER ORGANIZATION

Amergen
American Red Cross
Associated Press International
Barnegat Light Fire Department
Beach Haven First Aid Squad
Citizens on Patrol
Great Bay Emergency Medical Services
H.E.L.P. Group
Millennium Radio
Mystic Island Fire Department
Lakewood Township ARES / RACES
Ocean County ARES / RACES
Parkertown Fire Department
RACES
Salvation Army
Seaside Heights Fire Department
Seaside Park Fire Department
Times-Beacon
Tri-Boro First Aid Squad
WRAT

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Oyster Creek Nuclear Power Station exercise on September 9, 2003. Also included are times notifications were made to the participating jurisdictions/functional entities.

Due to several tornados impacting the State of New Jersey on the morning of September 23, 2003, some exercise activities demonstrated for the Ingestion Pathway phase of the exercise had to be modified.

TABLE 1 – TIMELINE SEPTEMBER 9, 2003 – OYSTER CREEK NUCEAR POWER STATION

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken							
		NJ SEOC	Ocean County EOC	EOF	BNE-FCP	JIC	EAS Station – WRAT	NJ State FMT	Ocean County FMT
Unusual Event	1651								
Alert	1747	1750	1807	N/A	N/A	1810			1850
Site Area Emergency	1929	1932	1950	1929	1937	1944		1940	1942 2000
General Emergency	2105	2111	2120	2105	2107	2110		2108	2108
Simulated Rad. Release Started	2105	2111	2120	2100	2107	2110		2108	2108
Simulated Rad. Release Terminated			-		N/A	-		-	-
Facility Declared Operational		1851	1825	1901	1838	1805		-	
Declaration of State of Emergency		1947	2005	1947	-	1949		2337	224
Exercise Terminated		0006	2345	2345	2355	0015		-	2345
Early Precautionary Actions:		1950	1951 1958 2003	2015	-	1956	1956 1958 1903	-	-
1ST Protective Action Decision Shelter: No Evacuate: ERPAs 1, 2, 3, 4		2207	2209	2207	2216	2215	2210 (verbal)	2225	2224
1st Siren Activation		2215	2215	-	-	-	2214	-	-
1st EAS Message		2220	2220	-	-	-	2217	-	-
2ND Protective Action Decision Shelter: M23456789 W4567 Evacuate: M1 W123		2344	-	2344	2355	2345	2346	-	-
2nd Siren Activation		2352	-	-	-	-	2354	-	-
2nd EAS Message		2357	-	-	-	-	2357	-	-
KI Administration Decision: No K1 for Emergency Workers									

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		Barnegat Township EOC	Beachwood Borough EOC	Berkley Township EOC	Lacey Township EOC	Ocean Gate Borough EOC	Ocean Township EOC
Unusual Event	1651	1744	1717 (fax) 1722 (paper)	1722	1719	1722	1714
Alert	1747	1821	1825	1825	1814	1815	1810
Site Area Emergency	1929	2000	2002	2025	2000	2006	2000
General Emergency	2105	2124	2129	2130	2119	2126	2116
Simulated Rad. Release Started	2105	2124	2129	2130	2119	2126	2116
Simulated Rad. Release Terminated		-	-	-	-	-	-
Facility Declared Operational		1748	1758	1817	1842	1739	2005
Declaration of State of Emergency		2025	2028	2025	2030	2021	2024
Exercise Terminated		2307	2311	2325	2305	2303	2300
Early Precautionary Actions:		1958 2003 2220	2037 (notification)	1958 2003	2008	1958 2003	2122 (Evacuate) 2126 (route alerting)
1ST Protective Action Decision Shelter: No Evacuate: ERPAs 1, 2, 3, 4		2220	2222	2219	2218	2220	2216 (EPRAs 1,2,3,4)
1st Siren Activation		2215	2215	2215	2215	2215	2215
1st EAS Message		2220	2220	2220	2220	2220	2220
2ND Protective Action Decision Shelter: M23456789 W4567 Evacuate: M1 W123		N/A	-	-	-	-	-
2nd Siren Activation		-	-	-	-	-	-
2nd EAS Message		-	-	-	-	-	-
KI Administration Decision: No K1 for Emergency Workers		-	-	-	2227 (Discussion)	-	N/A

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the September 9, 2003, Plume Pathway Exercise, and the September 23-25, 2003, Ingestion Pathway Exercise, to test the offsite emergency response capabilities of State and local governments in the 10-Mile EPZ, and the 50-mile IPZ surrounding the Oyster Creek Nuclear Power Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise objectives contained in the FEMA Interim REP Program Manual, August 2002. Detailed information on the exercise objectives and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation - Table 2

The matrix presented in Table 2, on the following page(s), presents the status of all exercise objectives from FEMA-REP-14 that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise objectives are listed by number and the demonstration status of those objectives is indicated by the use of the following letters:

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercises)

D - Deficiency assessed

A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

N - Not Demonstrated (Reason explained in Subsection B

TABLE 2.1 - SUMMARY OF EXERCISE EVALUATION – SEPTEMBER 9, 2003 – OYSTER CREEK NUCLEAR POWER STATION

OYSTER CREEK NPS

SEPTEMBER 9, 2003
(PLUME)

State of New Jersey	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Avail Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
EOC	M	M	M	M	M	M	M	M	M													M				M			M				
Dose Assessment - EOF		M	M	M	M	M	M	M	M													M											
FCP - EOF		M	M	M	M							M	M									M											
Field Monitoring Teams				M								M	M								M		M										
Joint Information Center	M	M	M	M	M																								M				
EAS Station																										M							

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

OYSTER CREEK NPS

SEPTEMBER 9, 2003
(PLUME/OOS)

Ocean County	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Available Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
EOC	M	M	A	M	M	M						M	M	M	M	M	M									M							
Field Monitoring Team				M								A	M								M		M										
Emergency Worker Decontamination						M																											M
Reception Center						M																								M	M		
Congregate Care Center																																M	
General Population Evacuation (Trans Dep)						M								M																			
Hearing Impaired														M	M																		
Mobility Impaired														M																			
Route Alerting																												M					
School Evacuation															M																		
School Interviews															M																		
Traffic and Access Control												M	M			M																		
Medical Drill												M																					M

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

OYSTER CREEK NPS

SEPTEMBER 9, 2003
(PLUME)

Risk Municipalities	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Avail Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
Barnegat Township EOC	M	M	M	M	M							M	M	M	M	M	M																
Beachwood Borough EOC	M	M	M	M	M							M	M	M	M	M	M																
Berkley Township EOC	M	M	M	M	M							M	M	M	M	M	M																
Lacey Township EOC	M	M	M	M	M							M	M	M	M	M	M																
Ocean Gate Borough EOC	M	M	M	M	M							M	M	M	M	M	M																
Ocean Township EOC	M	M	A	M	M							M	M	M	M	M	M																

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

TABLE 2.2 - SUMMARY OF EXERCISE EVALUATION – SEPTEMBER 25, 2003 – OYSTER CREEK NUCLEAR POWER STATION

OYSTER CREEK NPS

SEPTEMBER 25, 2003
(INGESTION)

	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Avail Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
State of New Jersey																																	
EOC			M							M	M					M		M	A	M												
FCP			M	M																												
Field Monitoring Teams				M	M																			M								
Emergency Laboratory Facility																									M							
Technical Assessment Center		M	M	M	M					M	M							M	M	M												

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

OYSTER CREEK NPS

SEPTEMBER 25, 2003
(INGESTION)

	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Available Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
Ocean County																																	
EOC			M													M		M	M	M													

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

OYSTER CREEK NPS

SEPTEMBER 25, 2003
(INGESTION)

Risk Municipalities	Mobilization	Facilities	Direction & Control	Communications Equipment	Equipment & Supplies to Support Operations	Emergency Worker Exposure Control	Rad Assmt PARs Based on Avail Information	Rad Assmt PADs for General Public	Prot Action Decisions for Special Population's	Rad Assmt & Decision Making for Ingest Exposure	Rad Assmt & Dec Making for Relo/Re-entry/& Return	Implementation of Emergency Wrkr Exposure Control	Implementation of KI Decision	Implementation of PADs for Special Population's	Implementation of PADs for Schools	Implementation of Traffic Access & Control	Impediments to Evac & Traf are Identified & Resolved	Implementation of Ingestion Pathway Decisions	Impl of IP Decisions Show Strat & Instr Material	Impl of Relocation/Re-entry/Return Decisions	Plume Phase Measurement & Analysis Equip	Plume Phase Field Measurement & Analysis Mgmt	Plume Phase Fld Measurements & Analysis Proced	Post Plume Phase Field Measurements & Sampling	Laboratory Operations	Activation of Prompt Alert & Notification	Activation Prompt Alert & Notif 15 Min (Fast Breaker)	Activation Prompt Alert & Notif in Exception Areas	Emerg Info & Instructions for the Public & Media	Monitoring/Decon/Registration of Evacuees & EWs	Monitoring & Decon of Emerg Worker Equipment	Temporary Care of Evacuees	Trans & Treatment of Contam Injured Individuals
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING						PROTECTIVE ACTION IMPLEMENTATION									FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO				SUPPORT OPN/FACILITIES			
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
Lakehurst Borough EOC			M													M		M	M	M												
Lakewood Township EOC			M													M		M	M	M												
Manchester Township EOC			M													M		M	M	M												

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity, in a jurisdiction based, issues only format. Presented below is a definition of the terms used in this subsection relative to objective demonstration status.

- **Met** - Listing of the demonstrated exercise objectives under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.

- **Deficiency** - Listing of the demonstrated exercise objectives under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

- **Area Requiring Corrective Actions** - Listing of the demonstrated exercise objectives under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

- **Not Demonstrated - Listing** of the exercise objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.

- **Prior ARCAs - Resolved** - Descriptions of ARCAs assessed during previous exercises that were resolved in this exercise and the corrective actions demonstrated.

- **Prior ARCAs - Unresolved** - Descriptions of ARCAs assessed during prior exercises that were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues that are discussed in this report.

- A **Deficiency** is defined as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- An **ARCA** is defined as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of exercise issues on a nationwide basis.

The identifying number for Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.

- **Exercise Year** - The last two digits of the year the exercise was conducted.

- **Evaluation Criterion Number** – An alphanumeric corresponding to the evaluation criteria in the FEMA Interim REP Program Manual (e.g., 1.a.1).

- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.

- **Exercise Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

PLUME PHASE ACTIVITIES
AND OUT OF SEQUENCE DEMONSTRATIONS

1. STATE OF NEW JERSEY

1.1 State Emergency Operations Center

a. **MET:** Evaluation Criteria 1.a.1; 1.b.1; 1.c.1; 1.d.1; 2.a.1; 2.b.1; 2.b.2; 2.c.1; 5.a.1; 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.2 Dose Assessment - Emergency Operations Facility

a. **MET:** Evaluation Criteria: 1.b.1; 1.c.1; 1.d.1; 1.e.1; 2.a.1; 2.b.1; 2.b.2; 2.c.1; 4.a.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.3 Emergency Operations Facility – Forward Command Post

a. **MET:** Evaluation Criteria: 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 4.a.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.4 **State Radiological Field Monitoring Teams**

a. **MET:** Evaluation Criteria: 1.d.1; 3.a.1; 3.b.1; 4.a.1; 4.a.3

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.5 **Joint Information Center**

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.d.1; 1.e.1; 5.b.1

b. **DEFICIENCY:** NONE

d. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.6 **Emergency Alert System Radio Station - WRAT**

a. **MET:** Evaluation Criteria: 5.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1 OCEAN COUNTY

2.1.1 Ocean County Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.d.1; 1.e.1; 2.a.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2; 5.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION: 1**

Issue Number: 43-03-1.c.1-A-01

Condition: Ocean Township completed a radio broadcast to Ocean County Emergency Operations Center at 2136 hours reporting; "Due to radiation release & possibility of 3rd fission barrier failure O T is deploying Fire Dept for Rt area alerting. First Aid is going to evac. mobility impaired. Local police will be stationed at traffic control posts + will be relocating into the Mobile Command Ctr at Voc. School on 532 – Areas evac. will be 3 & 4 – This is a drill 2126 Hrs."

The Ocean County message form transcribes the above as: "Drill X: Due to Radiation and release Deploying Fire Department for Decon ... Local Police to Mobile Command Center ... Relocating EOC to Vocational School Rt. 532"

The Ocean County Radio Operation did not write the following information broadcast from Ocean Township on the message form:

- Deploying Fire Dept. for Rt. Area alerting;
- First Aid is going to evacuate mobility impaired;
- Local police will be stationed at traffic control posts; and
- Areas evacuated will be 3 and 4.

Possible Cause: Poor radio transmission or lack of attention to detail.

Reference: NUREG-0654, F.1,2.

Effect: Clear information flow is critical for Ocean County EOC decision makers to fully understand operational status and

situational awareness. Not knowing that Ocean Township was setting up traffic control points and evacuating people from the township could cause serious traffic flow problems within the county. The county needs to know what actions the municipalities are taking on their own.

Recommendation: Additional training should be conducted for all radio operators to emphasize the importance of fully transcribing radio messages. In addition, all messages describing protective actions should be confirmed by call back or hard copy.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED: 2**

Issue No: 43-02-01-A-04 (1.a.1)

Description: The Public Information Officer did not respond to the Joint Information Center (JIC) as required in the Ocean County Radiological Emergency Response Plan Annex B.

Recommended Corrective Action: Have the County Emergency Management Coordinator verify the Public Information Officer has responded to the JIC.

Corrective Action: During the 09 Sept 03 exercise, at approximately 1817 hours, the Under Sheriff confirmed with the Director of Public Information, Division of the Public Affairs Department (who was located within the Ocean County Emergency Operations Center), that the Public Information Officer had deployed to and was stationed at the Joint Information Center. This issue was corrected.

Issue No: 43-02-03-A-05 (1.c.1)

Description: The County failed to confirm receipt of a group auto fax with a radio call to the six at risk municipalities.

Recommended Corrective Action: Revise the Communication Officer's procedure to clearly define the actions associated with auto faxing of messages.

Corrective Action Taken: During the 09 Sept 03 exercise all message sequences were conducted in accordance with the Communications Officer's procedures. A messaging sequence

transmitting the Governor's Declaration (message #48) revealed that Barnegat Light, Lacey Township, and Pine Beach risk municipalities did not receive the fax transmission. This was identified during the radio roll call portion of the messaging sequence. Radio Operators receive message confirmation forms for the radio roll call during each messaging sequence. This form is completed as received or not received and then reviewed by the Communications Officer. The Radio Operator noted the missed fax transmission on the message confirmation form. The Communication's Officer identified the risk municipalities and ordered the message to be reissued followed by both a radio and telephone conformation.

Also to insure message receipt there is located in the radio room a status board indicating each risk municipality and their primary and secondary means of communication with the Ocean County EOC. In addition there is an activity log maintained within the radio room detailing all radio room activities. This issue was corrected.

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.2 Ocean County Radiological Field Monitoring Team

a. **MET:** Evaluation Criteria: 1.d.1; 3.b.1; 4.a.1; 4.a.3

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION: 1**

Issue Number: 43-03-3.a.1-A-02

Condition: During the County FMT interview the following question was asked: If your low range dosimeter goes off-scale, what would you do? The team responded that they would continue taking readings on the high range dosimeter. After being asked to restate the response, an immediate review (in coordination with the State Controller) of the purpose of the low range and high range dosimeters was made clear and the team members understood that the 200 mR dosimeter would need to be re-zeroed several times before reaching the mission dose limit of 1.25 R. It was also demonstrated to the FMT that the exposure limit of 1.25 R would hardly be observable on the high range dosimeter.

Possible Cause: The appropriate knowledge of the role of the 200 mR dosimeter was not successfully conveyed to this team.

Reference: NUREG 3.K.a,b

Effect: A predictable effect of the original answer would be the probable over exposure of the Field Monitoring Team for Ocean County. There could be situations where the team lost total communications linkages with the FCP and not realize the difficulty until an exposure was observable on the 20 R dosimeter. On the other hand, due to the constant communication with the FCP, the team might have been reminded of the proper procedure.

Recommendation: Retraining and FMT understanding of the principles of dosimetry will correct this issue.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.3 **Ocean County Emergency Worker Decontamination Center (Triboro FAS 5/14/03)**

a. **MET:** Evaluation Criteria: 2.a.1; 6.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.4 **Ocean County Reception Center (Pinelands High School – 7/17/03)**

a. **MET:** Evaluation Criteria: 2.a.1, 6.a.1, 6.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:**

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.5 **Ocean County Congregate Care Center (Lakewood Middle/High School – 8/02/03)**

a. **MET:** Evaluation Criteria: 6.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.6 **General Population Evacuation (Transportation Dependant – 7/15/03)**

a. **MET:** Evaluation Criteria: 2.a.1; 3.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.7 **Special Population - Hearing Impaired (Surf City Borough – 5/14/03)**

a. **MET:** Evaluation Criteria: 3.c.1; 3.c.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.8 **Special Population - Mobility Impaired (Ship Bottom Borough – 5/14/03)**

a. **MET:** Evaluation Criteria: 3.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.9 **Route Alerting (Barnegat Light Borough - 5/14/03)**

a. **MET:** Evaluation Criteria: 5.a.3

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.10 **School Evacuation (Twelve Schools Interviewed within the EPZ – 7/17/03)**

a. **MET:** Evaluation Criteria: 3.c.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.11 **School Interviews (Twelve Schools within the EPZ – 7/31/03 & 8/1/03)**

a. **MET:** Evaluation Criteria: 3.c.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

f. **PRIOR ARCAs - RESOLVED:** NONE

2.1.12 **Traffic and Access Control Point (Water Borne – 9/16/03)**

a. **MET:** Evaluation Criteria: 3.a.1; 3.b.1; 3.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.13 **Medical Drill (10/16/03)**

a. **MET:** Evaluation Criteria: 3.a.1; 6.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2 RISK MUNICIPALITIES

2.2.1 Barnegat Township Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.2 Beachwood Borough Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.3 Berkeley Township Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.4 **Lacey Township Emergency Operations Center**

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.5 **Ocean Gate Borough Emergency Operations Center**

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.6 **Ocean Township Emergency Operations Center**

a. **MET:** Evaluation Criteria: 1.a.1; 1.b.1; 1.d.1; 1.e.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION: 1**

Issue Number: 43-03-1.c.1-A-03

Condition: The Emergency Management Coordinator (EMC) and his assistant decided to evacuate areas 3 and 4 in Ocean Township following the notification of a General Emergency and an offsite release. This decision was before the State of New Jersey had issued a Protective Action Decision (PAD). The Assistant EMC briefed the Waretown Fire Department Liaison for route alerting and the Waretown First Aid Squad Liaison to assist in the evacuation of special populations. The township informed the county of these actions; however, the township did not request any support or a reply to its message. Because of this oversight, the evacuees had no place to go for monitoring for the presence of radiation exposure or a mass care facility in which to stay because none had been activated at this time. Also, traffic control points had not been established outside of Ocean Township in the areas through which evacuation traffic would pass.

Possible Cause: The EMC and Assistant EMC felt that if there was a release and they had population within two miles of the facility, there should have been a PAD for evacuation. They decided to be conservative and do a precautionary evacuation to protect the health and safety of the public.

Reference: Nureg-0654, a.1.D; A.2a, b

Possible Effect: Evacuees could have been exposed to radiation without access to radiological monitoring and decontamination. The uncoordinated evacuation could also have led to traffic congestion, possible wrecks, and other traffic related problems. In addition, Congregate Care facilities had not been opened, so there were no shelters for the evacuees (special populations) needing housing assistance.

Recommendation: All local Protective Actions should be coordinated in advance with the county and the state.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

INGESTION PHASE ACTIVITIES

1. STATE OF NEW JERSEY

1.1 State Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.c.1; 2.d.1; 2.e.1; 3.d.1; 3.e.1; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION: 1**

Issue Number: 43-03-3.e.2-A-04

Condition: There was no discussion of how any informational material would be distributed to the agribusiness community. In addition, there were no copies available of any pre-printed or camera ready instructional information.

Possible Cause: The organization did not follow their procedures for providing prepared instructional material.

Reference: NUREG-0654 E.5, E.7

Effect: The general public and agribusiness community were not properly informed in accordance with the procedures, hence compromising public health and safety.

Recommendation: Ensure that proper procedures are followed.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.2 Emergency Operations Facility – Forward Command Post

a. **MET:** Evaluation Criteria: 1.c.1; 1.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.3 **State Radiological Field Monitoring Teams**

a. **MET:** Evaluation Criteria: 1.d.1; 1.e.1; 4.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.4 **State Emergency Laboratory Facility**

a. **MET:** Evaluation Criteria: 4.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.5 **Technical Assessment Center**

a. **MET:** Evaluation Criteria: 1.b.1; 1.c.1; 1.d.1; 1.e.1; 2.d.1; 2.e.1; 3.e.1; 3.e.2; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1 OCEAN COUNTY

2.1.1 Ocean County Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.c.1; 3.d.1; 3.e.1; 3.e.2; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2 RISK MUNICIPALITIES

2.2.7 Lakehurst Borough Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.c.1; 3.d.1; 3.e.1; 3.e.2; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.8 Lakewood Township Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.c.1; 3.d.1; 3.e.1; 3.e.2; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.9 Manchester Township Emergency Operations Center

a. **MET:** Evaluation Criteria: 1.c.1; 3.d.1; 3.e.1; 3.e.2; 3.f.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

APPENDIX 1
ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations, which were used in this report.

AOG	Augmented Off-Gas
ARCA	Area Requiring Corrective Action
ARM	Area Radiation Monitors
ATWS	Anticipated Transient Without Scram
A&N	Alert and Notification
CFM	Cubic Feet per Minute
CFR	Code of Federal Regulations
CHRRMS	Containment High Range Radiation Monitoring System
DOT	U.S. Department of Transportation
DRD	Direct-Reading Dosimeter
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EMC	Emergency Management Coordinator
EMITS	Emergency Management Information Tracking System
EMRV	Electro-Motive Relief Valve
ENC	Emergency News Center
EPA	U.S. Environmental Protection Agency
EPR	Electronic Pressure Regulator
EPZ	Emergency Planning Zone
ERF	Emergency Response Facility
ERO	Emergency Response Organization
ERPA	Emergency Response Planning Area
FCP	Forward Command Post
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
GE	General Emergency
ICF	ICF Consulting, Inc.
JIC	Joint Information Center

KI	Potassium Iodide
LED	Light Emitting Diode
mR	milliRoentgen(s)
MS	Medical Services
MSIV	Mainstream Isolation Valves
NAWC	Lakehurst Naval Air Warfare Center
NJ	New Jersey
NJBNE	New Jersey Bureau of Nuclear Engineering
NJDEP	New Jersey Department of Environmental Protection
NJOEM	New Jersey Office of Emergency Management
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980
OCEOC	Ocean County Emergency Operations Center
OCMEOCs	Ocean County Municipality Emergency Operations Centers
OCNGS	Oyster Creek Nuclear Generating Station
OCOEM	Ocean County Office of Emergency Management
OEM	Office of Emergency Management
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PIO	Public Information Officer
R	Roentgen
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
R/hr	Roentgen(s) per hour
SAE	Site Area Emergency
SBOEM	Ship Bottom Office of Emergency Management
SEOC	State Emergency Operations Center
SFA	State Field Activities
SGTS	Standby Gas Treatment System
SM	Shift Manger
SOP	Standard Operating Procedure
TL	Team Leader

TLD	Thermoluminescent Dosimeter
WRAT	Ocean County EAS Radio Station

APPENDIX 2
EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Plume Phase of the Oyster Creek Nuclear Power Station exercise on September 9, 2003 and the out of sequence drills. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

FEMA	Federal Emergency Management Agency
DOT	Department of Transportation
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
NJBNE	New Jersey Bureau of Nuclear Engineering
NRC	Nuclear Regulatory Commission
ICF	ICF Consulting

EVALUATION SITE	EVALUATOR	ORGANIZATION
Exercise Oversight	Robert Reynolds	FEMA
STATE OF NEW JERSEY		
SEOC	Brian Hasemann, TL	FEMA
SEOC	Deborah Blunt, AA	ICF
SEOC	Mark Walters	FEMA
SEOC	Mabel Santiago	FEMA
EOF	Joseph Keller, TL	ICF
EOF	Robert Bores	NRC
Forward Command Post	Robert Gawlak	ICF
Field Monitoring	Eric Simpson	USEPA
Field Monitoring	Ron Bernacki	FDA
JIC	Jane Young	FEMA
JIC	William Cullen	FEMA
EAS Station	Paul Malool	FEMA
OCEAN COUNTY		
EOC	Kevin Reed, TL	FEMA
EOC	David Petta	DOT
EOC	Miriam Weston	FEMA
Field Monitoring	Herbert Boedecker	FEMA
Emergency Worker Monitoring/Decontamination	Brian Hasemann	FEMA
Reception Center*	Brian Hasemann	FEMA
Congregate Care Center*	Brian Hasemann	FEMA
General Population*	Brian Hasemann	FEMA
Hearing Impaired*	Brian Hasemann	FEMA

Mobility Impaired*	Brian Hasemann	FEMA
Route Alerting*	Brian Hasemann	FEMA
School Evacuation*	Brian Hasemann	FEMA
School Interview*	Brian Hasemann	FEMA
Traffic and Access Control*	Paul Malool	FEMA
Medical Drill*	Joseph Keller (TL)	ICF
Medical Drill*	William Cullen	FEMA
MUNICIPALITIES		
Barnegat Township EOC	Lauren DeMArco	FEMA
Beachwood Borough EOC	Roy Smith	ICF
Berkley Township EOC	Russell Fox	FEMA
Lacey Township EOC	Susan O'Neil	FEMA
Ocean Gate Borough EOC	Henry Christiansen	ICF
Ocean Township EOC	Ernie Boaze	ICF

* Indicates an out of sequence drill or demonstration.

The following is a list of the personnel who evaluated the Ingestion Phase Oyster Creek Nuclear Power Station exercise on September 25, 2003. Evaluator Team Leaders are indicated by the letters "(TL)" after their names.

EVALUATION SITE	EVALUATOR	ORGANIZATION
Exercise Oversight	Robert F. Reynolds	FEMA
STATE OF NEW JERSEY		
SEOC	Brian Hasemann, TL	FEMA
SEOC	Deborah Blunt	ICF
Forward Command Post	Paul Malool	FEMA
Technical Assessment Center	Joseph Keller, TL	ICF
Technical Assessment Center	Daryl Thome	ICF
Emergency Laboratory Facility	Frank Bold	ICF
Emergency Laboratory Facility	Jeanette Eng	EPA
Field Monitoring	Jeanette Eng	EPA
Field Monitoring	Ron Bernacki	FDA
Field Monitoring	Frank Bold	ICF
OCEAN COUNTY		
EOC	Rebecca Thompson	FEMA
MUNICIPALITIES		
Lakehurst Borough EOC	Kevin Reed	FEMA
Lakewood Township EOC	Lauren DeMarco	FEMA
Manchester Township EOC	William Cullen	FEMA

APPENDIX 3
EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise objectives and the extent-of-play agreement, which were scheduled for demonstration in the Oyster Creek Nuclear Power Station exercise on September 9, 2003.

The exercise evaluation criteria, contained in the FEMA Interim REP Program Manual, August 2002, represent the application of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 to an emergency response exercise.

Because the exercise evaluation criteria are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the objectives. The following extent-of-play agreement was approved by FEMA Region II on February 13, 2003.

Oyster Creek Nuclear Power Station

OFFSITE EXTENT OF PLAY

FULL – PARTICIPATION EXERCISE

SEPTEMBER 9, 2003 – PLUME PHASE

SEPTEMBER 23-25, 2003 – INGESTION PHASE

EXTENT

OF

PLAY

EXTENT OF PLAY

GROUND RULES

REAL LIFE EMERGENCIES TAKE PRIORITY OVER EXERCISE PLAY.

- There will be no free play messages as an element of the scenario.
- A control cell will inject rumor control messages at the State EOC.
- **A State Controller will inject radiological data for field radiological activities (i.e. Field Monitoring Teams, Reception Centers, EWDCs).**

According to REP Program Strategic Review Initiative 1.5 and the Interim Radiological Emergency Preparedness (REP) Program Manual Section III. I: During tabletop exercises, drills, and other demonstrations conducted out-of-sequence from an integrated exercise, if FEMA and the offsite response organizations (ORO) agree, the FEMA Evaluator may have the participants re-demonstrate an activity that is determined to be not satisfactorily demonstrated. Immediate correction of issues in an integrated exercise is authorized only if it would not be disruptive and interrupt the flow of the exercise and affect other Evaluation Areas".

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a - Mobilization

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4, D.3, 4, E.1, 2, H.4)

EXTENT OF PLAY AGREEMENT:

BNE/EOF

- The BNE will pre-position Staff in the area and will arrive at the EOF approximately 60 minutes after notification by the State OEM of an ALERT or greater ECL notification.

BNE/FCP

- The BNE will pre-position Staff in the area and will arrive at the FCP approximately 60 minutes after notification by the BNE Headquarters of an ALERT or greater ECL notification. For the ingestion pathway demonstration, FCP staff will report to the FCP at a pre-designated time.

BNE/FMT Plume Phase

- During the plume phase, two (2) State and (1) county FMT will pre-demonstrate instrument checkout and field air-sampling procedures during the afternoon of September 9, 2003. The three field teams will remain in the area until FCP staff arrives and will not be required to perform a second instrument checkout.

BNE/FMT Ingestion Phase

- During the ingestion phase, state FMTs will report to the FCP at a pre-designated time. Field monitoring will be performed off-line from the demonstrations at the BNE/TAC, BNE/ELF, and the state EOC.

JIC

- State JIC Staff will be pre-positioned and arrive approximately 60 minutes after notification of an ALERT or greater ECL notification.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b - Facilities

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H)

EXTENT OF PLAY AGREEMENT:

- Back-up power is available, but will not be demonstrated, for the State, Ocean County, or the municipal EOCs.

- Maps and displays will vary with each facility according to the assigned mission. They may include printouts and listings.

- Additional baseline facility evaluations, outside of those detailed in the Offsite Extent of Play Activities Schedule, will be conducted prior to or after the exercise as agreed by FEMA, NJ OEM, NJ BNE, Ocean County OEM, and each municipal OEM.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c - Direction and Control

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG 0654, A.1.d; A.2.a, b)

EXTENT OF PLAY AGREEMENT:

JIC

- The utility is responsible for the overall direction and control of the JIC. Upon the Governor's Declaration of a State of Emergency, the NJ State Police Public Information Officer will assume the responsibility of direction and control at the JIC.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d - Communications Equipment

Criterion 1.d.1: At least two communications systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1.2)

EXTENT OF PLAY AGREEMENT:

County/municipal EOCs

- The use of radio* as a backup to commercial telephone will be demonstrated between the Ocean County EOC and the risk municipal EOCs. (TBD Ocean County)

  * RACES, EMRAD, County OEM, 800 Mhz

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e - Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG 0654, H.7, 10; J.10.a, b, e, J.11; K.3.a)

EXTENT OF PLAY AGREEMENT:

- In the NJRERP, Accident Assessment is a State responsibility therefore; radiological monitoring points and population by evacuation area will not be displayed on maps at the county or municipal EOCs.

- The NJ OEM Calibration Laboratory calibrates field team equipment. The State RERP Plan requires annual calibration of this equipment. Therefore, the calibration sticker for this equipment shows a calibration due date which reflects the annual calibration cycle. The instruments are considered calibrated as long as the current date is within one year of the calibration date.

- No equipment (i.e. barriers, traffic cones, signs, etc.) will be deployed to the field.

- FMTs will simulate the donning of protective clothing for both the plume and post-plume demonstrations.

- Check sources for field monitoring instruments will be shared among state and county FMTs.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a. Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, J.10.e, f; K.4)

EXTENT OF PLAY AGREEMENT:

- One emergency worker exposure control kit will be utilized in the County EOC and in each municipal EOC. No TLDs will be distributed during this exercise, but their location and recording methodology will be explained to the evaluator. County and municipal coordinators will provide and discuss the SOP on TLD distribution and record keeping with the evaluator. EMCs who distribute more than the minimum requirement of emergency worker kits will not be penalized.

- Maximum authorized mission exposure limits may be referred to as mission dose, dose limit, or turn back value. The New Jersey limit is 1.25 R. Direct-reading dosimeters (DRDs) in the emergency worker exposure control kits contain 0-20 R and 0-200 mR dosimeters. Inspection dates (including leak test information) for this instrumentation is on file at the NJOEM Radiation Laboratory and will be visually inspected and evaluated by FEMA staff prior to the exercise. KI will not be distributed. It is stored at the State OEM, BNE-FCPs and at the County OEM until an actual incident.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.b. Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8, 10, and Supplement 3)

EXTENT OF PLAY AGREEMENT:

- The back up for the electronic dose projection model at the EOF is hand calculations based on the NRC's Response Technical Manual. Hand calculations will only be demonstrated during the plume or ingestion phases if the primary and secondary electronic systems fail.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.b. Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.2: A decision-making process involving consideration of the appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9, 10.f, m).

EXTENT OF PLAY AGREEMENT:

- The State of New Jersey has determined that it will utilize KI as a supplement to the other protective actions for the public.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.c. - Protective Action Decisions Consideration for the Protection of Special Populations

Criterion 2.c.1: Protective action decisions are made as appropriate, for special population groups. (NUREG-0654, J.9, J.10.d, e)

EXTENT OF PLAY AGREEMENT:

- There are no modifications from the NJRERP.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.d - Radiological Assessment and Decision Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654, J.9, J.11)

EXTENT OF PLAY AGREEMENT:

TAC

- The BNE/TAC will not be participating in sequence with the FCP/FMTs or the ELF. Data will be provided to the BNE/TAC by controllers and outgoing data will be collected through the controller. Communication and data flow between the TAC and ELF and the TAC and FCP will be demonstrated out of sequence.

FCP

- The FCP is playing out of sequence with the TAC. Field sample requests will be provided by a controller and all outgoing data will be collected by the controller.

FMT

- FMTs are playing out of sequence with the ELF. Chain of Custody Forms will be completed by the FMTs during exercise play but will not be delivered to the ELF with the samples. Ingestion sampling sites may be at locations outside the exercise deposition area. Specific sampling locations will be where the state can gain access to farms with prior permission from property owners.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.e. - Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO_s plans and/or procedures. (NUREG-0654, I.1; J.9; M.1)

EXTENT OF PLAY AGREEMENT:

- There are no modifications from the NJRERP.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a - Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3a, b)

EXTENT OF PLAY AGREEMENT:

- FMTs will not be required to dress out during the plume phase. Exposure control and contamination control functions will be addressed through an interview with the field teams There are no modifications from the NJRERP.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b - Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI by emergency workers and institutionalized individuals is maintained.

EXTENT OF PLAY AGREEMENT:

- The State of New Jersey has determined that it will utilize KI as a supplement to the other protective actions.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c - Implementation of Protective Actions for Special Populations

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within the areas subject to protective actions. (NUREG-0654, J.10.c, d, g).

EXTENT OF PLAY AGREEMENT:

Evacuation of Transportation Dependent Population

- Evacuation of Transportation Dependent Population will be demonstrated offline. (Location TBD, July 15, 2003).

- A State Trooper and a NJT bus will demonstrate one (1) route offline. (Location TBD, September 16, 2003).

Notification of Hearing Impaired

- The notification of a hearing impaired individual will be demonstrated offline. (Surf City Borough, May 15, 2003).

- The list of hearing impaired individuals will be available for inspection at each municipal EOC. The list will be reviewed but not retained by the federal evaluator.

- There will be no actual notification of hearing impaired individuals.

Evacuation of Non- Institutionalized Mobility Impaired Individuals

- The notification of non-institutionalized impaired individual will be demonstrated offline. (Ship Bottom Borough, May 15, 2003).

- The list of non-institutionalized mobility impaired individuals will be available for inspection at each municipal EOC. The list will be reviewed but not retained by the federal evaluator.

- There will be no actual notification of non-institutionalized impaired individuals.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c - Implementation of Protective Actions for Special Populations

Criterion 3.c.2: OROs/School officials implement protective actions for schools. (NUREG-0654, J.10.c, d, g).

EVACUATION OF SCHOOL POPULATIONS

EXTENT OF PLAY AGREEMENT:

- An evacuation bus route for Lacey High School will be run from the building to the host facility.

  August 1, 2003

SCHOOL INTERVIEWS

EXTENT OF PLAY AGREEMENT:

- Interviews will be conducted during the summer by FEMA and a State Controller with either school superintendents or principals.

  July 31, 2003 and August 1, 2003.

EVAL EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. - Implementation of Traffic and Access Control

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g, j)

EXTENT OF PLAY AGREEMENT:

Traffic and Access Control Points (TCPs and ACPs)

- The activation of a water borne Access Control Post and a Traffic Control Post will be demonstrated offline. (Location and Sept 16, 2003).
- The State Police Field Operation Bureau personnel will discuss how to activate ACPs in the field in mutually agreed upon locations.
- The personnel from the Ocean County Sheriffs Department and road Department will discuss how to activate TCPs in the field in mutually agreed upon locations.
- The participants will demonstrate their ability to locate their assigned posts through an interview with a federal evaluator.
- There will be no actual activation of Access Control or Traffic Control.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. - Impediments to Evacuation

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10.k)

EXTENT OF PLAY AGREEMENT:

Impediments to evacuation

- The State Police Field Operation Bureau personnel will discuss with the Federal evaluator how impediments to evacuation would be overcome.

- The Ocean County Sheriffs Department and Road Department and Traffic Engineer will discuss with the Federal evaluator how impediments to evacuation would be overcome.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e - Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability appropriate use of adequate information regarding water, food, supplies, milk, and agricultural production within the ingestion pathway emergency planning zone for implementation of protective actions. (NUREG-0654, J.9, 11).

EXTENT OF PLAY AGREEMENT:

- There are no modifications from the NJRERP.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e - Implementation of Ingestion Pathway Decisions

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654, J.9, 11).

EXTENT OF PLAY AGREEMENT:

- There are no modifications from the NJRERP.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.f. - Implementation of Relocation, Re-entry, and Return Decisions

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of public are coordinated with appropriate organizations and implemented. (NUREG-0654, M.1, 3)

EXTENT OF PLAY AGREEMENT:

- Implementation of State Return, Recovery, and Re-entry functions will be demonstrated during the exercise through discussion at the State EOC and Technical Assessment Center. Plans and procedures regarding return, recovery and re-entry will be available to evaluators upon request and specific questions may be directed to appropriate personnel.

- Implementation of County and municipal Return, Recovery and Re-entry functions will be demonstrated through discussion at the County EOC during the third day of the exercise. There will also be an observed and critiqued, but not evaluated discussion on the third day at the County EOC.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a.1 - Plume Phase Field Measurements and Analysis

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates. (NUREG-0654, H.10; I.7, 8, 9)

EXTENT OF PLAY AGREEMENT:

FMTs

- During the plume phase, two (2) State and (1) county FMT will pre-demonstrate instrument checkout and field air-sampling procedures during the afternoon of September 9, 2003. The three field teams will remain in the area until FCP staff arrives and will not be required to perform a second instrument checkout.

- BNE/FMTs will perform an operational check of the Ludlum Model 16 instruments in the field monitoring team kits using a Ba-133 check source. Each field team is not required under the NJRERP to have a check source. Calibration stickers indicate current calibrations and battery checks are sufficient for all other instruments to demonstrate operability.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a. - Plume Phase Field Measurements and Analysis

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, H.12; I.8, 11; J.10.a)

EXTENT OF PLAY AGREEMENT:

- There are no modifications from the NJRERP.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a. - Plume Phase Field Measurements and Analysis

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.9).

EXTENT OF PLAY AGREEMENT:

- During the plume phase, two (2) state and (1) county FMT will pre-demonstrate instrument checkout and field air sampling and counting procedures during the afternoon of September, 9, 2003. If the FMT is not required to perform an additional air sample and count during exercise play, the pre-demonstration will serve as the evaluation demonstration for this criterion.

- Chain of Custody Forms will be completed during the exercise by FMTs. However, the transfer of samples to the laboratory will not be demonstrated during the plume phase.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.b - Post Plume Phase Field Measurements and Sampling

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG-0654, I.8; J.11)

EXTENT OF PLAY AGREEMENT:

- Three FMTs from the state will be evaluated during the post plume demonstration: milk, water, vegetation. FMTs will simulate dressing out in protective clothing. Exposure control will be addressed through interviews with the FMT staff.

- Field monitoring teams will pre-stage at the FCP. It may be necessary for the milk sampling team to demonstrate out of sequence with the other field teams and the FCP depending on the milking schedules of the dairy farm used for the exercise. In addition, a dairy out of the exercise deposition area may be used that would necessitate simulation of some activities.

- Ingestion sampling sites may be at locations outside the exercise deposition area. Specific sampling locations will be where the state can gain access to farms with prior permission from property owners.

- Field teams will be participating out of sequence with the Emergency Laboratory Facility (ELF). There will be no courier or demonstration of sample custody or receipt during the FMT demonstration. Evaluation of these portions of the procedure will be obtained through interviews with FMT staff.

- The FCP will be playing out of sequence with the TAC. Sampling requests and priorities will be provided through exercise controllers.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.c - Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analysis to support protective action decisions. (NUREG-0654, C.; J.11)

EXTENT OF PLAY AGREEMENT:

- One (1) soil, one (1) silver zeolite cartridge, one (1) particulate filter, and one (1) water sample will be processed at the lab during the exercise.
- Solid and liquid waste removal and sample waste disposal will be simulated during the exercise.
- The ELF will be demonstrating sample analysis out of sequence from the exercise scenario and the demonstration at the BNE/TAC.
- ELF staff will be pre-positioned for the demonstration.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a - Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with the primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D & NUREG-0654, E.5, 6, 7)

EXTENT OF PLAY AGREEMENT:

- There will be no actual siren sounding and no broadcasting of EAS messages. The Oyster Creek siren system was tested on June 10, 2003.
- Airing of all EAS message will be simulated.
- Regular programming responsibilities of the radio station may preclude participation at the time of issuance of the simulated EAS message.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a - Activation of the Prompt Alert and Notification System

Criterion 5.a.2: RESERVED

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a - Activation of the Prompt Alert and Notification System

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are competed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, 3B.2.c)

EXTENT OF PLAY AGREEMENT:

- Backup route alerting will be demonstrated offline. (Barnegat Light Borough, May 15, 2003).

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.b - Emergency Information and Instructions for the Public and the Media

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E.5, 7; G.3.a, G.4.c).

EXTENT OF PLAY AGREEMENT:

Public Instruction and Emergency Information

Plume Phase

- EAS Follow-up News Releases are provided to WRAT only and the media at the JIC.

Post Plume

- The JIC function will be conducted at State Police Headquarters in West Trenton for the Post Plume Phase only on September 23, 2003.

Public Inquiry

Plume Phase

- The public inquiry (rumor control) function will be staffed by at least five operators with one supervisor.

- Inject messages will identify at least two false or misleading information to enable the public inquiry (rumor control) function to identify trends and false rumors.

Post Plume Phase

- The public inquiry (rumor control) function will be staffed by at least five operators with one supervisor.

- Inject messages will identify false or misleading information to enable the public inquiry (rumor control) function to identify trends and false rumors.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.a - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12;K.5.a)

EXTENT OF PLAY AGREEMENT:

- One (1) Reception center will be demonstrated offline. (Pinelands High School, July 15, 2003).

- At least 1/3 of the required monitors will be present and evacuees will be monitored. Staff will be provided to act as evacuees.

- Initial personnel monitoring staff will be demonstrated as tabulated below. Staff will be provided to act as evacuees.

Number of persons for Initial Personnel Monitoring	
Category	Location
Radiological monitors for initial monitoring	
Recorders	
Number of Portal Monitors	

- Two radiation monitoring staff will be present, one (1) for male decontamination and one (1) for female decontamination.

- Both vehicle monitoring posts will be staffed with a minimum of two (2) emergency workers.

- Two vehicles will be demonstrated for monitoring and decontamination, one (1) clean vehicle and one (1) contaminated.

- There will be only a representative (small) sample of supplies available at the facility.

- Decontamination techniques will be simulated.

- Reception Center floors will not be covered with paper/plastic during this demonstration. However, it will be available for inspection.

- The Portal monitors will not be checked with a check source.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.b - Monitoring and Decontamination of Emergency Worker Equipment

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, K.5.b).

EXTENT OF PLAY AGREEMENT:

- One (1) Emergency Worker Decontamination Center (EWDC) will be demonstrated offline. (Triboro EWDC, May 14, 2003).
- One (1) radiation monitoring staff person will be demonstrating decontamination.
- Both vehicle monitoring posts will be staffed with a minimum of two (2) emergency workers.
- Two vehicles will be demonstrated for monitoring and decontamination, one (1) clean vehicle and one (1) contaminated.
- There will be only a representative (small) sample of supplies available at the facility.
- Decontamination techniques will be simulated.
- EWDC floors will not be covered with paper/plastic during this demonstration. However, it will be available for inspection.
- The Portal monitors will not be checked with a check source.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c - Temporary Care of Evacuees

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (found in MASS CARE-Preparedness Operations ARC 3031). Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h, J.12)

EXTENT OF PLAY AGREEMENT:

- One (1) Congregate Care Shelter will be demonstrated offline. (Lakewood Middle/High School)

- Capabilities will be demonstrated through an interview process. Personnel, at a minimum, will consist of one Manager and an Assistant for each congregate care shelter opened.

- Availability of additional personnel will be determined by interview.

- Supplies required for long term mass care (cots, blankets, food, etc.) are not to be acquired or brought to the Congregate Care Shelters.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

Criterion 6.d.1: The facility/ORO has appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2; H.10; K.5a, b; L.1, 4)

EXTENT OF PLAY AGREEMENT:

- The use of flashing lights and sirens for exercise play will be simulated. (Lacey FAS and Community Memorial Medical Center Date TBD)

APPENDIX 4
EXERCISE SCENARIO SYNOPSIS

This appendix contains a summary of the simulated sequence of events – Exercise Scenario – that was used as the basis for invoking emergency response actions by OROs in the Oyster Creek Nuclear Power Station exercise on September 9, 2003.

This exercise scenario was submitted by the State of New Jersey and approved by FEMA Region II on August 28, 2003.

OYSTER CREEK NPS
2003 EMERGENCY PREPAREDNESS EXERCISE
ONSITE SEQUENCE OF EVENTS

The exercise will start at 16:30 hours. The plant will be at 100% power and will have completed 275 days on-line.

Initial Conditions:

- "B" CRD Pump is OOS while its rotating element is being replaced. Job is awaiting parts from the manufacturer. This work started 4 days ago at 9:00 a.m. (7 day T.S. LCO)

At 16:40, a minor earthquake will be felt in the plant. The Shift Manager will be expected to review the EALs, and at approximately 16:50, declare a Notice of Unusual Event (NOUE), based upon category O.1 "verified earthquake felt in plant."

The Station Emergency Alarm will be sounded, a plant page announcement indicating the declaration of a NOUE, with expectations that site personnel will continue with normal duties, and listen for any additional page announcements.

The on-shift Emergency Organization will be activated, and initial on-site and off-site notifications performed.

At approximately 17:30, an explosion in the SBO Transformer will occur. The explosion will penetrate the Pre-treatment Building, setting the west side of the building on fire. The deluge system piping shears off between the Pre-treatment Building and the transformer, such that the water stream goes onto the ground and not to the suppression nozzles. Fire Brigade will respond. Off-site fire support will not be used.

The Emergency Director (Shift Manager) will declare an **ALERT** based on category P.2, "Known explosion damage to any Permanent Plant Structure."

The Station Emergency Alarm is sounded, a plant page announcement indicating the declaration

of an ALERT, and all on-duty Emergency Response personnel report to their Emergency Response Facilities (ERF). Pager activation is initiated, and the Emergency Response Organization is activated.

By approximately 18:15, the fire will be extinguished.

By approximately 18:30, the Emergency Response Organization will be fully activated.

Approximately an hour and a half after the ALERT (at 19:15), the Control Room is given a message stating the site has just experienced a major earthquake.

Damage to USS1A2 causes the "A" CRD pump to trip. When the Control Room receives the second accumulator trouble alarm, they will initiate a manual SCRAM, which fails to work. ARI fails to initiate automatically and manually.

ED declares a **SITE AREA EMERGENCY**, at approximately 19:30, based on "earthquake affecting systems required for shutdown" (category O.1).

The Station Emergency Alarm is sounded, a plant page announcement indicating the declaration of a Site Area Emergency, and Accountability will be initiated.

The liquid poison tank ruptures and rapidly drains down to below the pump suction line.

The earthquake also causes the 1-3 Circ water pump to trip.

The turbine is expected to stay on line controlling pressure while power remains between 35 and 40 percent. Operations enters RPV CONTROL-ATWS EOP. Reactor level will be lowered to control power. Pressure will be controlled on the Electric Pressure Regulator (EPR).

The team sent out from the OSC to vent the scram air header will find the East Reactor Building door from the Radwaste Yard jammed due to mechanical failure of the door interlock latch. When the team enters the reactor building, the valve to vent the scram air header is jammed. When the team disassembles the valve or opens the air header by other means, they will be told that a *very* small stream of air is wisping out. If a team is sent to line up CRD to vent the over-piston area so rods can be driven, then they will find the drain valve stuck closed.

Note: The purpose of these multiple barriers/failures is to insure that power remains on the reactor for the time between the SAE and the GE, to provide a plausible fuel damage mechanism.

Due to the Power Oscillation occurring, the ATWS poison injection is required. A decision to prepare to inject poisons using the Clean-up System or the Feed and Condensate System will be made by the ED. The responders will be required to simulate moving boron and demonstrate all tools and procedures.

At 20:00, the initial status of site Accountability will be completed.

At 21:00, the "B" Isolation Condenser steam line will rupture venting the reactor vessel into the Reactor Building. Valve V-14-32 will seize in the open position and will not be closable. Valve V-14-33 will start to close but will cause the trip of the main feeder breaker to DC-2 (on DC-C). This will prevent the leak from being isolated until the feeder breaker is repaired.

Reactor Building temperature and pressure will increase driving an emergency depressurization of the reactor. An elevated release will commence via SBGT to the stack.

The Emergency Director will declare a **GENERAL EMERGENCY** (~21:10) based on Category S.1 "Loss of 2 out of 3 fission product barriers with a potential loss of the third."

The Station Emergency Alarm is sounded and a General Emergency announced, but all activities related to a site evacuation will be simulated and not conducted.

A Dose Projection is developed based upon an elevated release via the main stack. Off-site data provided with the scenario is based upon an elevated release.

The appropriate PAR will be EVACUATE 0-2 miles full circle and 2-5 miles in sectors SW, SSW, and S and shelter the remaining portion of the EPZ. Dose projection will indicate that KI is not recommended for use within the EPZ.

The PAR will be discussed with the New Jersey Bureau of Nuclear Engineering at the EOF, and provided to the NJ Office or Emergency Management.

Off-site activities will be expanded to confirm and define the extent of the plume.

The reactor will reach a shutdown condition when the CRD pump is returned and all rods are inserted. Once shut down, efforts to use the alternate methods to inject poison will be secured.

The leak will be secured when DC-2 is re-energized allowing the V-14-33 valve to close. The stack release will continue as Standby Gas Treatment ventilates the reactor building.

At approximately 23:00, the Exercise will be concluded when on-site and off-site activities have concluded and discussions on requirements to enter into recovery have taken place.

PLANNING ISSUES
OYSTER CREEK EXERCISE OF SEPTEMBER 2003

This report supplement contains the Planning Issues identified during the September 9 and September 23-25, 2003, exercises at the Oyster Creek Nuclear Power Station. Planning Issues do not involve participant performance, but rather involve inadequacies in the plan or procedures. Planning Issues are required to be corrected through the revision and update of the appropriate State and local RERPs and/or procedures in accordance with the following schedule:

- Within 120 days of the date of the exercise/drill when the Planning Issue is directly related to protection of the public health and safety.

- During the annual plan review and update (reported in the Annual Letter of Certification) when the Planning Issue does not directly affect the public health and safety. However, when the date for the annual plan review and update is imminent and the responsible organization does not have sufficient time to make the necessary revisions in the plans and/or procedures, the revised portion of the plans and/or procedures should be submitted in the subsequent annual plan review and update and reported in the Annual Letter of Certification.

Any requirement for additional training of responders to radiological emergencies necessitated by the revision and update of the plans and/or procedures must be completed within the timeframes described above in order for the Planning Issue to be considered resolved.

State of New Jersey

1.1 New Jersey State Emergency Operations Center

Planning Issue Number: 43-03-2.b.2-P-01

Condition: The Protective Action Decisions were delayed because the Commissioner of Health, who is responsible for the KI decision, was not present. A representative of the Department of Health and Senior Services was present at the SEOC in place of the Commissioner, but did not have signature authority. The representative contacted the Commissioner by phone once a recommendation was made, and waited for the Commissioner to formally authorize KI. The process took 28 minutes from the time the Commissioner was notified to the time that official authorization was received.

Possible Cause: The possible cause for the delay in making decisions was that the Commissioner of Health was not present at the EOC and did not give signature authority to his representative. This resulted in a delay in issuing a PAD for the general public to take KI.

Reference: NUREG-0654, J.9, J.10.f, m

Effect: Evacuation of the general public was potentially delayed, hence compromising protection of public health.

Recommendation: Decision-making should be timely in order to protect the public from potential exposure to radiation. The SEOC procedures should be revised so that:

- Persons with authority to make decisions are located in the SEOC. If a representative is sent in place of the decision-maker, that person should be given signature authority.

- Communications between dose assessment staff at the EOF and EOC could also be improved. Once a PAR has been issued from the EOF via FAX, a confirmation call from the EOF should be made to ensure that the information was received in order to expedite the decision-making process.

Planning Issue Number: 43-03-2.b.2-P-02

Condition: There is no public information brochure that is distributed annually for the Oyster Creek site. The insert in the telephone book is inadequate because it is found only in the Verizon telephone book, not the other telephone books, and because it is difficult to locate as well as very hard to read because the print is so small.

Possible Cause: Lack of production and distribution of a public information brochure.

Reference: NUREG-0654, G.1

Effect: While the EAS messages and the briefings at the Joint Information Center refer the public to the public information in the telephone books, that information difficult to locate and to read. Therefore, in an emergency situation, the public may not be able to obtain needed information.

Recommendation: Create a clear, easy-to-read public information brochure (guidance on this may be found in Section I.E of the Interim REP Program Manual, Public Information Materials Review Guidance, FEMA August 2002), perhaps as part of a calendar, and institute a program for annual distribution of the brochure.

1.2 Dose Assessment - Emergency Operations Facility

Planning Issue Number: 43-03-2.b.1-P-03

Condition: Attachment 4 to SOP 301 specifies a time dependent dose conversion factor for converting field team measurements of radioiodine to thyroid dose. These factors are not correct if the measurements are of I-131 only as is the case with the procedures and equipment in use.

Possible Cause: The incorrect dose conversion factors may have been a holdover from previous equipment and procedures.

Reference: NUREG-0654, I.9

Effect: If the incorrect dose conversion factors are used, the resulting thyroid dose would be underestimated.

Recommendation: Revise the procedure to use the appropriate dose conversion factor for children.

Planning Issue Number: 43-03-4.a.2-P-04

Condition: Only two useful air sample results were provided to the DEP staff in the dose assessment area in approximately three hours of exercise play from the five field monitoring teams deployed (Two state teams, one County team and two licensee teams). A third air sample (from a licensee team) was either not processed or its results not delivered to the DEP staff. The DEP EOF Lead was well aware of the importance of the FMT results. The dose projections and PARs produced were critically dependent on an assumed radioiodine scrubbing efficiency. Only the FMT results could confirm or negate this assumption. The licensee had announced that there might be a question as to the efficiency of the treatment system in use to reduce the radioiodine source term. Two/three air samples from five teams over a three-hour period is not an adequate management of the available resources.

Possible Cause: First, the failure of the licensee team to take or report an air sample result for a location where there was a significant indication that the plume was present at ground level (SSW-2 team at 2130) resulted in a delay of at least one hour in producing a KI PAR and is unexplained. The licensee teams should provide additional information to the State in a timely manner, particularly after the Governor has declared a State of Emergency.

Second, the concept of operations for the ORO teams results in the teams waiting for instructions as to making traverses of projected plume trajectories and therefore waiting and being unproductive for significant periods. The current procedure for teams to complete a traverse, report results and return to an appropriate location increases the exposure to the team members and lengthens the time necessary to obtain air sample results. In the case of this exercise, Field Team B followed procedures and, as a result of the change in the Stability class, the plume dispersion had decreased and had left ground level before the team could return to the sampling location. When there is a significant need to obtain air sample results, as there almost always is, the EOF staff should instruct the FCP to direct the teams to obtain samples on an expedited basis

Reference: NUREG-0654, I.8

Recommendation: Investigate the cause of the failure of the licensee to obtain and or furnish air sample results from a location where an air sample was clearly appropriate and implement appropriate corrective actions. Develop a Letter of Agreement with the licensee to formalize information sharing and joint operations after the Governor has declared a State of Emergency. Review the State concept of operations and procedures for the State FMTs and implement corrective actions to assure maximum productivity and reduce exposure to their team members.

1.5 Joint Information Center

Planning Issue Number: 43-03-5.b.1-P-05

Condition: The state plan is inconsistent with the county plan and the public information materials regarding reception centers. Both the county plan and the public information materials identify Ocean County College and Jackson Middle School as reception centers. However, the state plan does not.

Additionally, the public information materials still references EBS instead of EAS.

Regarding the public information materials concerning pets, the statement implies that if you do not have a cage or carrier for your pet you cannot evacuate with them. For those individuals who do not own a cage/carrier, they may choose not to evacuate. However, the ARC has an agreement with the US Humane Society and with other entities (veterinary associations) to provide such assistance at reception centers.

Possible Cause: Updates on current information not included in all plans.

Reference: NUREG-0654, G.1

Effect: Information is inconsistent, which may cause confusion of the public.

Recommendation: Obtain current information and update the plans, public information materials, and the pre-scripted EAS messages needed.