



Federal Emergency Management Agency

Region V

536 South Clark Street, 6th Floor

Chicago, IL 60605-1521

February 27, 2002

Mr. James Dyer, Regional Administrator
U.S. Nuclear Regulatory Commission Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Dear Mr. Dyer:

Enclosed is the Final Report for the Radiological Emergency Preparedness (REP) Plume Pathway Exercise conducted on November 28, 2001 for the Byron Generating Station. Copies of this report were transmitted to the Nuclear Regulatory Commission's (NRC) National Office, the Federal Emergency Management Agency (FEMA) National Office, and the State of Illinois.

There were no Deficiencies. Two (2) Areas Requiring Corrective Action (ARCAs) pertaining to Mobilization, and Direction and Control, respectively, were assigned to the State of Illinois. One ARCA, pertaining to Implementation of Protective Actions for Special Populations – Schools was assigned to Ogle County. Two prior unresolved ARCAs for the State, pertaining to Direction and Control, and Emergency Information – Media, respectively, and one prior unresolved ARCA for Ogle County, pertaining to Public Instructions and Emergency Information, were resolved during this exercise. A detailed discussion of the new ARCAs can be found in Part IV of the final report.

Based on the results of the November 28, 2001 exercise, the offsite radiological emergency response plans and preparedness for the State of Illinois and Ogle County, site-specific to the Byron Generating Station, can be implemented. These plans are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public.

Therefore, Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Illinois and Ogle County, granted on September 12, 1984, remains in effect.

If you have any questions, please let me know or have a member of your staff contact Woodie Curtis at (312) 408-5528.

Sincerely,

A handwritten signature in black ink, appearing to read "E. G. Buikema", is written over a horizontal line.

Edward G. Buikema
Regional Director

Enclosure



Final Exercise Report

Byron Generating Station

Licensee: **Exelon Nuclear**

Exercise Date: **November 28, 2001**

Report Date: **February 27, 2002**

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION V
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

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I. EXECUTIVE SUMMARY

On November 28, 2001, an exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Byron Generating Station by the Federal Emergency Management Agency (FEMA), Region V. 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.

The most recent exercise at this site was conducted on August 25, 1999. The qualifying emergency preparedness exercise was conducted on November 15, 1983.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Illinois the risk county of Ogle participated along with the State Government.

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 on the part of all the participants were evident during this exercise.

This report contains the final evaluation of the biennial exercise and the evaluation of the following out-of-sequence activities: Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees; Monitoring and Decontamination of Emergency Worker Equipment; Temporary Care of Evacuees; and the two EV-2 demonstrations.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies and three Areas Requiring Corrective Action (ARCAs) identified as a result of this exercise. Two of the ARCAs for Criteria 1.a.1 (Mobilization) and 1.c.1 (Direction and Control), respectively, were assigned to the State of Illinois. One ARCA for Criterion 3.c.2 (Implementation of Protective Actions for Special Populations – Schools) was assigned to Ogle County. Also, two prior ARCAs for Objectives 3 (Direction and Control) and 12 (Emergency Information – Media), respectively, assigned to the State of Illinois during the 2001 Clinton Power Station Biennial Radiological Emergency Preparedness (REP) Exercise, and one prior ARCA for Objective 11 (Public Instructions and Emergency Information), assigned to Ogle County during the 1999 Byron Generating Station Biennial REP Exercise, were corrected during 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 governments' 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 RERPs and procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of the 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 V Regional Assistance Committee (RAC) which is chaired by FEMA.

Formal submission of the RERPs for the Byron Generating Station to FEMA Region V by the State of Illinois and involved local jurisdictions occurred on March 28, 1984. Formal approval of these RERPs was granted by FEMA on September 12, 1984, under 44 CFR 350.

A REP exercise was conducted on November 28, 2001 by FEMA Region V to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Byron Generating 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 V 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;
- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- the new FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology and Alert and Notification; Notices," as published in the Federal Register Notice dated September 12, 2001.

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 criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues only format. This section also contains: (1) descriptions of the ARCAs assessed during this exercise, recommended corrective action, 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 November 28, 2001, exercise to test the offsite emergency response capabilities in the area surrounding the Byron Generating Station. This section of the exercise report includes 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.

A. Plume Emergency Planning Zone Description

The Byron Generating Station, Units 1 and 2, is located on a 1,288-acre site in Rockville Township, approximately 3.7 miles south-southwest of the City of Byron and 2.2 miles east of the Rock River in Ogle County, Illinois. The site is situated approximately in the center of the county in a predominantly agricultural area, with cash grain crops of corn and soybeans.

The plume pathway EPZ consists of a circle with the Byron Station as the center point. The EPZ extends approximately 10 miles outward in all directions from the Byron Station. In the event of a serious accident at the Byron Station, the plume exposure EPZ will be the area in which intensive efforts will be made to notify and protect residents and transient populations from exposure to radiation. This EPZ includes Ogle County, a small portion of Winnebago County and the following municipalities: Byron, Oregon, Stillman Valley, Leaf River, Mount Morris, and Davis Junction.

The population distribution in the 10-mile EPZ surrounding the Byron Station is relatively low. Based on the 2000 census, the City of Byron has a population of 2,917, Oregon has a population of 4,060, Stillman Valley has a population of 1,048, Leaf River has a population of 555, Mount Morris has a population of 3,013, and Davis Junction has a population of 491; for a total of 12,084 residents. The 12 Sub-areas (Numbered: 10, 12, 14, 17, 23, 25, 27, 28, 39 and 40) located in the Byron Station EPZ have a total population of 27,297 per the 2000 census.

Recreational facilities outside the municipalities include the 273-acre Lowden Memorial State Park located three and one-half miles southwest of the Byron Station. This park has facilities for hiking, camping, picnicking, boating and fishing. The 1,800-acre Castle Rock State Park and Nature Preserve is located seven miles south-southwest of the Byron Station. This park has facilities for picnicking, fishing, boating, and hiking along the 600-acre Nature Preserve. The 2,225-acre Lowden-Miller State Forest is approximately six and one-half miles southwest of the Byron Station. This facility has trails for hiking (year-round), skiing (seasonal) and hunting (October to December; 40 hunters per day).

Major transportation facilities in the Byron Station EPZ are limited to Illinois Route 72, three and one-half miles north of the station, Illinois Route 2, two and one-half miles west of the station, and Illinois Route 64, four and one-half miles south of the station. Three rail lines also run through the Byron Station EPZ: the Illinois and Missouri (I & M) Rail Link line is four and one-half miles north of the station, the Burlington Northern and Santa Fe Railway Company line is five and one-half miles south of the station, and the Illinois Railnet line is nine and one-half miles east of the station.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Byron Generating Station exercise on November 28, 2001.

STATE OF ILLINOIS

- Illinois Commerce Commission (ICC)
- Illinois Department of Agriculture (IDOA)
- Illinois Department of Corrections (IDOC)
- Illinois Department of Natural Resources (IDNR)
- Illinois Department of Nuclear Safety (IDNS)
- Illinois Department of Public Health (IDPH)
- Illinois Department of Transportation-Aeronautics (IDOT-A)
- Illinois Department of Transportation-Highways (IDOT-H)
- Illinois Emergency Management Agency (IEMA)
- Illinois Environmental Protection Agency (IEPA)
- Illinois Army National Guard (ILARNG)
- Illinois State Police (ISP)
- Office of the State Fire Marshal (OSFM)
- Secretary of State Police (SOS)

RISK JURISDICTION

OGLE COUNTY

- Ogle County Board Chairman
- Ogle County Coroner
- Ogle County Emergency Services and Disaster Agency (ESDA)
- Ogle County Health Department
- Ogle County Highway Department
- Ogle County Sheriff's Office
- Byron Fire Department
- Davis Junction/Village Trustee
- Dixon Rural Fire Department

OGLE COUNTY (continued)

Lee County Sheriff's Department
Lee/Ogle Regional Office of Education
Leaf River Fire Department
Mount Morris Police Department
Oregon Police Department
Sauk Valley Community College
Winnebago County Sheriff's Office

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
Exelon Nuclear
Radio Station WRHL AM/FM
Rockford Register Star

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Byron Generating Station exercise held on November 28, 2001. Also included are times notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: November 28, 2001, Byron Generating Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		ILLINOIS STATE EOC	STATE FORWARD COMMAND POST	REAC	OGLE COUNTY EOC	JOINT PUBLIC INFORMATION CENTER	EMERGENCY OPERATIONS FACILITY
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0812	0818	0941	0818	0934	0834	0816
Site Area Emergency	0948	0953	1012	1001	1009	0958	0951
General Emergency	1028	1039	1104	1043	1055	1038	1028
Simulated Radiation Release Started	1130	1137	1145	1131	1144	1140	1137
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0830	0845	0910	1009	0918	0835
Declaration of State of Emergency		1105	1156	1045	N/A	1135	N/A
Exercise Terminated		1250	1300	1258	1255	1305	1305
1st Early Precautionary Action Decision: Confine milk-producing animals on stored feed and protected water out to 10-miles.		1009	N/A	1007	1009	1020	N/A
1st Siren Activation		N/A	N/A	N/A	1020	N/A	N/A
1st EBS Activation		N/A	N/A	N/A	1024	N/A	N/A
1st Protective Action Decision: Continue confining milk-producing animals on stored feed and protected water out to 10-mile radius. Evacuate Sub-areas 17, 19, and 23.		1055	N/A	N/A	1103	1052	N/A
2nd Siren Activation		N/A	N/A	N/A	1105	N/A	N/A
2nd EBS Activation		N/A	N/A	N/A	1106	N/A	N/A
2nd Protective Action Decision: Continue confining milk-producing animals on stored feed and protected water out to 10-mile radius. Evacuate Sub-areas 17, 19, 23, 10 and 40.		1211	N/A	N/A	1218	1225	N/A
3rd Siren Activation		N/A	N/A	N/A	1220	N/A	N/A
3rd EBS Activation		N/A	N/A	N/A	1227	N/A	N/A
KI Administration Decision: To administer KI to Emergency Workers and immobile populations.		1142	1145	1132	1145	N/A	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 November 28, 2001, exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile plume pathway EPZ surrounding the Byron Generating Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise objectives contained in FEMA-REP-14, REP Exercise Manual, September 1991. Detailed information on the exercise criteria 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 criteria from FEMA-REP-14 which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria 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. SUMMARY RESULTS OF EXERCISE EVALUATION

DATE AND SITE: November 28, 2001, Byron Generating Station

JURISDICTIONS/FUNCTIONAL ENTITY	1. a. 1	1. b. 1	1. c. 1	1. d. 1	1. e. 1	2. a. 1	2. b. 1	2. b. 2	2. c. 1	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
STATE OF ILLINOIS																																	
State Emergency Operations Center	A	M	A	M	M		M	M	M							M	M													M			
Radiological Emergency Assessment Center	M	M	M	M	M	M	M		M																								
State Forward Command Post	M	M	M	M	M												M									M							
Traffic and Access Control					M							M	M			M	M																
Emergency Operations Facility	M		M	M																													
Joint Public Information Center	M		M																											M			
Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees		M			M																										M		
Monitoring and Decontamination of Emergency Worker Equipment					M																											M	
Temporary Care of Evacuees		M																															M
Ogle County EOC Liaison			M					M				M	M																				
RISK JURISDICTIONS																																	
OGLE COUNTY																																	
County Emergency Operations Center	M	M	M	M	M			M	M			M	M	M	A	M	M									M				M			
Initial Notification Point	M			M																													
EBS Radio Station WRHL																										M				M			
Traffic and Access Control					M							M	M			M																	
Byron School District					M							M			M																		
Oregon School District					M							M			M																		

LEGEND: M = Met (No Deficiency or ARCA(s) assessed)
D = Deficiency assessed

A = ARCA(s) assessed (Not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises

Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (Reason explained in Section IV.B.)

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 criteria demonstration status.

- **Met** - Listing of the demonstrated exercise criteria 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 criteria 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 criteria 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 criteria 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 which were resolved in this exercise and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** - Descriptions of ARCAs assessed during prior exercises which 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 which are discussed in this report.

- A **Deficiency** is defined in FEMA-REP-14 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 in FEMA-REP-14 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.
- **Criteria Number** - A three-digit number corresponding to the criteria numbers in FEMA-REP-14.
- **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.

1. STATE OF ILLINOIS

1.1 State Emergency Operations Center

- a. **MET:** Criteria 1.b.1, 1.d.1, 1.e.1, 2.b.1, 2.b.2, 2.c.1, 3.d.1, 3.d.2, and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criteria 1.a.1 and 1.c.1

Issue No.: 09-01-1.a.1-A-01

Condition: The notification of the declaration of an Alert ECL by the Utility was received at 0815 hours, and verified by the State at 0824 hours. However, the State did not notify Ogle County Officials of the Alert in a timely manner. Therefore, the County did not initiate mobilization efforts until after 0934 hours, when the State NARS message #1 was received.

Possible Cause: The EOC Manager did not follow his procedures in transmitting NARS message #1 to Ogle County in a timely fashion after verification.

Reference: Communications procedures: IPRA Volume 1, Chapter 4, Page 1 section A, paragraph 4 (NUREG-0654; A.1.d, E.1, E.2.). After notifications of an accident from the Utility via the NARS, IEMA will consult with IDNS, and then reactivate the NARS to notify local governments.

Effect: Due to the delay in receiving notification of the Alert ECL, Ogle County was not able to begin to mobilize staff and activate the County EOC until 0934 hours, which was one hour and 10 minutes after the Alert ECL had been verified by the State.

Recommendation: Ensure that appropriate Counties are notified of all ECLs in a timely manner.

Schedule of Corrective Actions: In the future, the Illinois Emergency Management Agency will notify the EPZ counties in a timely manner in accordance with the Illinois Plan for Radiological Accidents. This will be demonstrated during the March 2002 LaSalle exercise.

Issue No.: 09-01-1.c.1-A-02

Condition: A significant delay occurred in notifying Ogle County of the Alert ECL by means of a State NARS message. Although the State EOC was notified

by the Utility of the Alert ECL at 0815 hours, the State EOC did not notify Ogle County of the Alert until 0934 hours.

Possible Cause: The State EOC Manager indicated that this delay was due to the fact that the REAC did not initially agree that it was necessary to notify Ogle County. The State plan indicates that after notification of an accident from the Utility via the NARS, IEMA will consult with IDNS, and then reactivate the NARS to notify local governments.

Reference: Communications procedures IPRA Volume 1, Chapter 4, Section A, page 1, paragraph 4. (NUREG-0654; A.1.d, E.1, E.2)

Effect: The delay in notifying Ogle County of the Alert ECL resulted in a delay in the Ogle County activating its EOC and mobilizing its staff.

Recommendation: Ensure that appropriate counties are notified of verified ECLs in a timely manner. Also, provide additional training to EOC staff to ensure that timely notification will be accomplished.

Schedule of Corrective Actions: In the future, the Illinois Emergency management Agency will notify the EPZ counties in a timely manner in accordance with the Illinois Plan for Radiological Accidents. This will be demonstrated during the March 2002 LaSalle exercise.

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED:**

Issue No.: 13-01-03-A-01

Description: In several instances, information recorded and provided to the Counties on State NARS forms was incorrect and/or incomplete. (NUREG-0654: E.5)

Corrective Action Demonstrated: Appropriate information was properly recorded on the NARS message forms. The information provided to Ogle County in State NARS messages accurately reflected the plant status information provided by the Utility, as well as State protective actions. This corrects ARCA No. 13-01-03-A-01 from the 2001 Clinton exercise.

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

1.2 Radiological Emergency Assessment Center

a. **MET:** Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, and 2.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**

1.3 State Forward Command Post

- a. **MET: Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.d.2, and 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**

1.4 Traffic and Access Control

- a. **MET: Criteria 1.e.1, 3.a.1, 3.b.1, 3.d.1, and 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**

1.5 Emergency Operations Facility

- a. **MET: Criteria 1.a.1, 1.c.1, and 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**

1.6 Joint Public Information Center

- a. **MET: Criteria 1.a.1, 1.c.1, and 5.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED:**

Issue No.: 13-01-12-A-02

Description: The JPIC staff preparing the press releases has access to copies of Emergency Broadcast System (EBS) messages; however, a number of items addressed in the EBS messages were not discussed or expanded upon. These items included:

- Precautionary: EBS Message #1, milk-producing animals in 10 miles of the Clinton Power Station should be confined and placed on stored feed and protected water.
- Special Populations: EBS Message #2, bedridden individuals, for special arrangements to evacuate, are to call the DeWitt County Health Department at (217) 935-3427; individuals who are in need of transportation are to proceed to one of the locations: the City Park for the Village of DeWitt or the Fire Station for Weldon.

During the press briefing, the JPIC staff did not provide the media with the following:

- A phone number where the media can call for information.
- A phone number for individuals who have special concerns related to their ability to follow protective action decisions.
- Location identified for individuals who may need transportation to evacuate, and a public inquiry phone number as requested by the media.
- A press release was not issued for the General ECL.

Corrective Action Demonstrated: Timely and pertinent information was disseminated to the media through briefings and press releases. They also ensured

that information provided through Emergency Broadcast Station messages was addressed in the media briefings and by the availability of hardcopy messages for the media to review.

Hard copy messages of the State press release concerning the agriculture advisory were available for the media to review. Special populations, if needing assistance, were advised to call their local agencies or 911. A Public Inquiry hotline (800-247-5010) was established by IEMA in Springfield, Illinois, at 1100 hours. This number was furnished to the media in the media briefings. Press releases and Emergency Broadcast Station messages were distributed at appropriate times throughout the exercise.

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

1.7 Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

- a. **MET: Criteria 1.b.1, 1.e.1, and 6.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**

1.8 Monitoring and Decontamination of Emergency Worker Equipment

- a. **MET: Criteria 1.e.1 and 6.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**

1.9 Temporary Care of Evacuees

- a. **MET:** Criteria 1.b.1 and 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

1.10 Ogle County EOC Liaison

- a. **MET:** Criteria 1.c.1, 2.b.2, 3.a.1, and 3.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

2. RISK JURISDICTION

2.1 OGLE COUNTY

2.1.1 County Emergency Operations Center

- a. **MET:** Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 5.a.1, and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 3.c.2

Issue No.: 09-01-3.c.2-A-03

Condition: The Ogle County Superintendent of Educational Services (SES) should have notified the District 220 Superintendent in order for the Lorado Taft Field Campus to begin evacuation procedures once the protective action decision to evacuate sub-area 19 was received.

Possible Cause: Procedure 11 does not have a list of schools by sub-area for easy reference by the SES representative.

Reference: IPRA Volume VI, Ogle County Procedures, Attachment 5.

Effect: By not having the schools listed by sub-area in Procedure 11, the SES overlooked contacting the District 220 Superintendent to begin evacuating the Lorado Taft Field Campus.

Recommendation: The SES should include a copy of page 51, of the Ogle County Plan, which provides a breakdown of schools within specific sub-areas. This would be a useful tool in procedure 11 of the SES's checklist to insure that all schools within affected sub-areas are contacted with vital information in a timely manner.

Schedule of Corrective Actions: The State, Ogle County ESDA and the Superintendent of Educational Services are working on a procedural change to ensure that all schools are notified at the appropriate time. This revised procedure will be implemented during the 2003 Byron exercise.

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED:**

Issue No.: 09-99-11-A-01

Description: The Illinois Department of Transportation (IDOT) identified a traffic impediment on the primary evacuation route, State Route 2. An alternative evacuation route, State Route 72, was recommended by IDOT. However, although both the primary and alternative evacuation routes were described in Emergency Alert System (EAS) Message #3, the second shift Emergency Operations Center (EOC) staff was not aware of the alternative route.

Corrective Action Demonstrated: Two impediments to evacuation were promptly removed after coordination between the Ogle County EOC, Illinois State Police, and IDOT. Information about the impediments was included on logs and status boards to support staff's knowledge of the incident.

f. **PRIOR ARCAs – UNRESOLVED: NONE**

2.1.2 Initial Notification Point

- a. **MET: Criteria 1.a.1 and 1.d.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- g. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.3 EBS Radio Station WRHL AM/FM

- a. **MET: Criteria 5.a.1 and 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**

2.1.4 Traffic and Access Control

- a. **MET: Criteria 1.e.1, 3.a.1, 3.b.1, and 3.d.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- e. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.5 Byron School District

- a. **MET:** Criteria 1.e.1, 3.a.1, and 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

2.1.6 Oregon School District

- a. **MET:** Criteria 1.e.1, 3.a.1, and 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

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

ACP	Access Control Point
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
CAP	Civil Air Patrol
CD V	Civil Defense – Category V
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DOE	U.S. Department of Energy
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
ESDA	Emergency Services and Disaster Agency
GE	General Emergency
ICC	Illinois Commerce Commission
IDA	Illinois Department of Agriculture
IDHS	Illinois Department of Human Services
IDMA	Illinois Department of Military Affairs
IDNR	Illinois Department of Natural Resources
IDNS	Illinois Department of Nuclear Safety
IDOT	Illinois Department of Transportation
IDPH	Illinois Department of Public Health
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
IPRA	Illinois Plan for Radiological Accidents
IREACH	Illinois Radio Emergency Aid Channel
ISP	Illinois State Police
JIC	Joint Information Center
JPIC	Joint Public Information Center

KI	Potassium Iodide
mR	milliroentgen
mR/h	milliroentgen per hour
NARS	Nuclear Accident Reporting System
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980</i>
NWS	National Weather Service
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAO	Public Affairs Official
PAR	Protective Action Recommendation
PIO	Public Information Officer
PNS	Prompt Notification System
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RAFT	Radiological Assessment Field Team
RDO	Radiological Defense Officer
REA	Radioactive Emergency Area
REAC	Radiological Emergency Assessment Center
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
R/h	Roentgen(s) per hour
RO	Radiological Officer
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SFCP	State Forward Command Post
SOP	Standard Operating Procedure
TCP	Traffic Control Point
TL	Team Leader
TLD	Thermoluminescent Dosimeter

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Byron Generating Station exercise on November 28, 2001. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

DOT/FHA	- U.S. Department of Transportation/Federal Highway Administration
FEMA	- Federal Emergency Management Agency
ICF	- ICF Consulting
USDA	- U.S. Department of Agriculture

<u>RAC CHAIR/EXERCISE DIRECTOR</u>	<u>NAME</u>	<u>ORGANIZATION</u>
RAC Chair	W. Curtis	FEMA
Exercise Director	W. King	FEMA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
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STATE OF ILLINOIS

Emergency Operations Center	C. Sturghill (TL)	FEMA
	R. Rospenda	ICF
	R. Smith	ICF
Radiological Emergency Assessment Center	R. Grundstrom	ICF
State Forward Command Post - Traffic and Access Control	G. Naskrent	FEMA
	A. Birman	FEMA
Emergency Operations Facility	K. Flynn	ICF
Joint Public Information Center	S. Bailey	FEMA
	A. Lookabaugh	ICF
Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees	S. Bailey	FEMA
	R. Rospenda	ICF
Monitoring and Decontamination of Emergency Worker Equipment	K. Flynn	ICF
	R. Rospenda	ICF
Temporary Care of Evacuees	A. Birman	FEMA
State Liaison – Ogle County	R. Smith	ICF

OGLE COUNTY

Emergency Operations Center	C. Crackel (TL)	FEMA
	J. McSpaden	DOT/FHA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Emergency Operations Center (continued)	R. Graham	USDA
	R. Smith	ICF
Joint Public Information Center	A. Lookabaugh	ICF
EBS Radio Station WRHL	C. Lloyd	FEMA

APPENDIX 3

EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criteria which were scheduled for demonstration in the Byron Generating Station exercise on November 28, 2001, and the extent-of-play agreement.

The exercise objectives, contained in FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991, represent a functional translation 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.

Because the exercise objectives 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.

A. Exercise Criteria

Listed below are the specific radiological emergency preparedness criteria scheduled for demonstration during this exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

CRITERION 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and facilities in a timely manner.

CRITERION 1.b.1: Facilities are sufficient to support the emergency response.

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.

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.

CRITERION 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

CRITERION 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure 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.

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.

CRITERION 2.b.2: A decision-making process involving consideration of 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).

CRITERION 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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.

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 for emergency workers and institutionalized individuals (not the general public) is maintained.

CRITERION 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.

CRITERION 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

CRITERION 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

CRITERION 3.d.2: Impediments to evacuation are identified and resolved.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

CRITERION 5.a.1: Activities associated with primary alerting and notification of the public are completed in as 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.

CRITERION 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

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.

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.

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.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the State of Illinois in preparation for the Byron Generating Station exercise on November 28, 2001. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each exercise criterion listed in Subsection A of this appendix.

STATE OF ILLINOIS CRITERIA:

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and facilities in a timely manner.

The State Emergency Operations Center (EOC) will be fully activated. The IEMA Emergency Response Telecommunicator (ERT) will implement procedures for notification of IEMA staff as defined in IEMA SOPs. State agency liaisons will be contacted and will report to the State EOC.

The State Forward Command Post (SFCP) in Hillcrest will be activated with State district and regional personnel. IEMA personnel will be pre-positioned in the Byron Station area and dispatched to the Ogle County EOC, SFCP, the Morrison JPIC and the EOF.

The IDNS Telecommunicator will implement notification procedures in accordance with IDNS SOPs. REAC will be fully activated. RAFT will be simulated in Springfield. IDNS personnel will be pre-positioned in the Byron Station vicinity for response to the Ogle County EOC, SFCP, JPIC, EOF and TSC.

The pre-positioned State staff will begin exercise play at the following facilities no earlier than the Alert ECL: SFCP, JPIC, EOF, TSC and Ogle County EOC.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This criterion will be demonstrated in State facilities through the use of maps, status boards and displays as appropriate.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of overall response effort for which they are responsible.

The ability to direct and control emergency response activities will be demonstrated at the State EOC, REAC, the SFCP, the RAFT Simulation Cell and the JPIC. Coordination will be demonstrated between the State EOC, REAC, the SFCP, the RAFT Simulation Cell, the JPIC, the EOF and the county EOC.

Criterion 1.d.1: At least two communication systems are available and operate properly and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

IEMA will use a variety of communication systems [Nuclear Accident Reporting System (NARS), telefax, commercial telephone, radio] to communicate with other organizations and locations.

IDNS (intra/inter-agency) communications capabilities will be demonstrated in accordance with appropriate SOPs (e.g. NARS, telefax, commercial telephone, radio).

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

The State of Illinois will demonstrate the use of equipment, maps and displays to support emergency operations. The use of dosimetry and KI will be demonstrated at the SFCP.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure 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.

The ability to make the decision to recommend the use of KI to emergency workers will be demonstrated by IDNS in REAC.

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.

REAC will evaluate the licensee information and complete independent dose projections based on that information and simulated field monitoring data. REAC will make an evaluation of the data and make a protective action recommendation to the State EOC.

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

The coordination to determine protective action recommendations (PARs) based upon available shelters, evacuation time estimates and other relevant factors will be demonstrated between the State EOC and REAC.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

The coordination to determine protective action recommendations (PARs) based upon available shelters, evacuation time estimates and other relevant factors will be demonstrated between the State EOC and REAC.

The ability to make the decision to recommend the use of KI to institutionalized persons will be demonstrated by IDNS in REAC.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures and manage radiological exposure to emergency workers in accordance with the plan 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.

This will be demonstrated during the traffic and access control demonstration at the SFCP. The Illinois State Police will bring dosimetry packets to the SFCP from their district headquarters.

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 for emergency workers and institutionalized individuals (not the general public) is maintained.

This will be demonstrated during the traffic and access control demonstration. The Illinois State Police will bring dosimetry packets to the SFCP from their district headquarters.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

This will be demonstrated by the State through coordination between the SFCP and the Ogle County EOC, in accordance with the Byron Station EPZ Traffic and Access Control Procedures. The Illinois State Police (ISP) will staff one traffic and access control post during the exercise. The post for the demonstration will be selected by the ISP during the exercise based on exercise play. The staffing of the remaining State posts will be simulated.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

This will be demonstrated through discussions at the SFCP between the Illinois State Police and Illinois Department of Transportation. A message will be impacted by a Controller that will drive this demonstration. State personnel will deal with the impediment by calling for equipment, discussing its estimated time of arrival, etc.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-site emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include:

1. Identification of the state or local government organization and the official with the authority for providing the alert signal and instructional message,
2. Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant,
3. Reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency,
4. A closing statement asking the affected and potentially affected population to stay tuned for additional information.

The State's role in demonstrating this criterion is limited to transmitting the State's protective action recommendation (PAR) to the counties and monitoring the instructional messages provided to the public by the counties. This monitoring will be accomplished by the SFCP through the IEMA representatives in the Ogle County EOC.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

This will be demonstrated at the JPIC in coordination with the State EOC, REAC, SFCP, and the Ogle County EOC. IEMA and IDNS personnel will be present at the JPIC to coordinate with the utility staff. Media briefings will be conducted at the JPIC.

A rumor control phone bank will be operated by the State during the exercise.

EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

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.

This criterion will be demonstrated at Sauk Valley Community College near Dixon during the week of the exercise. Two portal monitors will be set up during the demonstration. The appropriate number of evacuees will be processed to meet the 20% in 12 hours requirement.

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.

This criterion will be demonstrated at Sauk Valley Community College near Dixon during the week of the exercise. Two portal monitors will be set up during the

demonstration. The ability to decontaminate emergency workers, equipment and vehicles will be fully demonstrated by IDNS RAFT personnel.

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. 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.

This criterion will be demonstrated at Sauk Valley Community College near Dixon during the week of the exercise. Local organizations responsible for operating a reception and congregate care center will be present to demonstrate this criterion.

OGLE COUNTY CRITERIA:

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and facilities in a timely manner.

Ogle County intends to fully activate the Emergency Operations Center (EOC) in Rochelle, Illinois. The County will implement notification procedures as defined in IPRA-Byron. Representatives from the EPZ municipalities, Winnebago County Sheriff's Department, IEMA, IDNS, ISP and the utility will not be pre-positioned in the County EOC.

An evaluator will be positioned at the County Sheriff's Communications Center (initial warning point) at the start of the exercise.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This objective will be demonstrated in the Ogle County EOC through the use of maps, status boards and displays as appropriate.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of overall response effort for which they are responsible.

Decision-making will be demonstrated at the State EOC and Ogle County EOC. Coordination of decisions and emergency activities will be demonstrated between Ogle

County, the State EOC, SFCP and the JPIC, and between the County and municipalities within the EPZ.

Criterion 1.d.1: At least two communication systems are available and operate properly and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

Ogle County will use NARS, commercial telephone, radio and telefax to communicate with departments and agencies at other locations.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Ogle County will adequately demonstrate the ability to support operations through the use of maps, status boards and other displays as appropriate. The use of dosimetry and KI will be demonstrated during the traffic and access control demonstration and the EV-2 interviews.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

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

The State of Illinois will make protective action recommendations to Ogle County officials in the County EOC. The Ogle County officials will make the final decision regarding what protective actions will be recommended to the public.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

The State of Illinois will make protective action recommendations to Ogle County officials in the County EOC. The Ogle County officials will make the final decision regarding what protective actions will be recommended to the special population groups.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures and manage radiological exposure to emergency workers in accordance with the plan 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.

Ogle County will demonstrate this criterion by close coordination with IDNS and timely dissemination and exchange of information within the County Dosimetry Control Officer network. Exercise messages will be injected which will ensure the opportunity to demonstrate this criterion in the County EOC.

This criterion will also be demonstrated during the EV-2 interviews and the traffic and access control demonstration.

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 for emergency workers and institutionalized individuals (not the general public) is maintained.

If notified by the State of Illinois to distribute and administer KI, Ogle County officials will discuss the issuance of KI to emergency workers and immobile populations, as a voluntary measure, and will notify the municipalities of the State's recommendation.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

This will be demonstrated by Ogle County through the simulated implementation of the appropriate procedures. The appropriate officials will coordinate transportation and receiving facilities for special populations. The public will not be involved in the demonstration.

The Mobility Impaired List will be available for inspection in the County EOC during the exercise.

Criterion 3.c.2: OROs/school officials decide upon and implement protective actions for schools.

Ogle County officials will demonstrate this capability through the simulated implementation of the appropriate procedures in the County EOC. EV-2 interviews will be conducted in the Byron and Oregon school districts during the week of the exercise.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Coordination between Ogle County agencies designated to provide traffic and access control will be exhibited in the County EOC. A Sheriff's deputy will be available during the exercise to demonstrate the staffing of one post. The post for the demonstration will be selected by Ogle County during the exercise based on exercise play. The staffing of the remaining posts will be simulated.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

The Ogle County EOC staff will demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation. A message will be injected by the Controller that will drive this demonstration. County personnel will deal with the

impediment by identifying the equipment needed, discussing its estimated time of arrival, etc.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-site emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include:

1. Identification of the state or local government organization and the official with the authority for providing the alert signal and instructional message,
2. Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant,
3. Reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency,
4. A closing statement asking the affected and potentially affected population to stay tuned for additional information.

Ogle County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout the 10-mile plume pathway EPZ in a timely manner after their decision to activate the alert and notification system to implement protective action recommendations (PARs).

This capability will be demonstrated through the simulated activation of the Byron Station EPZ Prompt Notification System as defined in IPRA-Byron. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise.

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station. The local radio station (WRHL) will be contacted during the first alert and notification sequence. An evaluator will be positioned at the radio station during the exercise to monitor the initial message.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

Ogle County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Byron. Contact with the radio station will be simulated for each alert and notification sequence following the initial sequence.

The ability to provide information to the media will be demonstrated by Ogle County through briefings held at the Ogle County media briefing location. If real media are not present for the briefings, the controller and observers will serve as mock media. Evaluators will not serve as mock media.

The ability to deal with rumors will be demonstrated by Ogle County through coordination between the County EOC and the JPIC. The Ogle County EOC controller will inject exercise messages which will ensure the opportunity to demonstrate this criterion. County officials will investigate and address "rumors." If appropriate, the "rumors" will be coordinated between State and County officials in the County EOC and the JPIC.

County emergency broadcast messages and news releases, if issued, will be faxed to the JPIC.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events -- Exercise Scenario -- which was used as the basis for invoking emergency response actions by OROs in the Byron Generating Station exercise on November 28, 2001.

This exercise scenario was submitted by the State of Illinois and Exelon Nuclear and approved by FEMA Region V on November 20, 2001.

During the exercise, controllers from the State of Illinois gave "inject messages," containing scenario events and/or relevant data, to those persons or locations who would normally receive notification of such events. These inject messages were the method used for invoking response actions by OROs.

SCENARIO SUMMARY

- 0745 Initial conditions/weather forecast message to players.
- 0800 An ALERT is declared at Byron Station.
- 0815 Exelon notifies IEMA and IDNS telecommunicators of the ALERT via NARS.
 - IEMA Telecommunicator verifies the NARS message.
 - IDNS Telecommunicator activates the IDNS response team.
 - IDNS Duty Officer contacts the Byron Station Shift Engineer.
 - IEMA Telecommunicator notifies IEMA personnel of the ALERT per SOP.
 - IEMA may dispatch liaisons to the County EOC, Forward Command Post, JPIC and EOF, if appropriate.
 - IEMA notifies Governor's Office of the ALERT. (Simulated)
 - IEMA may activate the State EOC, if appropriate.
 - IEMA Telecommunicator notifies appropriate State agencies of the ALERT.
 - IEMA notifies FEMA of the ALERT. (Simulated)
- 0830 IEMA Telecommunicator notifies Ogle County of the ALERT via NARS.

Approx.
Time

Event/Anticipated Response

Ogle County telecommunicator completes and verifies the NARS message.

Ogle County telecommunicator notifies County officials and municipalities of the ALERT per SOP.

Ogle County may activate the EOC, if appropriate.

Municipal telecommunicators complete and verify the NARS message.

Municipal telecommunicators notify officials of the ALERT per SOP.

0935

A SITE AREA EMERGENCY is declared at Byron Station.

0950

Exelon notifies IEMA and IDNS telecommunicators of the SITE AREA EMERGENCY via NARS.

IEMA Telecommunicator verifies the NARS message.

REAC contacts the Byron Station Shift Engineer.

State EOC is activated if not previously activated.

IEMA notifies the Governor's Office and requests that a representative report to the State EOC. (Simulated)

IEMA dispatches liaisons to the Ogle County EOC, Forward Command Post, JPIC and EOF, if not previously dispatched.

IEMA notifies FEMA of conditions. (Simulated)

IEMA notifies State agencies (Simulated):

- Illinois State Police
- IDOT/Division of Highways
- IDOT/Division of Aeronautics
- IDNR
- Illinois National Guard
- ICC
- American Red Cross
- IDPH
- IEPA
- Corrections

<u>Approx. Time</u>	<u>Event/Anticipated Response</u>
	<ul style="list-style-type: none"> - Office of the State Fire Marshal - others as appropriate
	IDNS contacts Federal and State support agencies. (Simulated)
	REAC provides an update to the State EOC Liaison and County EOC Liaison.
	REAC provides an update to the IDNS PIO.
1005	<p>IEMA notifies Ogle County of the SITE AREA EMERGENCY via NARS.</p> <p>Ogle County telecommunicator completes and verifies the NARS message.</p> <p>Ogle County telecommunicator notifies County officials and municipalities of the SITE AREA EMERGENCY per SOP.</p> <p>Ogle County EOC is activated if not previously activated.</p> <p>Ogle County implements public notification procedures, if appropriate. (Simulated)</p> <p>Municipal telecommunicators complete and verify the NARS message.</p> <p>Municipal telecommunicators notify officials per SOP.</p> <p>Dosimetry is issued to emergency personnel, EOC staff and exposure records are completed.</p>
<hr/>	
1035	A GENERAL EMERGENCY is declared at Byron Station.
1050	<p>Exelon notifies IEMA and IDNS telecommunicators of the GENERAL EMERGENCY via NARS. Protective actions are recommended.</p> <p>IEMA Telecommunicator verifies the NARS message.</p> <p>The State EOC and REAC evaluate the protective action recommendation.</p> <p>A recommendation is made to the Governor. The Governor recommends that protective actions be implemented.</p>