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August 8, 2003

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555  
Attn: Mr. Robert Clark (Mail Stop O-8-E9)  
Project Directorate I-1

Subject: Revision to Emergency Plan Implementing Procedures  
R.E. Ginna Nuclear Power Plant  
Docket No. 50-244

Gentlemen:

In accordance with 10 CFR 50.4(b)(5), enclosed are revisions to Ginna Station Emergency Plan Implementing Procedures (EPIP).

We have determined, per the requirements of 10 CFR 50.54(q), that the procedure changes do not decrease the effectiveness of our Nuclear Emergency Response Plan.

Very truly yours,

Richard J. Watts  
Manager, Nuclear Training Department

Enclosures

xc: USNRC Region 1 (2 copies of letter and 2 copies of each procedure)  
Resident Inspector, Ginna Station (1 copy of letter and 1 copy of each procedure)  
RG&E Nuclear Safety and Licensing (1 copy of letter)  
Dr. Robert C. Mecredy (2 copies of letter only)

RJW/jtw

AC45

PROCEDURE

REVISION NUMBER

EPIP 1-9

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EPIP 2-1

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EPIP 4-1

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EPIP 4-3

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**ROCHESTER GAS AND ELECTRIC CORPORATION**

**GINNA STATION**

**CONTROLLED COPY NUMBER** 23

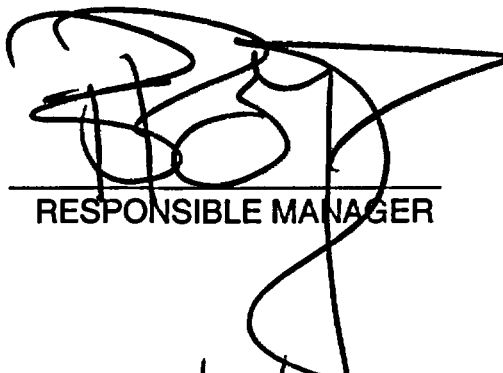
**PROCEDURE NO.** EPIP 1-9

**REV. NO.** 25

**TECHNICAL SUPPORT CENTER ACTIVATION**

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\_\_\_\_\_  
**RESPONSIBLE MANAGER**

08/08/03  
\_\_\_\_\_  
**EFFECTIVE DATE**

**CATEGORY 1.0**

**THIS PROCEDURE CONTAINS** 9 **PAGES**

## EPIP 1-9

**TECHNICAL SUPPORT CENTER ACTIVATION****1.0      PURPOSE:**

The purpose of this procedure is to designate actions and responsibility of individuals who would report to the Technical Support Center upon a decision to activate at an Alert level or greater.

**2.0      RESPONSIBILITY:**

2.1      The first qualified person to arrive is responsible for initiating this procedure.

2.2      The TSC Director is responsible for activation of the TSC upon arrival.

2.3      The TSC Director becomes the TSC Emergency Coordinator upon assuming Command and Control.

2.4      If the Severe Accident Management Guidelines (SAMG's) are entered, the following TSC staff assume SAM duties:

Decision Maker	-	TSC Emergency Coordinator
Evaluators	-	TSC Operations Manager, TSC Technical Manager, TSC Nuclear Assessment

**3.0      REFERENCES:**

3.1      Developmental References

3.1.1      Nuclear Emergency Response Plan

3.1.2      NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

3.2      Implementing References

3.2.1      EPIP 1-10, OSC Activation

3.2.2      EPIP 1-11, Survey Center Activation

3.2.3      EPIP 3-3, Immediate Entry

3.2.4      EPIP 1-5, Notification

3.2.5      EPIP 5-7, Emergency Organization

3.2.6      EPIP 1-0, Ginna Station Event Evaluation and Classification

3.2.7      EPIP 2-13, Iodine and Particulate Activity Determination from Air Samples

3.2.8      RP-JC-AMS4, Routine Operation of the Eberline AMS-4 Air Monitoring System

**4.0      PRECAUTIONS:**

As noted in this procedure.

**5.0      PREREQUISITES:**

5.1      An Alert, Site Area Emergency, or General Emergency has been declared in accordance with ETIP 1-0, Ginna Station Event Evaluation and Classification.

5.2      The TSC could be activated anytime at the discretion of the TSC Director/Emergency Coordinator.

**6.0      ACTIONS:**

**6.1      Personnel Responding from Offsite**

6.1.1      Personnel shall report to the TSC using normal security site access procedures.

6.1.2      If a hazardous condition prevents normal site access (e.g., release of radioactivity, security event, HAZMAT), responders may be directed by Community Alert Network to report to the designated staging area (Ontario Fire Department Exempt Hall, located on Route 104 between Route 350 and Knickbocker Road) or, upon arrival to the site, informed by Security to report to the Survey Center or designated location. Refer to ETIP 3-3, Immediate Entry, for site access.

**6.2      Personnel Arriving at TSC**

\*\*\*\*\*

**CAUTION**

**FRISK BEFORE ENTERING IF RP DETERMINES THAT FRISKING IS REQUIRED.**

\*\*\*\*\*

**NOTE:            DEPENDING ON THE NUMBER OF ARRIVING PERSONNEL, PERFORM STEPS CONCURRENTLY TO MINIMIZE ACTIVATION TIME.**

6.2.1      Place your name under appropriate emergency position on magnetic organization chart and display associated job function badge.

6.2.2      If you leave the TSC, contact the RP/Chemistry Manager to determine if an electronic dosimeter is required.

6.2.3      Perform responsibilities as described in ETIP 5-7, Emergency Organization.

**6.3      TSC Director perform the following:**

6.3.1      Ensure minimum staff listed below is available to activate the TSC:

a.      Emergency Coordinator

- b. Radiation Protection/Chemistry Manager
- c. Dose Assessment Manager
- d. Technical Assessment Manager
- e. Operations Assessment Manager
- f. Maintenance Assessment Manager
- g. Communicator
- h. Survey Center Manager

6.3.2 If position is not staffed, notify personnel to report to the assigned duty location. Qualified responders are found in their position checklist in EPIP 5-7. The status of the call-in process can be monitored by obtaining a report from the incoming fax machine at 30 minutes into the event.

6.3.3 Ensure Technical Assessment Manager establishes ERDS link to NRC within one hour per duties in EPIP 5-7.

6.3.4 Receive briefing from the Shift Supervisor on Plant conditions.

6.3.5 Obtain notification forms sent by the Control Room from the TSC fax machine. Use these forms and brief response staff on plant conditions using Attachment 2 (TSC meeting agenda).

\*\*\*\*\*

### CAUTION

**IF DOSE RATES EXCEEDS 50 mR/HR, CONSIDER RELOCATION OF TSC PERSONNEL.**

**IF AIR SAMPLE RADIOIODINE ACTIVITY IS GREATER THAN  $1\text{E-}8 \mu\text{Ci/cc}$ , CONSIDER RELOCATION OF TSC PERSONNEL.**

\*\*\*\*\*

6.3.6. Obtain results of radiation survey and air activity of TSC.

6.3.7 If TSC is uninhabitable, relocate the following personnel to the Shift Supervisor's office:

- a. Operations Assessment Manager
- b. Radiation Protection/Chemistry Manager
- c. TSC Director/Emergency Coordinator
- d. Technical Manager
- e. Nuclear Assessment

Direct remaining personnel to the Survey Center or alternate location as directed by the TSC Director/Emergency Coordinator.

6.3.8 Obtain status of manpower from managers.

**NOTE: THE TSC DIRECTOR ASSUMES THE ROLE AND TITLE OF TSC EMERGENCY COORDINATOR WHEN TSC TAKES COMMAND AND CONTROL.**

6.3.9 Assuming Command and Control

6.3.9.1 Ensure minimum activation staff (Step 6.3.1) is available to assume command and control.

6.3.9.2 Confer with Emergency Coordinator (Control Room Shift Supervisor) on shifting command and control of the emergency from the Control Room to the TSC. Normally, when command and control is transferred, the TSC assumes:

- a. Overall direction for the emergency
  - 1. Emergency Classification
  - 2. Protective Action Recommendations
- b. Notifications to New York State, Wayne and Monroe counties
- c. Dose Assessment
- d. Notifications to the NRC

However, certain conditions may warrant transferring a given responsibility area (or communications) at different times, per the discretion of the Emergency Coordinator (Shift Supervisor and TSC Director).

6.3.9.3 Brief the TSC on plant status using Attachment 2 for meeting agenda and inform them that command and control will be assumed at the agreed upon time.

6.3.9.4 At agreed upon time, call the Control Room (Emergency Coordinator) and state that, unless he has any objections, the TSC is assuming command and control at this time.

6.3.9.5 Announce to the TSC that the TSC has assumed command and control of the emergency.

- 6.3.9.6 Upon assuming command and control, direct the Administrative/Communications Manager to provide RECS line updates every 30 minutes using EPIP 1-5, Attachment 3.
- 6.3.9.7 Notify EOF that the TSC has assumed command and control and to make preparations to transfer command and control to the EOF.
- 6.3.9.8 Conduct PORC meetings as required to support emergency operations. *PORC meeting minutes are stored under S:\Forums\Forums\PORC\PORC minutes then choose year of interest.*
- 6.3.9.9 If the TSC will be activated for more than 12 hours, direct managers to complete Attachment 1 for continuous staffing.
- 6.3.10 Shift Turnover
  - 6.3.10.1 If a turnover to another shift is needed, contact the personnel identified on Attachment 1 and inform them of the time and location to assemble.
  - 6.3.10.2 When the responders for the next shift have arrived, have them perform a detailed turnover with the person they are relieving. Have them log the turnover in their log book.
  - 6.3.10.3 When the individual turnovers are complete, have the on-coming crew perform a briefing for each other using the standard meeting agenda (Attachment 2). The off-going crew should also be at the briefing to ensure that the information that is shared is correct and complete.
- 6.4 TSC Managers perform the following:
  - 6.4.1 Check communications at work location.
  - 6.4.2 Determine status of manpower and report to the Emergency Coordinator.
  - 6.4.3 Radiation Protection/Chemistry Manager check survey results and air activity for TSC and report to TSC Director/Emergency Coordinator.

\*\*\*\*\*

### CAUTION

**IF AIR SAMPLE RADIOIODINE ACTIVITY IS GREATER THAN  $1\text{E-}8 \mu\text{Ci/cc}$ ,  
INFORM THE EMERGENCY COORDINATOR.**

**IF DOSE RATES EXCEEDS 50 mR/HR, CONSIDER RELOCATION OF TSC  
PERSONNEL.**

\*\*\*\*\*

- 6.4.3.1 If TSC is uninhabitable, the following personnel shall relocate to the Shift Supervisor's office:
  - a. Operations Assessment Manager
  - b. Radiation Protection/Chemistry Manager



- c. TSC Director/TSC Emergency Coordinator
- d. Technical Manager
- e. Nuclear Assessment

6.4.3.2 Direct remaining personnel to the Survey Center or other locations as directed by the Emergency Coordinator.

6.5 Radiation Protection Technician perform the following:

6.5.1 Place step-off pad and frisker at each entrance to the TSC.

6.5.2 Start up TSC AMS-4 per RP-JC-AMS4.

\*\*\*\*\*

# CAUTION

IF AIR SAMPLE RADIOIODINE ACTIVITY IS GREATER THAN 1E-8  $\mu\text{Ci/cc}$ ,  
INFORM THE RADIATION PROTECTION/CHEMISTRY MANAGER AND  
THE EMERGENCY COORDINATOR.

\*\*\*\*\*

6.5.3 Take an air sample in accordance with EPIP 2-13, Iodine and Particulate Activity Determination from Air Samples, and report results to Radiation Protection/Chemistry Manager.

6.5.4 Perform a survey of the TSC.

\*\*\*\*\*

# CAUTION

IF DOSE RATES EXCEEDS 50 mR/HR, INFORM THE RADIATION  
PROTECTION/CHEMISTRY MANAGER AND EMERGENCY  
COORDINATOR.

\*\*\*\*\*

6.5.5 Report results of all TSC surveys to Radiation Protection/Chemistry Manager

6.5.6. Monitor the TSC radiation and contamination levels and air activity at the discretion of the Radiation Protection/Chemistry Manager.

6.6 TSC Support Personnel

6.6.1 Perform job functions in accordance with EPIP 5-7, Emergency Organization.

7.0 Attachments

- 1. TSC Continuous Staffing Schedule
- 2. TSC Meeting Agenda

**TSC CONTINUOUS STAFFING SCHEDULE**

(Consult EPIP 5-7 position checklists for qualified personnel and phone numbers to fill positions.)

	Shift A	Shift B
	_____ hrs. to _____ hrs.	_____ hrs. to _____ hrs.
POSITION	Date:	Date:
Emergency Coordinator*		
Assistant Emergency Coordinator		
Radiation Protection/Chemistry* Manager		
Dose Assessment Manager*		
Technical Assessment Manager*		
Operations Assessment Manager*		
Maintenance Assessment Manager*		
Communicator*		
Survey Center Manager*		
Admin./Comm. Manager		
Security Manager		
TSC Survey Team Coordinator		
Dose Assessment Support		
Messenger/Status Board Keepers		

**Note:** All positions need not be filled. Select those needed as a resources for the event and the minimum staff required for TSC activation.

\* Minimum staff

**TSC CONTINUOUS STAFFING SCHEDULE**

(Consult EPIP 5-7 position checklists for qualified personnel and phone numbers to fill positions.)

	Shift A	Shift B
	_____ hrs. to _____ hrs.	_____ hrs. to _____ hrs.
POSITION	Date:	Date:
RP/Chemistry Technicians		
Nuclear Assessment		
I&C Electrical Assessment		
Mechanical/Hydraulic Assessment		
Computer Analysts		
Discipline Planners		
Manager of OSC Satellite		
Maintenance Personnel		
Assistant Survey Center Manager		
OSC Assignees		
Inventory Control Supervisor/Analyst		
Inventory Control Support Personnel		
OSC Director		

**Note:** All positions need not be filled. Select those needed as a resources for the event and the minimum staff required for TSC activation.

\* Minimum staff

Meeting Date: \_\_\_\_\_ Time: \_\_\_\_\_

**NOTE: IF THE EOF IS ACTIVATED OR ACTIVATING, ATTEMPT TO INCLUDE NUCLEAR OPERATIONS MANAGER, OR AN ASSISTANT, IN THE TSC BRIEFING VIA CONFERENCE CALL.**

1. Emergency Coordinator
  - Purpose of Meeting
  - Classification Level
  - Time Classification Declared
  - Brief Event Description (use EAL reference manual)
  - Injury/Fire Status
2. Operations Assessment Manager
  - Plant activities in progress
  - Safety Related Equipment Status
  - Operational needs required for plant safety
  - Operational manpower needs
3. Technical Assessment Manager
  - Status of Plant Conditions
  - Core Conditions
  - Core Cooling capabilities
4. Maintenance Assessment Manager
  - Equipment out of service
  - Status of repairs in progress
  - Manpower needs required to support Maintenance
  - Supplies and Materials needed to support Maintenance activities
5. Dose Assessment Manager
  - Offsite areas of concern (downwind areas affected)
  - Protective Actions Recommended
  - Releases in progress
  - Status of radiological conditions outside the plant fence
  - Brief status of Survey Team activity
6. Administrative/Communications Manager
  - Status of notifications to State and Counties
  - Status of notifications to NRC
7. Security Manager
  - Status of accountability of plant personnel
  - Status of Site Security
  - Status of search and rescue operations
8. RP/Chemistry Manager
  - Status of TSC habitability
  - Status of radiological concerns inside the plant fence
  - Status of PASS operation and availability
  - Status of exposure to plant personnel (Ops, Maintenance, RP)
9. EOF Concerns
10. Review of Open Items

Please write on these pages. New pages will be provided after each use.

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. EPIP 2-1

REV. NO. 21

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PROTECTIVE ACTION RECOMMENDATIONS

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TECHNICAL REVIEW



RESPONSIBLE MANAGER

08/08/03  
EFFECTIVE DATE

CATEGORY 1.0

THIS PROCEDURE CONTAINS 15 PAGES

**EPIP 2-1****PROTECTIVE ACTION RECOMMENDATIONS****1.0 PURPOSE:**

- 1.1 The purpose of this procedure is to provide guidance to the Emergency Coordinator or EOF/Recovery Manager in making protective action recommendations to offsite authorities.

**2.0 RESPONSIBILITY:**

- 2.1 The Shift Supervisor, Emergency Coordinator (TSC) or EOF/Recovery Manager is responsible for making protective action recommendations to Wayne County, Monroe County and New York State, depending on command and control status.
- 2.2 The decision to implement any protective actions is solely the responsibility of the local authorities.

**3.0 REFERENCES:****3.1 Developmental References****3.1.1 Nuclear Emergency Response Plan****3.1.2 EPA-400, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (1991)****3.1.3 Evacuation Travel Time Estimates - Ginna Emergency Planning Zone, September 1992.****3.1.4 NUREG/BR - 0150 Response Technical Manual (RTM-93)****3.1.5 Food and Drug Administration (FDA) "Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies", December 2001.****3.1.6 NUREG-1633, "Assessment of the Use of Potassium Iodide (KI) as a Supplemental Public Protective Action During Severe Reactor Accidents".****| 3.1.7 NRC RIS 2003-12 "Clarification of NRC Guidance for Modifying Protective Actions"****3.2 Implementing References****3.2.1 EPIP 1-0, Ginna Station Event Evaluation and Classification**

3.2.2 EPIP 1-5, Notification

3.2.3 EPIP 2-3, Emergency Release Rate Determination

3.2.4 EPIP 2-4, Emergency Dose Projections - Manual Method

3.2.5 EPIP 2-18, Control Room Dose Assessment

3.2.6 EPIP 2-5, Emergency Dose Projections - Personal Computer Method

3.2.7 EPIP 2-6, Emergency Dose Projections - MIDAS Program

4.0 **PRECAUTIONS:**

None

5.0 **PREREQUISITES:**

None.

6.0 **INSTRUCTIONS:**

**NOTE: PROTECTIVE ACTION RECOMMENDATIONS (PARs) WILL ONLY REFLECT RG&E RECOMMENDATIONS, NOT ACTIONS IMPLEMENTED BY OFFSITE OFFICIALS.**

6.1 Obtain the event classification using EPIP 1-0.

6.2 **UNUSUAL EVENT, ALERT and SITE AREA EMERGENCY.**

6.2.1 Report on EPIP 1-5, Attachment 3a, Item 7:

**A. No need for protective actions outside the site boundary.**

6.3 **GENERAL EMERGENCY**

6.3.1 Protective Action Recommendations shall be issued with the initial declaration of a General Emergency.

6.3.2 Using Attachment 1, Page 1 of 2, and the current wind direction, determine the initial ERPAs to be evacuated. The Counties will implement their KI plans for any evacuated ERPA. Any ERPA not evacuated will be sheltered.

6.3.3 Record in EPIP 1-5, Attachment 3a, Item 7 the Protective Actions Recommended.

**NOTE: ONCE AN ERPA HAS BEEN RECOMMENDED TO EVACUATE, THAT RECOMMENDATION WILL CONTINUE. AN ERPA PAR STATUS CANNOT BE CHANGED FROM "EVACUATE" TO "SHELTER".**

**6.3.4** Re-evaluate the PARs based on the following to determine if secondary PARs are required or if initial PARs need to be modified.:

- a. Dose Assessment\*
- b. Survey Team data\*
- c. EPA Protective Action Guidelines (Attachment 2)
- d. Wind shifts

\* = If exposures in non-evacuated areas indicate that evacuation is warranted, use Attachment 1 page 2 of 2 to expand Protective Action Recommendations to an evacuated area of 5 mile radius and 10 miles downwind.

**6.3.5** The Evacuation Travel Time Estimate information (Attachment 3) is used by offsite agencies to determine the correct Protective Action Decision (PAD).

**6.3.6** If the EPA guidelines for evacuation or sheltering are exceeded beyond the 10 mile emergency planning zone and protective actions are required, specify the areas using roads, rivers, bodies of water or town boundaries.

**7.0 ATTACHMENTS:**

- 1. Evacuation Areas by Zones.
- 2. Projected Dose to the Population and Recommended Actions.
- 3. Evacuation Travel Time Estimates.
- 4. Emergency Response Planning Areas (ERPA's).



**EVACUATION AREAS BY ZONES  
PROTECTIVE ACTION RECOMMENDATIONS BY ERPA FOR  
GENERAL EMERGENCY CLASSIFICATION**

Wind From	(Degrees)	Initial Protective Action Recommendations (Evacuation based on 2 mile radius & 5 miles downwind)
N	349 to 11	Evacuate: W (1,2,3) and implement KI plan Shelter: All remaining ERPAs
NNE	12 to 33	Evacuate: W (1,2) M (1) and implement KI plan Shelter: All remaining ERPAs
NE	34 to 56	Evacuate: W (1,2) M (1) and implement KI plan Shelter: All remaining ERPAs
ENE	57 to 78	Evacuate: W (1,2) M (1) and implement KI plan Shelter: All remaining ERPAs
E	79 to 101	Evacuate: W (1,2) M (1) and implement KI plan Shelter: All remaining ERPAs
ESE	102 to 124	Evacuate: W (1) M (1) and implement KI plan Shelter: All remaining ERPAs
SE	125 to 146	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs
SSE	147 to 168	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs
S	169 to 191	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs
SSW	192 to 213	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs
SW	214 to 236	Evacuate: W (1,3) and implement KI plan Shelter: All remaining ERPAs
WSW	237 to 258	Evacuate: W (1,3) and implement KI plan Shelter: All remaining ERPAs
W	259 to 281	Evacuate: W (1,3) and implement KI plan Shelter: All remaining ERPAs
WNW	282 to 303	Evacuate: W (1,2,3) and implement KI plan Shelter: All remaining ERPAs
NW	304 to 326	Evacuate: W (1,2,3) and implement KI plan Shelter: All remaining ERPAs
NNW	327 to 348	Evacuate: W (1,2,3) and implement KI plan Shelter: All remaining ERPAs

EVACUATION AREAS BY ZONES  
PROTECTIVE ACTION RECOMMENDATIONS BY ERPA FOR  
GENERAL EMERGENCY CLASSIFICATION

P 2-1:5  
Attachment 1, Rev, 20  
Page 2 of 2

Wind From	(Degrees)	Initial Protective Action Recommendations (Evacuation based on 2 mile radius & 5 miles downwind)	Secondary Protective Action Recommendations (Evacuation based on 5 mile radius & 10 miles downwind)
N	349 to 11	Evacuate: W (1, 2, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 5, 6, 7) M (1, 2, 4, 5) and implement KI plan Shelter: All remaining ERPAs
NNE	12 to 33	Evacuate: W (1, 2) M (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 6, 7) M (1, 2, 3, 4, 5, 6, 7, 9) and implement KI plan Shelter: All remaining ERPAs
NE	34 to 56	Evacuate: W (1, 2) M (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 7) M (1, 2, 3, 4, 5, 6, 7, 8, 9) and implement KI plan Shelter: All remaining ERPAs
ENE	57 to 78	Evacuate: W (1, 2) M (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 7) M (1, 2, 3, 4, 5, 6, 7, 8, 9) and implement KI plan Shelter: All remaining ERPAs
E	79 to 101	Evacuate: W (1, 2) M (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1, 2, 3, 4, 6, 7, 8, 9) and implement KI plan Shelter: All remaining ERPAs
ESE	102 to 124	Evacuate: W (1) M (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1, 3, 6, 8, 9) and implement KI plan Shelter: All remaining ERPAs
SE	125 to 146	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1) and implement KI plan Shelter: All remaining ERPAs
SSE	147 to 168	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1) and implement KI plan Shelter: All remaining ERPAs
S	169 to 191	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1) and implement KI plan Shelter: All remaining ERPAs
SSW	192 to 213	Evacuate: W (1) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3) M (1) and implement KI plan Shelter: All remaining ERPAs
SW	214 to 236	Evacuate: W (1, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 4) M (1) and implement KI plan Shelter: All remaining ERPAs
WSW	237 to 258	Evacuate: W (1, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 4, 5) M (1) and implement KI plan Shelter: All remaining ERPAs
W	259 to 281	Evacuate: W (1, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 4, 5, 6) M (1) and implement KI plan Shelter: All remaining ERPAs
WNW	282 to 303	Evacuate: W (1, 2, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 4, 5, 6, 7) M (1) and implement KI plan Shelter: All remaining ERPAs
NW	304 to 326	Evacuate: W (1, 2, 3) and implement KI plan Shelter: All remaining ERPAs	Evacuate: W (1, 2, 3, 4, 5, 6, 7) M (1, 2) and implement KI plan Shelter: All remaining ERPAs
NNW	327 to 348	Evacuate: W (1, 2, 3) and implement KI plan	Evacuate: W (1, 2, 3, 4, 5, 6, 7) M (1, 2, 5) and implement KI plan

\* Secondary Protective Actions are recommended when dose projections or field teams indicate  $\geq 1$  REM TEDE beyond 5 miles.

**PROJECTED DOSE TO THE POPULATION AND RECOMMENDED ACTIONS**

<b>PROJECTED DOSE TO THE POPULATION</b>	<b>RECOMMENDED ACTIONS</b>	<b>COMMENTS</b>
Total Whole Body < 1 REM*	No planned protective actions. Local authorities or State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	None.
Total Whole Body ≥ 1 REM*  Committed Dose Equivalent to the thyroid (child) ≥ 5 REM.	Conduct evacuation.* Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access. Implement KI plan.	Evacuation (or for some situation, sheltering**) should be initiated at one REM. Seeking shelter would be an alternative if evacuation were not immediately possible.
<b>Project Dose (REM) to Emergency Team Workers</b>		
Total Whole Body 25 REM	Control exposure of emergency team members to these levels except for lifesaving mission. (Appropriate controls for emergency workers include time limitations, respirators and stable iodine.)	None.
Total Whole Body 75 REM	Control exposure of emergency team members performing lifesaving missions to this level. (Control of time of exposure will be most effective.)	None.

**NOTES:**

\* The sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent incurred from all significant inhalation pathways during the early phase.

\*\* Sheltering may be the preferred protective action when it will provide protection equal to or greater than evacuation, based on consideration of factors such as source term characteristics and temporal or other site-specific conditions.

**EVACUATION TRAVEL TIME ESTIMATES**

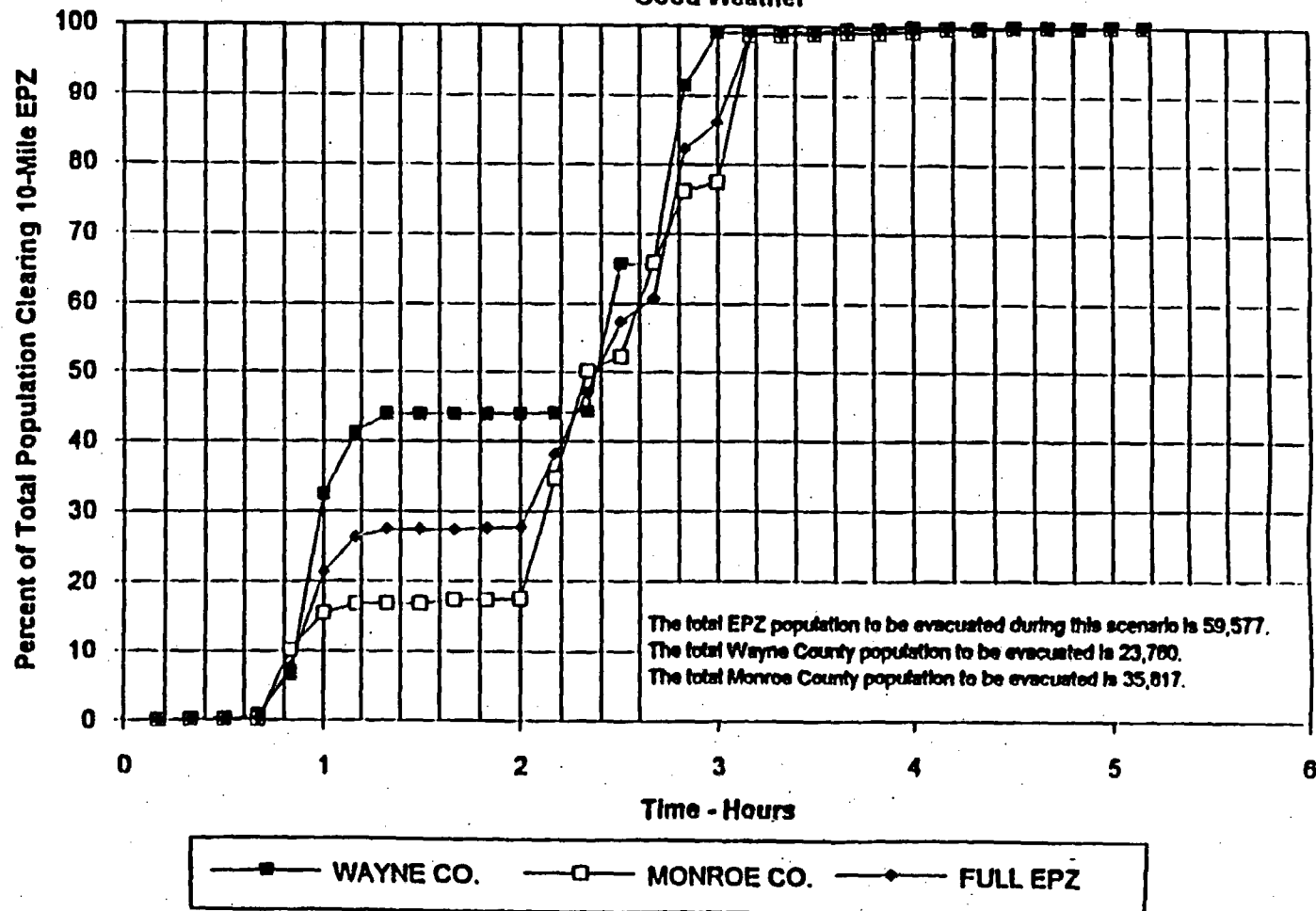
1. When discussing an evacuation, use this attachment to resolve conflicts.
2. 1992 Permanent Resident Population Estimates

<u>EPRA</u>	<u>Population</u>	<u>ERPA</u>	<u>Population</u>
W-1	3207	M-1	2421
W-2	5395	M-2	435
W-3	1200	M-3	258
W-4	2092	M-4	6681
W-5	3855	M-5	1253
W-6	2425	M-6	6943
W-7	4924	M-7	4750
		M-8	3033
		M-9	3285

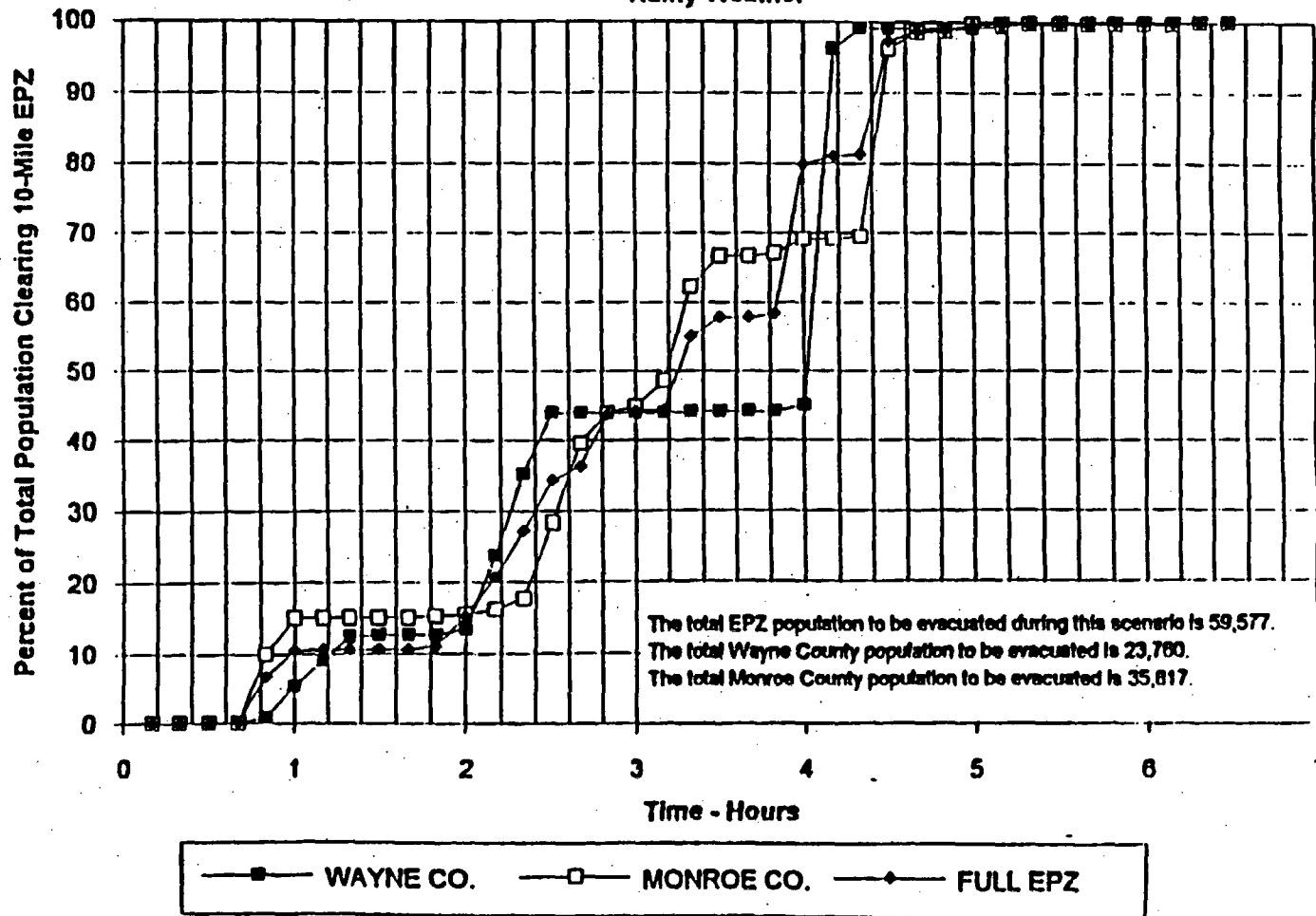
3. Use the following curves to assist in estimating evacuation decisions.

<u>Figure</u>	<u>Weather Conditions</u>	<u>Time of Week</u>
41	Summer, Good Weather	Midweek, Midday
43	Summer, Rainy Weather	Midweek, Midday
45	Summer, Good Weather	Midweek, Evening
49	Summer, Good Weather	Weekend, Midday
53	Winter, Good Weather	Midweek, Midday
55	Winter, Rainy Weather	Midweek, Midday
57	Winter, Snowy Weather	Midweek, Midday

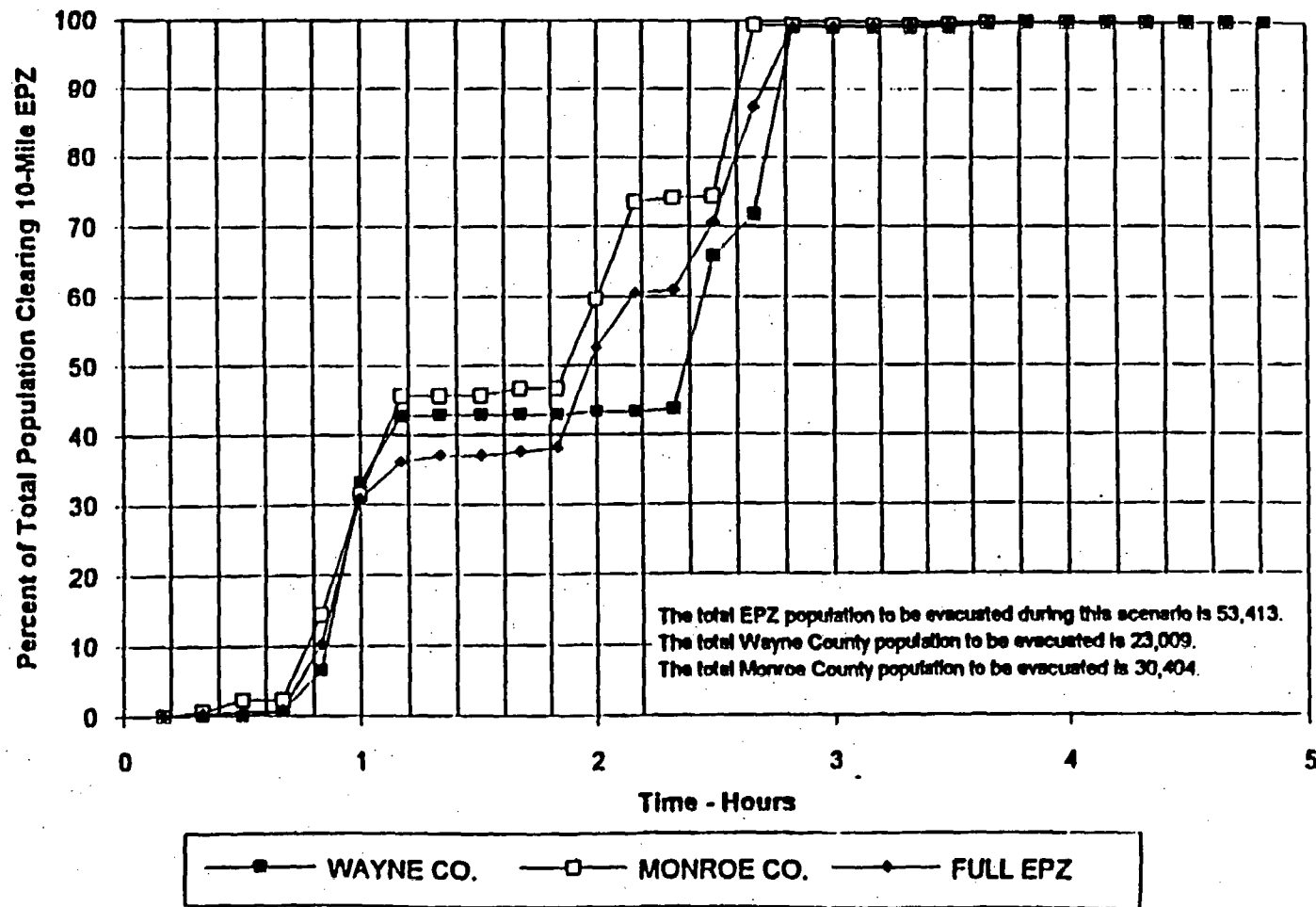
**FIGURE 41**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Summer, Midweek, Midday**  
**Good Weather**



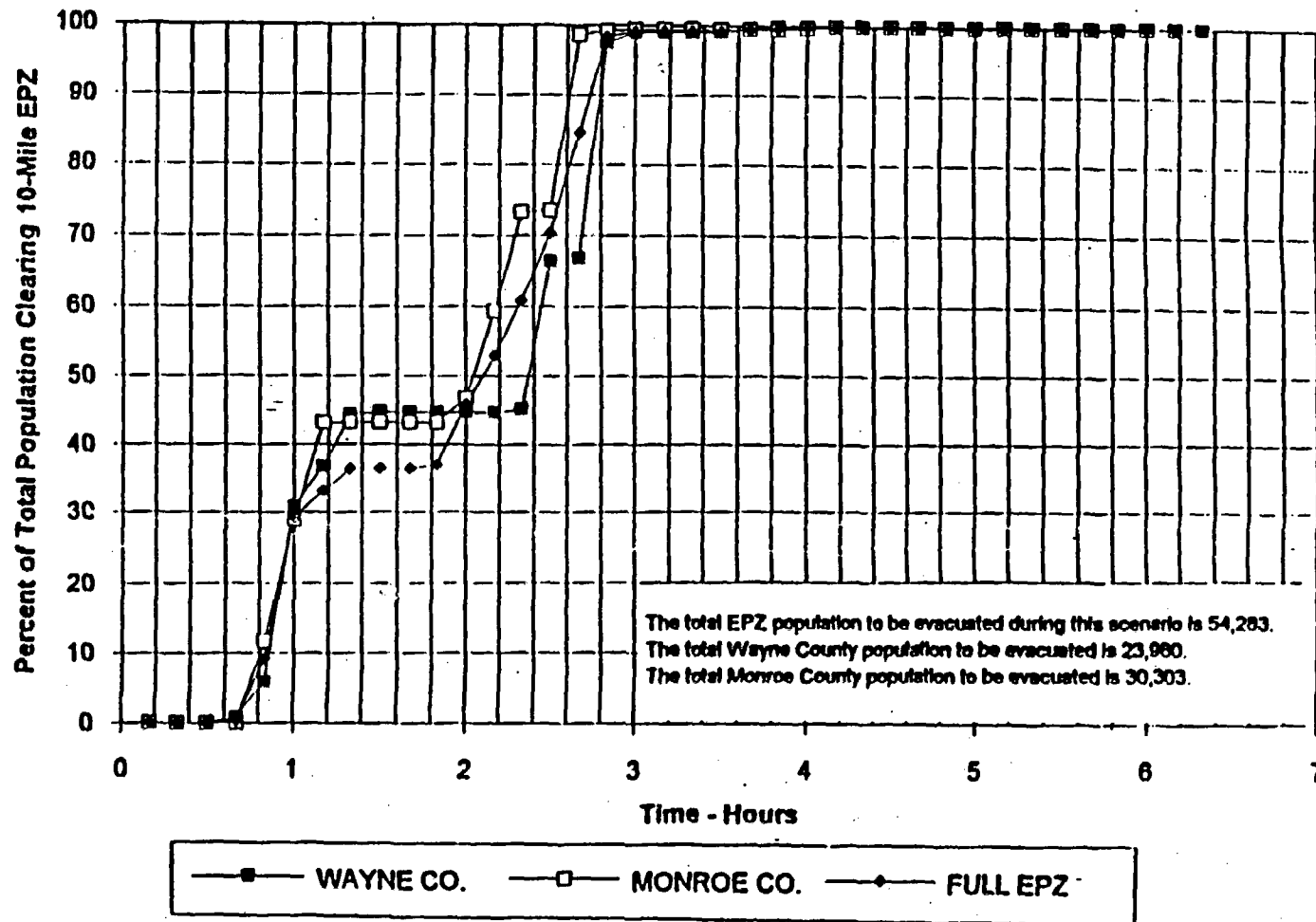
**FIGURE 43**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Summer, Midweek, Midday**  
**Rainy Weather**



**FIGURE 45**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Summer, Midweek, Evening**  
**Good Weather**

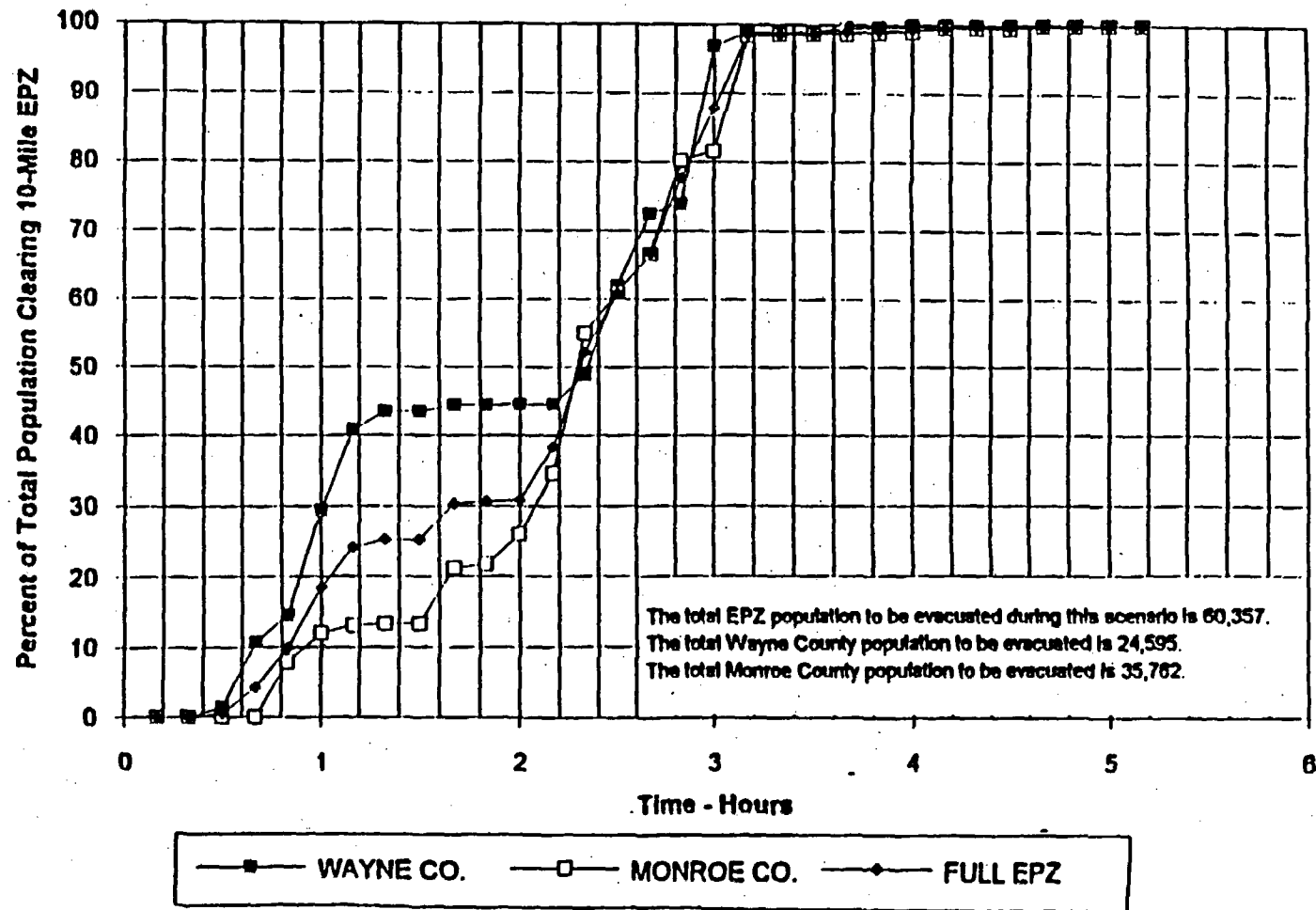


**FIGURE 49**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Summer, Weekend, Midday**  
**Good Weather**

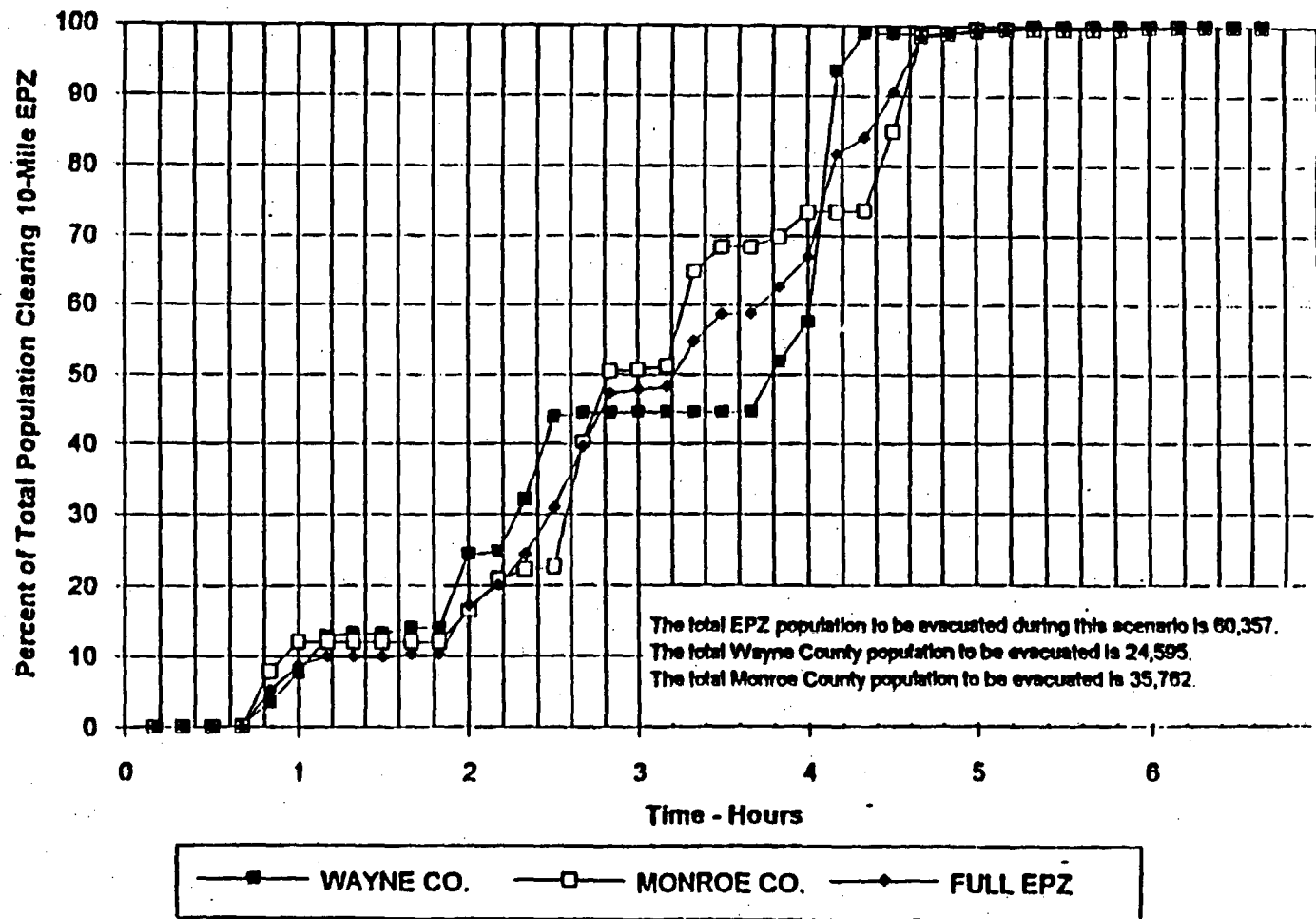




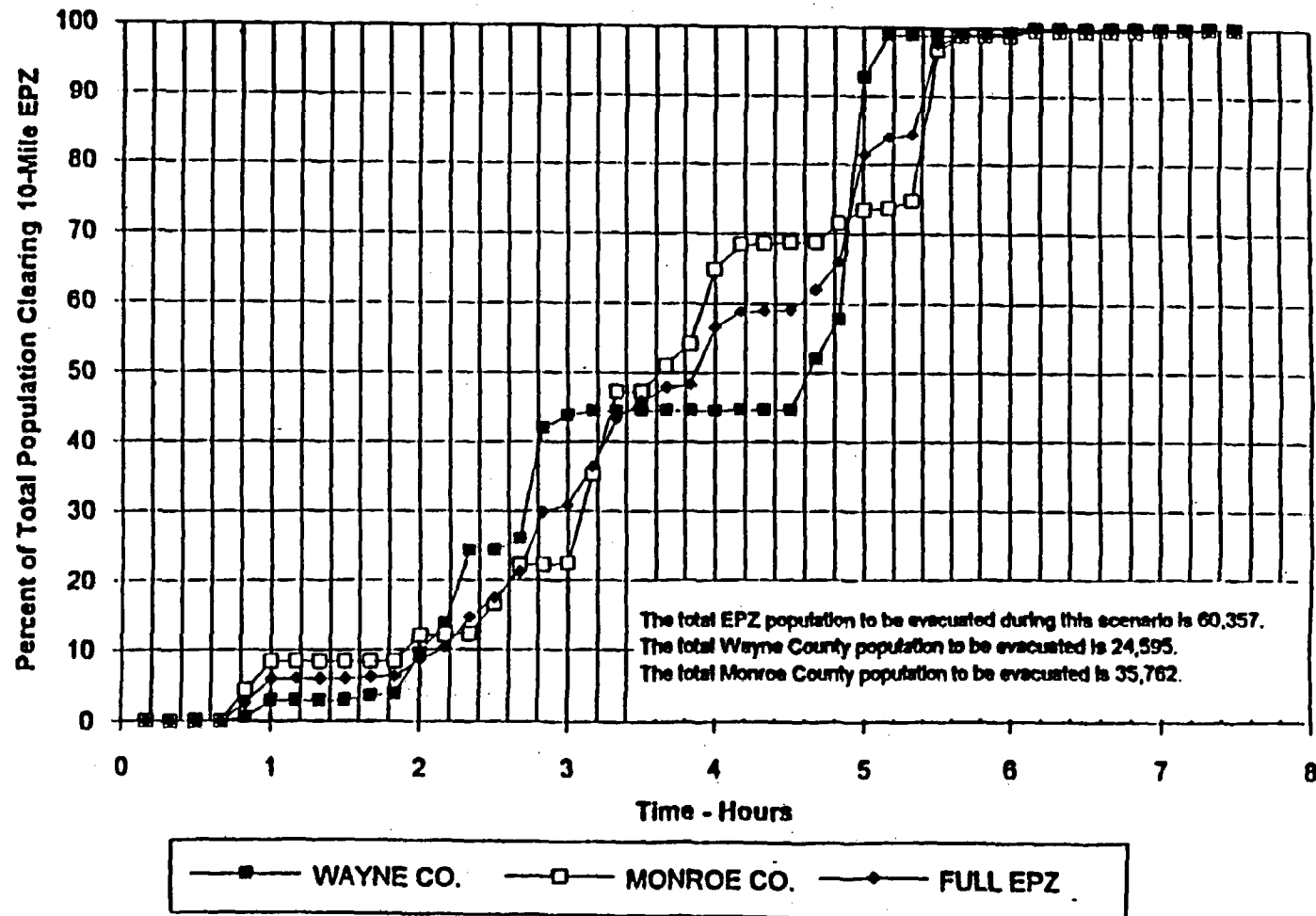
**FIGURE 53**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Winter, Midweek, Midday**  
**Good Weather**

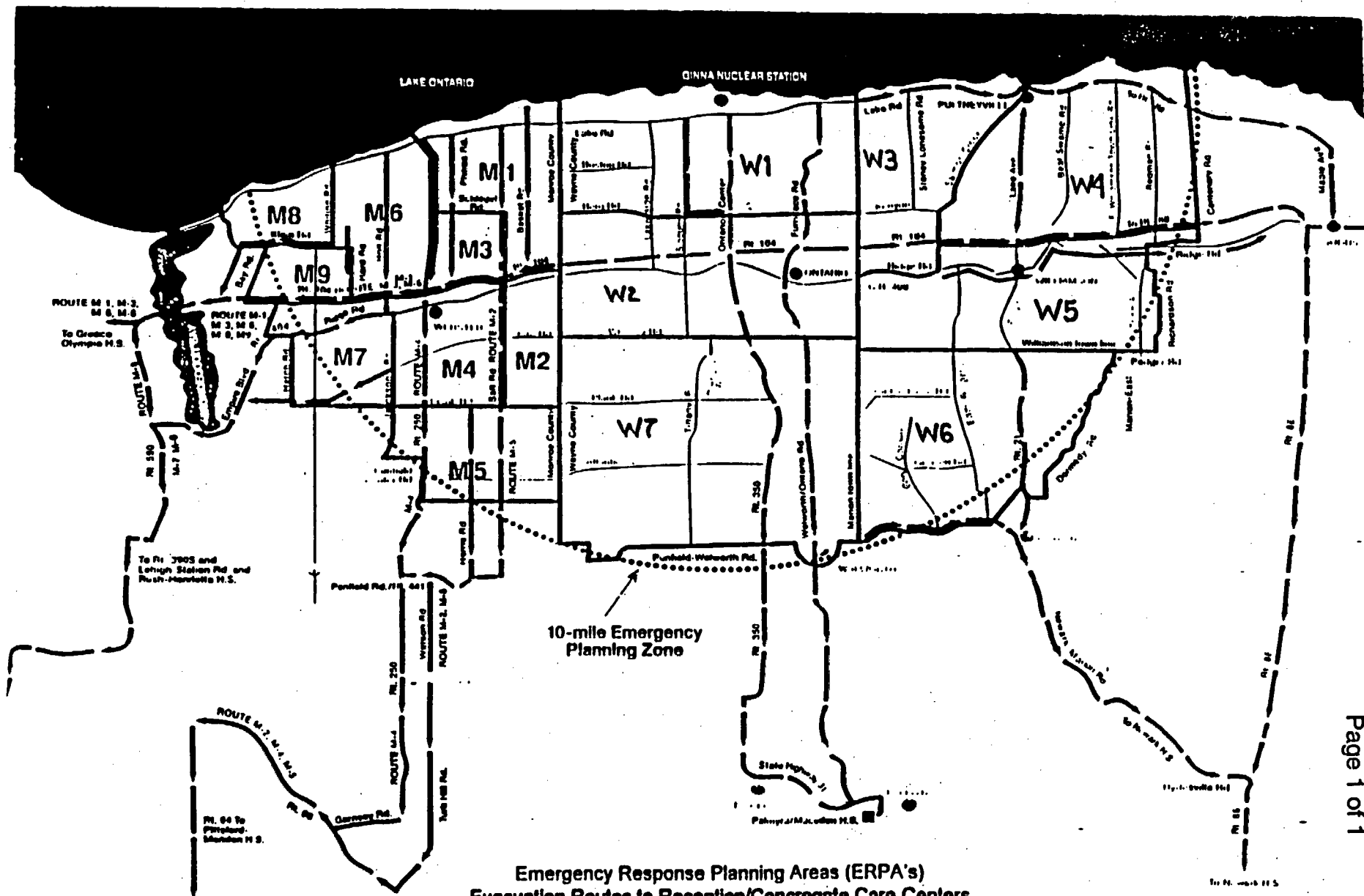


**FIGURE 55**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Winter, Midweek, Midday**  
**Rainy Weather**



**FIGURE 57**  
**Evacuation Travel Time Estimates**  
**Ginna Nuclear Power Station**  
**Winter, Midweek, Midday**  
**Snowy Weather**





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GINNA STATION

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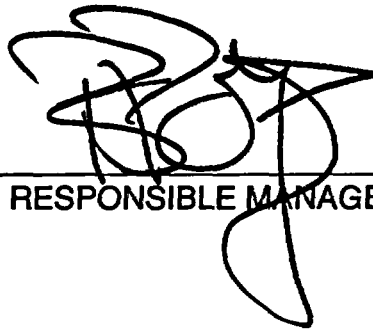
PROCEDURE NO. EPIP 2-4

REV. NO. 14

EMERGENCY DOSE PROJECTIONS - MANUAL METHOD

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RESPONSIBLE MANAGER

08/08/03

EFFECTIVE DATE

Category 1.0

This procedure contains 16 pages

**EPIP 2-4****EMERGENCY DOSE PROJECTIONS - MANUAL METHOD****1.0 PURPOSE**

- 1.1 The purpose of this procedure is to provide a manual method for performing projections of downwind dose rates and doses. Such information is needed to decide upon protective actions to be recommended to limit the exposure of the general public and emergency workers. This procedure is intended as a backup to EPIP 2-5.

**2.0 RESPONSIBILITY**

The TSC or EOF Dose Assessment Manager is responsible for implementing this procedure.

**3.0 REFERENCES****3.1 Developmental References****3.1.1 Nuclear Emergency Response Plan****3.1.2 EPA-400, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (1991)****3.1.3 Ginna UFSAR, Chapter 15****3.1.4 Regulatory Guide 1.109****3.2 Implementing References****3.2.1 EPIP 2-1, Protective Action Recommendations****3.2.2 EPIP 2-2, Obtaining Meteorological Data and Forecasts and their use in Emergency Dose Assessment****3.2.3 EPIP 2-3, Emergency Release Rate Determination****4.0 PRECAUTIONS**

None.

## **5.0 PREREQUISITES**

5.1 The following equipment and data sources are available for use in performing manual dose projections.

5.1.1 Xu/Q tabulated values (Attachment 2)

5.1.2 Wind and temperature indications from the Control Room

5.1.3 Plant Process Computer System (PPCS) - EVENT 2 Report

5.1.4 Control Room Radiation Monitor System (RMD) Panel read-outs of effluent monitors

5.1.5 Personal Computer in TSC and EOF (for obtaining 15 minute meteorological data average from Ginna Primary Weather Tower)

5.1.6 Back-up wind speed and direction indications at Station 13A (accessible from TSC or EOF IBM terminals) and National Weather Service.

## **6.0 ACTIONS**

6.1 Preliminary Downwind Dose Estimates

6.1.1 For initial notifications purposes, a preliminary estimate of potential offsite doses and releases may be obtained by the Control Room using EPIP 2-18.

6.1.2 For calculations performed by the Control Room, TSC and EOF staffs, a 4-hour release duration should be used if the duration is not known. A 4-hour release duration is consistent with the value used by Wayne and Monroe Counties.

6.1.3 If iodine effluent monitor or isotopic data are unavailable, a default value of  $1.0E-4$  should be used to reflect the estimated release concentration ratio of gross iodine to noble gas. (See Attachment 1)

**NOTE: WHEN DATA IS AVAILABLE, CALCULATE AN IODINE-TO-NOBLE GAS RATIO THAT REFLECTS PRESENT CONDITIONS.**

6.1.4 Determine the classification of the emergency with respect to plant releases and site boundary doses from the criteria provided in EPIP 1-0.

6.2 Use of Meteorological and Release Data with EPA Dose Factors Manual Method

**NOTE:** ANY PRELIMINARY DOES ESTIMATES USED AS A BASIS FOR EMERGENCY CLASSIFICATION OR PROTECTIVE ACTION RECOMMENDATIONS SHOULD BE REFINED AS FOLLOWS USING RELEASE MEASUREMENTS AND ACTUAL METEOROLOGICAL SAMPLING DATA AS THEY BECOME AVAILABLE.

- 6.2.1 Meteorological Data (15 min. averages) can be obtained by modem from the MIDAS storage computer in the Meteorological Tower Trailer by using the Personal Computer. (See EPIP 2-2 for instructions.)
- 6.2.2 Determine Pasquill Stability Class (A-G), using Attachment 2, in this procedure.
- 6.2.3 Obtain concentration or particulate, noble gas or iodines and vent flow to determine release rate. Refer to EPIP 2-3 or refer to the listing of effluent monitor calibration factors provided in Attachment 6 to this procedure.

**NOTE:** Standard Release Rates\*

Plant Vent	=	Normal = 77,854 cfm, Emergency = 71,289 cfm
Containment	=	Normal and Emergency = 15,300 cfm
Air Ejector	=	Normal and Emergency = 6.00E2

\* Verify values with Dose Assessment Manager

- 6.2.4 To calculate the downwind concentration of noble gas, particulates or radioiodine, multiply the release rate of radioactivity (Ci/sec) from the plant times the X/Q ( $\text{sec}/\text{m}^3$ ) dispersion coefficient determined in Attachment 1. The resultant concentration will be  $\mu\text{Ci}/\text{cc}$ . Perform these calculations on Attachment 1.
- 6.2.5 Obtain an initial release estimate of release duration from the TSC Emergency Coordinator or Recovery Manager. If this estimate is unavailable, use an initial release duration estimate of 4 hours for dose projection purposes.
- 6.2.6 Whole body gamma dose rate due to noble gas and radioiodine isotopes is estimated using Attachments 3 and 4 and using the listed factor corresponding to the approximate time after shutdown. Multiply this factor times the concentration calculated in Step 6.2.4 to get Rem/hour.



- 6.2.7 Whole body gamma dose is obtained by multiplying the dose rate calculated in Step 6.2.6 times the integrated exposure determined in Step 6.2.5.
- 6.2.8 Thyroid dose rate to the child (actually, the thyroid dose commitment per hour of inhalation) is estimated using Attachment 5 and using the listed factor corresponding to the time after shutdown. Multiply this factor times the concentration calculated in Step 6.2.4 to get Rem/hour. Project dose rates are always determined for child thyroid as they are the most critical population group. To determine the dose or dose rate for adults (which would only be necessary for emergency workers) divide the dose or dose rate for the child by 2.
- 6.2.9 Thyroid dose is found by multiplying the dose rate calculated in step 6.2.8 times the exposure time determined in step. 6.2.5.
- 6.3 Protective Action Recommendations
- 6.3.1 Recommend the appropriate measures for the general public in accordance with EPIP 2-1.
- 6.3.2 Weather forecast information should be considered when planning protective actions. Refer to EPIP 2-2 for instructions to obtain weather forecast information.

## 7.0 ATTACHMENTS

- 1. Dose Assessment Calculation
- 2. Pasquill Stability Class Criteria
- 3. Noble Gas Whole Body Dose Conversion Factors
- 4. Radioiodine Whole Body Dose Conversion Factors
- 5. Radioiodine Thyroid Dose Conversion Factors
- 6. RMS Process Monitor Calibration Factors

**DOSE ASSESSMENT CALCULATION****GENERAL INFORMATION:**

Current Time: \_\_\_\_\_

Shutdown Time: \_\_\_\_\_

Release Start Time: \_\_\_\_\_

Release Vent:      Plant Vent      Air Ejector      ARV or Safety  
                                 Containment Vent      OtherStability Class:      A B C      D      E F G  
                                 Unstable      Neutral      StableVent Flow (CFM): \_\_\_\_\_  
See Step 6.2.3 for flow rates**VENT CONCENTRATION FROM EFFLUENT MONITOR READING:****NOTE: Vent concentration can be input directly from SPING monitors, if available.****Noble Gas (Monitor Number \_\_\_\_\_):**

$$\frac{\text{_____ cpm}}{\text{(count rate)}} \times \frac{\text{_____ } \mu\text{Ci/cc}}{\text{(calib. factor) cpm}} = \frac{\text{_____ } \mu\text{Ci/cc}^*}{\text{(vent cond.)}}$$

**Radiolodine (Montior Number \_\_\_\_\_):**

$$\frac{\text{_____}}{\text{(later counts)}} - \frac{\text{_____}}{\text{(initial counts)}} \div \frac{\text{_____ hours}}{\text{(time between readings)}}$$

$$\frac{\text{_____}}{\text{(\Delta cpm/hr from monitor)}} \times \frac{\text{_____ } \mu\text{Ci/cc}}{\text{(calib. factor)}} = \frac{\text{_____ } \mu\text{Ci/cc}}{\text{(vent cond.)}}$$

**Particulate (Monitor Number \_\_\_\_\_):**

$$\frac{\text{_____ cpm}}{\text{(count rate)}} \times \frac{\text{_____ } \mu\text{Ci/cc}}{\text{(calib. factor) cpm}} = \frac{\text{_____ } \mu\text{Ci/cc}^*}{\text{(vent cond.)}}$$

**Flowrate Conversion (Convert CFM to cc/sec) (Step 6.2.3)**

$$\text{_____ CFM} \times 2.8\text{E4 cc/ft}^3 \times 1 \text{ min/60 sec} = \text{_____ cc/sec}$$

**NOBLE GAS:**

To calculate release RATE in Ci/sec from monitors:

$$\text{_____ } \mu\text{Ci/cc} \times \text{_____ cc/sec} \times 1\text{E-6 } \mu\text{Ci/cc} = \text{_____ Ci/sec}$$

**NOTE: TO PREDICT DOWNWIND CONCENTRATION, OBTAIN FIRST VALUE FROM ATTACHMENT 2.****NOTE: THE WIND SPEED INDICATOR AT THE 33 FOOT LEVEL IS DESIGNED TO MEASURE ONLY TO 50 MILES PER HOUR.**

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ Ci/sec} \times 1/(\text{_____ mph (windspeed)}) = \text{_____ } \mu\text{Ci/cc at } \underline{\text{S.B. 500 meters}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ Ci/sec} \times 1/(\text{_____ mph (windspeed)}) = \text{_____ } \mu\text{Ci/cc at } \underline{2 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ Ci/sec} \times 1/(\text{_____ mph (windspeed)}) = \text{_____ } \mu\text{Ci/cc at } \underline{5 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ Ci/sec} \times 1/(\text{_____ mph (windspeed)}) = \text{_____ } \mu\text{Ci/cc at } \underline{10 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ Ci/sec} \times 1/(\text{_____ mph (windspeed)}) = \text{_____ } \mu\text{Ci/cc at } \underline{\text{_____ (distance)}}$$

Hours after shutdown \_\_\_\_\_

Rem/hr. per  $\mu\text{Ci/cc}$  (Attachment 3): \_\_\_\_\_

Distance	<u>SB</u>	<u>2 miles</u>	<u>5 miles</u>	<u>10 miles</u>	_____
Noble Gas Whole Body Dose Rate (REM/hour)	_____	_____	_____	_____	_____
Projected duration (Hours)	_____	_____	_____	_____	_____
Noble Gas Projected Whole Body Dose (REM) (External Dose Equivalent - EDE)	_____	_____	_____	_____	_____

**RADIOIODINE:**

To calculate release RATE in Ci/sec from monitor:  
(or use appropriate NG to I Default 1:1E-4)

$$\text{_____ } \mu\text{Ci/cc} \times \text{_____ } \text{cc/sec} \times 1\text{E-6 } \mu\text{Ci/cc} = \text{_____ } \text{Ci/sec}$$

**NOTE: THE WIND SPEED INDICATOR AT THE 33 FOOT LEVEL IS DESIGNED TO MEASURE ONLY TO 50 MILES PER HOUR.**

To predict downwind concentration:

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \text{Ci/sec} \times 1/(\text{_____ } \text{mph}) = \text{_____ } \mu\text{Ci/cc at } \underline{\text{S.B. 500 meters}}$$

(windspeed)

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \text{Ci/sec} \times 1/(\text{_____ } \text{mph}) = \text{_____ } \mu\text{Ci/cc at } \underline{2 \text{ miles}}$$

(windspeed)

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \text{Ci/sec} \times 1/(\text{_____ } \text{mph}) = \text{_____ } \mu\text{Ci/cc at } \underline{5 \text{ miles}}$$

(windspeed)

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \text{Ci/sec} \times 1/(\text{_____ } \text{mph}) = \text{_____ } \mu\text{Ci/cc at } \underline{10 \text{ miles}}$$

(windspeed)

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \text{Ci/sec} \times 1/(\text{_____ } \text{mph}) = \text{_____ } \mu\text{Ci/cc at } \underline{\hspace{2cm}}$$

(windspeed) (distance)

Hours after shutdown \_\_\_\_\_

Rem/hr. per  $\mu\text{Ci/cc}$  (Attachment 4): \_\_\_\_\_

Distance	<u>SB</u>	<u>2 miles</u>	<u>5 miles</u>	<u>10 miles</u>	_____
Radioiodine Whole Body Dose Rate (REM/hour)	_____	_____	_____	_____	_____
Projected duration (Hours)	_____	_____	_____	_____	_____
Radioiodine Projected Whole Body Dose (REM) (Committed Effective Dose Equivalent - CEDE) + PLUS +	_____	_____	_____	_____	_____
Noble Gas Projected Whole Body Dose (REM) from previous page (External Dose Equivalent - EDE) + EQUALS +	_____	_____	_____	_____	_____
TOTAL Projected Whole Whole Body Dose (REM) (Total Effective Dose Equivalent - (TEDE)	_____	_____	_____	_____	_____

**RADIOIODINE:** (continued)

To calculate release RATE in Ci/sec from monitors:  
(or use appropriate NG to I DEFAULT 1:1E-4)

\_\_\_\_\_  $\mu\text{Ci/cc}$  x \_\_\_\_\_  $\text{cc/sec}$  x  $1\text{E-}6 \mu\text{Ci/cc}$  = \_\_\_\_\_  $\text{Ci/sec}$

Rem/hr. per  $\mu\text{Ci/cc}$  (Attachment 5): \_\_\_\_\_

Distance	<u>SB</u>	<u>2 miles</u>	<u>5 miles</u>	<u>10 miles</u>	_____
Radioiodine Whole Body Dose Rate (REM/hour)	_____	_____	_____	_____	_____
Projected duration (Hours)	_____	_____	_____	_____	_____
Radioiodine Projected Thyroid Dose (REM) (Committed Dose Equivalent - CDE)	_____	_____	_____	_____	_____

**PARTICULATE:**

To calculate release RATE in Ci/sec from monitors:

$$\text{_____ } \mu\text{Ci/cc} \times \text{_____ } \text{cc/sec} \times 1\text{E-6 } \mu\text{Ci/cc} = \text{_____ } \text{Ci/sec}$$

**NOTE: THE WIND SPEED INDICATOR AT THE 33 FOOT LEVEL IS DESIGNED TO MEASURE ONLY TO 50 MILES PER HOUR.**

To predict downwind concentration:

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \frac{\text{Ci/sec}}{(\text{windspeed})} \times 1/(\text{ ) mph} = \text{_____ } \mu\text{Ci/cc at } \underline{\text{S.B. 500 meters}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \frac{\text{Ci/sec}}{(\text{windspeed})} \times 1/(\text{ ) mph} = \text{_____ } \mu\text{Ci/cc at } \underline{2 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \frac{\text{Ci/sec}}{(\text{windspeed})} \times 1/(\text{ ) mph} = \text{_____ } \mu\text{Ci/cc at } \underline{5 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \frac{\text{Ci/sec}}{(\text{windspeed})} \times 1/(\text{ ) mph} = \text{_____ } \mu\text{Ci/cc at } \underline{10 \text{ miles}}$$

$$\text{_____ } \frac{\text{sec-mph}}{\text{m}^3} \times \text{_____ } \frac{\text{Ci/sec}}{(\text{windspeed})} \times 1/(\text{ ) mph} = \text{_____ } \mu\text{Ci/cc at } \underline{\hspace{1cm}} \text{ (distance)}$$

Hours after shutdown \_\_\_\_\_

Rem/hr. per  $\mu\text{Ci/cc}$ : \_\_\_\_\_

Distance	<u>SB</u>	<u>2 miles</u>	<u>5 miles</u>	<u>10 miles</u>	_____
Particulate Whole Body Dose Rate (REM/hour)	_____	_____	_____	_____	_____
Projected duration (Hours)	_____	_____	_____	_____	_____
Particulate Projected Whole Body Dose (REM)	_____	_____	_____	_____	_____

**NOTE: THE APPROPRIATE DOSE CONVERSION FACTOR FOR PARTICULATES WOULD BE BASED UPON THE RESULTS OF AN ISOTOPIC ANALYSIS OF THE MIXTURE AND REFERENCING EPA-400-R-92-001.**

**PASQUILL STABILITY CLASS CRITERIA**

PASQUILL STABILITY CLASS	DELTA T (DEG F/100 FT)		150 FT - 33 FT DELTA T (DEG F/117 FT)		250 FT - 33 FT DELTA T (DEG F/217 FT)	
	GREATER THAN	LESS THAN OR EQUAL TO	GREATER THAN	LESS THAN OR EQUAL TO	GREATER THAN	LESS THAN OR EQUAL TO
A	---	1.0	---	-1.17	---	-2.17
B	-1.0	-0.9	-1.17	-1.05	-2.17	-1.95
C	-0.9	-0.8	-1.05	-0.94	-1.95	-1.74
D	-0.8	-0.3	-0.94	-0.35	-1.74	-0.65
E	-0.3	0.8	-0.35	0.94	-0.65	1.74
F	0.8	2.2	0.94	2.57	1.74	4.77
G	2.2	---	2.57	---	4.77	---

## PASQUILL STABILITY CLASS CRITERIA

Attachment 2, Rev. 14

Page 2 of 2

GINNA SITE VALUES OF  $X_{u/Q}$  AS A FUNCTION OF  
STABILITY AND DISTANCE

<u>MILES</u>	UNSTABLE			NEUTRAL (D)		STABLE (F)	
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
0.1	4.48E-5	2.32E-4	6.44E-4	9.16E-4	9.35E-4	1.18E-3	1.22E-3
0.2	1.91E-5	7.88E-5	2.29E-4	3.89E-4	4.37E-4	6.30E-4	7.35E-4
0.3 SB	1.16E-5	4.20E-5	1.25E-4	2.36E-4	2.80E-4	4.36E-4	5.46E-4SB
0.4	8.12E-6	2.68E-5	8.15E-5	1.65E-4	2.04E-4	3.35E-4	4.43E-4
0.5	6.17E-6	1.90E-5	5.84E-5	1.26E-4	1.60E-4	2.74E-4	3.76E-4
0.6	4.93E-6	1.43E-5	4.45E-5	1.00E-4	1.31E-4	2.32E-4	3.29E-4
0.7	4.08E-6	1.12E-5	3.54E-5	8.29E-5	1.11E-4	1.60E-4	2.94E-4
0.9	2.99E-6	7.60E-6	2.43E-5	6.08E-5	8.40E-5	1.60E-4	2.44E-4
1.0	2.63E-6	6.45E-6	2.08E-5	5.33E-5	7.49E-5	1.46E-4	2.26E-4
1.1	2.34E-6	5.56E-6	1.80E-5	4.74E-5	6.74E-5	1.34E-4	2.11E-4
1.2	2.10E-6	4.86E-6	1.58E-5	4.26E-5	6.13E-5	1.23E-4	1.98E-4
1.6	1.47E-6	3.11E-6	1.03E-5	2.99E-5	4.47E-5	9.50E-5	1.60E-4
1.9	1.19E-6	2.38E-6	7.98E-6	2.41E-5	3.70E-5	8.12E-5	1.41E-4
2.0	1.12E-6	2.20E-6	7.39E-6	2.27E-5	3.50E-5	7.75E-5	1.36E-4
2.2	9.95E-7	1.89E-6	6.41E-6	2.01E-5	3.15E-5	7.11 E-5	1.27E-4
2.5	8.50E-7	1.55E-6	5.30E-6	1.72E-5	2.74E-5	6.33E-5	1.16E-4
2.8	7.39E-7	1.30E-6	4.47E-6	1.50E-5	2.42E-5	5.71 E-5	1.06E-4
3.0	6.79E-7	1.17E-6	4.04E-6	1.37E-5	2.24E-5	5.36E-5	1.01E-4
3.5	5.62E-7	9.20E-7	3.21E-6	1.14E-5	1.90E-5	4.66E-5	9.04E-5
3.7	5.24E-7	8.44E-7	2.95E-6	1.06E-5	1.78E-5	4.43E-5	8.68E-5
4.0	4.76E-7	7.47E-7	2.63E-6	9.63E-6	1.64E-5	4.41 E-5	8.20E-5
4.2	4.49E-7	6.93E-7	2.44E-6	9.07E-6	1.55E-5	3.95E-5	791 E-5
4.5	4.12E-7	6.22E-7	2.20E-6	8.33E-6	1.44E-5	3.71 E-5	7.52E-5
4.8	3.81E-7	5.63E-7	2.00E-6	7.69E-6	1.34E-5	3.50E-5	7.17E-5
5.0	3.62E-7	5.28E-7	1.88E-6	7.31E-6	1.28E-5	3.37E-5	6.98E-5
5.2	3.45E-7	4.97E-7	1.78E-6	6.96E-6	1.23E-5	3.25E-5	6.76E-5
5.5	3.22E-7	4.55E-7	1.63E-6	6.50E-6	1.15E-5	3.09E-5	6.49E-5
5.8	3.01E-7	4.19E-7	1.51E-6	6.09E-6	1.09E-5	2.94E-5	6.24E-5
6.0	2.98E-7	3.98E-7	1.44E-6	5.84E-6	1.05E-5	2.85E-5	6.09E-5
6.2	2.78E-7	3.78E-7	1.37E-6	5.60E-6	1.01 E-5	2.77E-5	5.95E-5
6.5	2.62E-7	3.51E-7	1.27E-6	5.29E-6	9.61 E-6	2.65E-5	5.74E-5
6.8	2.48E-7	3.27E-7	1.19E-6	5.00E-6	9.15E-6	2.55E-5	5.56E-5
7.0	2.39E-7	3.13E-7	1.14E-6	4.82E-6	8.86E-6	2.48E-5	5.44E-5
7.2	2.31E-7	3.00E-7	1.09E-6	4.66E-6	8.59E-6	2.42E-5	5.33E-5
7.5	2.20E-7	2.81E-7	1.03E-6	4.43E-6	8.22E-6	2.33E-5	5.17E-5
7.8	2.09E-7	2.65E-7	9.71E-7	4.22E-6	7.87E-6	2.25E-5	5.03E-5
8.0	2.03E-7	2.54E-7	9.35E-7	4.09E-6	7.66E-6	2.20E-5	4.93E-5
8.2	1.97E-7	2.45E-7	9.01E-7	3.97E-6	7.45E-6	2.15E-5	4.85E-5
8.5	1.88E-7	2.31E-7	8.54E-7	3.80E-6	7.16E-6	2.08E-5	4.72E-5
8.8	1.80E-7	2.19E-7	8.11E-7	3.64E-6	6.90E-6	2.01 E-5	4.60E-5
9.0	1.75E-7	2.12E-7	7.84E-7	3.54E-6	6.73E-6	1.97E-5	4.53E-5
9.2	1.71E-7	2.05E-7	7.59E-7	3.44E-6	6.57E-6	1.93E-5	4.45E-5
9.5	1.64E-7	1.95E-7	7.23E-7	3.31E-6	6.34E-6	1.88E-5	4.35E-5
9.8	1.58E-7	1.85E-7	6.91E-7	3.18E-6	6.13E-6	1.83E-5	4.25E-5
10.0	1.54E-7	1.80E-7	6.70E-7	3.11E-6	5.99E-6	1.79E-5	4.19E-5

SB = Site Boundary



**NOBLE GAS DOSE CONVERSION FACTORS FOR WHOLE BODY (EDE)**

<u>Time After Shutdown (Hours)</u>	<u>Rem/Hour Per <math>\mu\text{Ci/cc}</math></u>
0	470
1	434
2	331
3	265
4	221
6	159
12	65

**NOTE: MULTIPLY MCI/CC BY THE LISTED FACTOR TO OBTAIN REM/HOUR.**

**RADIOIODINE DOSE CONVERSION FACTORS FOR WHOLE BODY (CEDE)**

<u>Time After Shutdown (Hours)</u>	<u>Rem/Hour Per <math>\mu\text{Ci/cc}</math></u>
0	1.73E4
1	1.57E4
2	1.76E4
3	1.92E4
4	2.05E4
6	2.24E4
12	2.65E4

**NOTE: MULTIPLY MCI/CC BY THE LISTED FACTOR TO OBTAIN REM/HOUR.**

**RADIOIODINE CONVERSION FACTORS FOR THYROID (CDE)**

<u>Time After Shutdown (Hours)</u>	<u>Rem/Hour Per <math>\mu\text{Ci/cc}^*</math></u>
0	4.4E5
1	5.4E5
2	6.4E5
3	7.4E5
4	7.8E5
6	8.8E5
12	1.1E6

**NOTE: MULTIPLY MCI/CC BY THE LISTED FACTOR TO OBTAIN REM/HOUR.**

- \* These conversion factors have been increased by a factor of two. EPA-400 uses the adult thyroid. New York State has increased EPA-400 factors by two to adjust for child thyroid.

**RMS PROCESS MONITOR CALIBRATION FACTORS****R-10A    CONTAINMENT IODINE:**

$\mu\text{Ci/cc Iodine-131} = (\Delta \text{ cpm/hour}) (1.10 \text{ E-11})$

**R10B    PLANT VENT IODINE:**

$\mu\text{Ci/cc Iodine-131} = (\Delta \text{ cpm/hour}) (9.02 \text{ E-12})$

**R-11    CONTAINMENT PARTICULATE:**

$\mu\text{Ci/cc as Cs-137} = ( \text{ cpm}) (3.12 \text{ E-12})$

**R-12    CONTAINMENT GAS:**

$\mu\text{Ci/cc Xe-133} = ( \text{ cpm}) (5.6 \text{ E-8})$

**R-13    PLANT VENT PARTICULATE:**

$\mu\text{Ci/cc as Cs-137} = ( \text{ cpm}) (2.91 \text{ E-12})$

**R-14    PLANT VENT GAS:**

Calibration factors calculated based on Kr-85 and Xe-133 calibration factors.

$\mu\text{Ci/cc as Xe-133} = ( \text{ cpm}) (5.6 \text{ E-8})$

**R-15    AIR EJECTOR AND GLAND STEAM EXHAUST GAS:**

$\mu\text{Ci/cc Xe-133} = ( \text{ cpm}) (4.6 \text{ E-8})$

$\mu\text{Ci/cc as normal gas mixture}^* = ( \text{ cpm}) (5.0 \text{ E-8})$

\* Based on the mixture of noble gas present in the reactor coolant during the 01/25/82 tube rupture which is representative of normal operations.

**R-16    CONTAINMENT FAN COOLER SERVICE WATER:**

$\mu\text{Ci/cc as Cs-137} = ( \text{ cpm}) (1.5 \text{ E-8})$

**R-17    COMPONENT COOLING:**

$\mu\text{Ci/cc as Cs-137} = ( \text{ cpm}) (1.4 \text{ E-8})$

**RMS PROCESS MONITOR CALIBRATION FACTORS****R-18 RADWASTE SYSTEM DISCHARGE::** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.4 \text{ E-8} )$ **R-19 STEAM GENERATOR BLOWDOWN:** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.4 \text{ E-8} )$ **R-20A SPENT FUEL POOL HEAT EXCHANGER SERVICE WATER:** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 2.4 \text{ E-8} )$ **R-20B SPENT FUEL POOL HEAT EXCHANGER SERVICE WATER** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.7 \text{ E-7} )$ **R-21 RETENTION TANK:** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.5 \text{ E-8} )$ **R-22 HIGH CONDUCTIVITY WASTE TANK:** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.2 \text{ E-8} )$ **R-31 STEAM LINE RADIATION MONITOR:** $\text{mr/hr} = ( \text{ cpm} ) ( 2.11 \text{ E-2} )$ **R-32 STEAM LINE RADIATION MONITOR:** $\text{mr/hr} = ( \text{ cpm} ) ( 2.02 \text{ E-2} )$ **R-36 CONTROL ROOM NOBLE GAS MONITOR:** $\mu\text{Ci/cc as Kr-85} = ( \text{ cpm} ) ( 1.75 \text{ E-8} )$  $\mu\text{Ci/cc as Xe-133} = ( \text{ cpm} ) ( 1.41 \text{ E-7} )$ **R-37 CONTROL ROOM PARTICULATE MONITOR:** $\mu\text{Ci/cc as Cs-137} = ( \text{ cpm} ) ( 1.68 \text{ E-12} )$ **R38 CONTROL ROOM IODINE MONITOR:** $\mu\text{Ci/cc as I-131} = ( \text{ cpm} ) ( 2.51 \text{ E-12} )$

ROCHESTER GAS & ELECTRIC CORPORATION

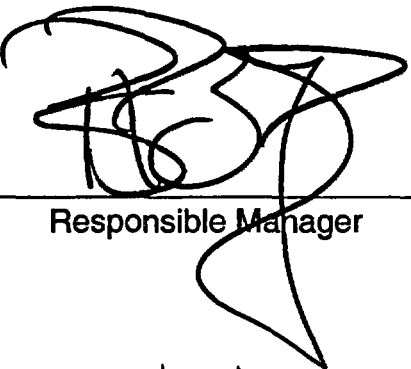
GINNA STATION

Controlled Copy Number 23

Procedure Number EPIP 3-1

Revision Number 23

Emergency Operations Facility (EOF) Activation

  
\_\_\_\_\_  
Responsible Manager  
  
08/08/03  
\_\_\_\_\_  
Effective Date

Category 1.0

This procedure contains 9 pages

**EPIP 3-1****EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION****1.0 PURPOSE**

The purpose of this procedure is to designate actions and responsibility of individuals who would report to the Emergency Operations Facility upon a decision to activate the facility.

**2.0 RESPONSIBILITY**

2.1 The first qualified person to arrive is responsible for initiating this procedure.

2.2 The EOF/Recovery Manager is responsible for activation of the EOF upon arrival.

**3.0 REFERENCES****3.1 Developmental References****3.1.1 Nuclear Emergency Response Plan****3.1.2 NUREG-0654 "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants".****3.2 Implementing References****3.2.1 EPIP 1-0, Ginna Station Event Evaluation and Classification****3.2.2 EPIP 1-5, Notifications****3.2.3 EPIP 3-3, Engineering Support Center (ESC) Activation****3.2.4 EPIP 3-6, Corporate Notifications****3.2.5 EPIP 4-6, Joint Emergency News Center (JENC) Activation****3.2.6 EPIP 5-7, Emergency Organization****4.0 PRECAUTIONS**

As noted in this procedure.

**5.0      PREREQUISITES**

5.1      An Alert, Site Area Emergency or a General Emergency has been declared in accordance with EPIP 1-0.

5.2      The EOF could be activated anytime at the discretion of the EOF/Recovery Manager.

**6.0      ACTIONS****6.1      Arriving Personnel**

**NOTE: Depending on the number of arriving personnel, perform steps concurrently to minimize activation time.**

6.1.1    Sign in at the Security Desk at the entrance to the EOF.

6.1.2    Place your name under the appropriate emergency position on the magnetic organization chart.

6.1.3    Perform responsibilities as described in EPIP 5-7, Emergency Organization

6.1.4    Personnel arriving from the Ginna plant should perform a whole body frisk to check for contamination if there has been a release of radioactivity.

**6.2      EOF/Recovery Manager perform the following:**

**NOTE: In the event of power loss at the EOF, contact the TSC Emergency Coordinator and discuss the need for the TSC to re-assume or maintain command and control, as appropriate.**

6.2.1    Ensure minimum response staff listed below is available (as indicated by the red dots on the sign in board):

a.      Nuclear Operations Manager (NOM)

b.      Engineering Manager

c.      Dose Assessment Manager

d.      News Center Manager

6.2.2    If a position is not staffed, call in personnel. Qualified responders are found in their position checklist in EPIP 5-7. The TSC will fax the status of the call-in process to the incoming fax machine (located in the Administrative area across the hall) when they are staffed.



- 6.2.3 Obtain a briefing from the TSC Director on plant conditions. If the Ginna responders have been directed to the Ontario Fire Department Exempt Hall (located on Route 104 between Route 350 and Knickerbocker Road, phone number 315-524-8078), have the EOF responders obtain the checklists for their counterparts in EPIP 5-7. Ensure that all functions required by the onsite emergency organization are performed by the EOF responders to the extent practical.
- 6.2.4 Obtain notification forms from EOF fax machine that the Control Room and TSC have sent to notify offsite agencies. Use these forms and brief the response staff on plant conditions. Ensure that the staff makes contact with their counterparts. The counterparts are:
- a. EOF/Recovery Manager - TSC Director
  - b. EOF Dose Assessment Manager - TSC Dose Assessment Manager
  - c. Nuclear Operations Manager - TSC Operations Manager
  - d. Engineering Manager - TSC Technical Manager
- 6.2.5 If the Ginna responders will not be allowed site access for greater than four (4) hours, have the Ginna Engineering, Operations and Dose Assessment personnel report to the EOF to assist in technical evaluations.
- 6.2.6 Brief Federal, State and County Representatives in the EOF on the status of the emergency. Request that they contact their respective emergency operation facilities and determine if the county response organizations have any concerns.

**NOTE: IF ONE OF THE INDIVIDUALS CANNOT BE CONTACTED, HAVE ONE OF THE OTHER CONTACTS ASSUME THE RESPONSIBILITY.**

- 6.2.7 Contact RG&E management and notify them that you are the EOF/Recovery Manager and that the EOF is activated in response to a Ginna emergency. Inform them of the following:

"This is the EOF/Recovery Manager. Ginna has declared an emergency and we are activating our emergency facilities. Can you be the management contact for this event? You are to act as the liaison between RG&E and our parent company, Energy East."

#### Primary Notifications

Jim Laurito

Work: (585) 724-8077  
 Home: (585) 218-9528  
 Cellular: (806) 306-7917

Primary Notifications (Cont'd.)

Wes von Schack	Work:	(607) 762-4550
Energy East	Home:	(212) 396-9792
	Cellular:	(607) 760-5200

Ken Jasinski	Work:	(607) 762-4315
Energy East	Home:	(914) 738-3065
	Cellular:	(914) 441-5770

"This is the EOF/Recovery Manager. Ginna has declared an emergency and we are activating our emergency facilities. Can you be the financial contact for this event?"

Joe Syta	Work:	(585) 724-8003
Controller and Treasurer	Home:	(585) 425-4474
	Pager:	(585) 528-8712

Debbie Merwin	Work:	(585) 771-2212
	Cellular:	(585) 329-6148

"This is the EOF/Recovery Manager. Ginna has declared an emergency and we are activating our emergency facilities. Can you be the RG&E outside/government agencies liaison for this event?"

Robert Bergin	Work:	(585) 771-2294
Assistant General Counsel	Home:	(585) 377-4399
Government and Community Relations	Cellular:	(585) 315-0040

6.2.8 Contact INPO at (800) 321-0614 and inform them of the declared emergency.

6.2.9 Request the Facilities and Personnel Manager contact hotels and food service providers for support of TSC and EOF responders.

#### 6.2.11 Assuming Command and Control of the Emergency

6.2.11.1 Ensure minimum activation staff listed below is available to assume command and control:

- a. EOF Dose Assessment Manager
- b. Dose Assessment Support (3)
- c. Nuclear Operations Manager (NOM)

- d. Technical Assistant to the NOM
- e. Administrative Assistant to the NOM
- f. Communicator
- g. Engineering Manager
- h. Facilities and Personnel Manager
- i. EOF/JENC Security Manager
- j. Offsite Agency Liaison
- k. Technical Representative Liaison
- l. Corporate Spokesperson
- m. News Center Manager

6.2.11.2 If a position is not staffed, call in personnel. Qualified responders are found in their position checklist in EPIP 5-7.

6.2.11.3 Confer with the TSC Emergency Coordinator on shifting command and control of the emergency from the TSC organization to the EOF. Normally when command and control is transferred, the EOF assumes:

- a. Overall direction for the emergency
  - 1. Emergency Classification
  - 2. Protective Action Recommendations
- b. Notifications to New York State, Wayne and Monroe Counties
- c. Dose Assessment and Offsite Survey Team coordination

However, certain conditions may warrant transferring a given responsibility area (e.g. survey team coordination) at different times, per the discretion of the Emergency Coordinator and EOF/Recovery Manager.

6.2.11.4 Brief EOF personnel on plant status and notify them that command and control will be assumed at the agreed upon time using Attachment 2 for meeting agenda.

- 6.2.11.5 At the agreed upon time, call the TSC Emergency Coordinator and state that, unless he has any objections, the EOF is assuming command and control at this time.
- 6.2.11.6 Announce to the EOF that the EOF has assumed command and control of the emergency.
- 6.2.11.7 Upon assuming command and control, direct the NOM to provide RECS line updates every 30 minutes using procedure EPIP 1-5, Attachment 3.
- 6.2.11.8 Direct the Federal, State and County representatives in the EOF to contact their emergency management organizations and inform them that the EOF has assumed command and control.
- 6.2.11.9 Ensure the EOF Dose Assessment Manager notifies the Survey Center Manager that the EOF has assumed command and control.

### 6.3 Shift Turnover

- 6.3.1 If the EOF will be activated for more than 12 hours, direct the Facilities and Personnel Manager to complete Attachment 1 for continuous staffing.
- 6.3.2 When the responders for the next shift have arrived, have them perform a detailed turnover with the person that they are relieving. Have them log the turnover in their log book.
- 6.3.3 When the individual turnovers are complete, have the on-coming crew perform a briefing for each other using the standard meeting agenda (Attachment 2). The off-going crew should also be at the briefing to ensure that the information that is shared is correct and complete.
- 6.3.4 To terminate the emergency or to transition to the recovery phase use EPIP 3-4.

## 7.0 ATTACHMENTS

- 1. EOF Continuous Staffing Schedule
- 2. EOF Meeting Agenda

**EOF CONTINUOUS STAFFING SCHEDULE**

(Consult EPIP 5-7 position checklists for qualified personnel and phone numbers to fill positions.)

	Shift A _____hrs to _____hrs	Shift B _____hrs to _____hrs
<b>POSITION</b>	<b>Date:</b>	<b>Date:</b>
EOF/Recovery Manager		
Secretary, Recovery Mgr		
Nuclear Operations Manager		
Technical Asst. to NOM		
Admin Asst to NOM		
Corporate Spokesperson		
Assistant to Corporate Spokesperson		
Technical Advisor to Corporate Spokesperson		
News Writer		
Engineering Manager		
Offsite Agency Liaison		
EOF Technical Representative		
Monroe County Tech. Rep.		
Wayne County Tech. Rep.		
Albany Tech. Rep.		
Facilities and Personnel Mgr		
EOF/JENC Security Manager		

**EOF CONTINUOUS STAFFING SCHEDULE**

(Consult EPIP 5-7 position checklists for qualified personnel and phone numbers to fill positions.)

	Shift A _____ hrs to _____ hrs	Shift B _____ hrs to _____ hrs
<b>POSITION</b>	<b>Date:</b>	<b>Date:</b>
Clerical Supervisor		
Fax Operator		
Copier Operator		
Courier		
Dose Assessment Manager		
Assistant DA Manager		
Dose Assessment Liaison		
Calculator		
Calculator		
Radio Operator		
Communicator		
Plotter		
Weather/Status Board		
Survey Team		
Survey Team		
Communicator		
Communicator		
Status Board Keeper		

**EOF MEETING AGENDA**

Meeting Date: \_\_\_\_\_ Time: \_\_\_\_\_

1. Recovery Manager
  - Purpose of Meeting
  - Classification level
  - Time classification declared
  - Brief event description (use EAL reference manual)
  - Injury/Fire Status
2. Dose Assessment
  - Offsite Areas of concern (downwind areas)
  - Protective Actions Recommended
  - Abnormal radiation levels
3. Nuclear Operations Manager (Ginna to report if on conference calls)
  - Plant Status
  - Maintenance
    - Equipment out of service
    - Repairs planned or in progress
4. Engineering Manager (Ginna to report if on conference calls)
  - Brief technical issues
5. Security
  - Accountability of plant personnel
  - Movement of response personnel to and from site.
6. Facility and Personnel Manager
  - Staffing of facilities
  - Transportation of personnel
  - Food
  - Requests received
7. Corporate Spokesperson
  - Media questions
8. Other RG&E Concerns
9. County Concerns
  - Wayne County
  - Monroe County
10. State Concerns
  - State Emergency Management Office (SEMO)
  - Department of Health (DOH)
  - Department of Environmental Conservation
11. Federal Concerns
  - Nuclear Regulatory Commission (NRC)
  - Federal Emergency Management Agency (FEMA)
  - Department of Energy (DOE)
12. Review of Open Items

Please write on these pages. New pages will be provided after each use.

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. EPIP 3-3

REV. NO. 10

IMMEDIATE ENTRY



RESPONSIBLE MANAGER

08/08/03  
EFFECTIVE DATE

Category 1.0

This procedure contains 6 pages



**EPIP 3-3**

**IMMEDIATE ENTRY**

**1.0 PURPOSE:**

- 1.1 To provide instructions for immediate entry to the Ginna site from the Survey Center as required by the Emergency Response Organization.

**2.0 RESPONSIBILITY:**

- 2.1 The Survey Center Manager is responsible for providing entry teams as requested by the Ginna Station TSC and/or Control Room and assisting in immediate entry preparation.

- 2.2 Entry team members are responsible for implementation of this procedure.

**3.0 REFERENCES:**

**3.1 Developmental References**

None.

**3.2 Implementing References**

- 3.2.1 EPIP 1-12, Repair and Corrective Action Guidelines During Emergency Situations

- 3.2.2 EPIP 1-8, Search and Rescue Operation

- 3.2.3 EPIP 1-9, Technical Support Center Activation

- 3.2.4 EPIP 1-10, Operational Support Center (OSC) Activation

- 3.2.5 EPIP 1-11, Survey Center Activation

**4.0 PRECAUTIONS:**

- 4.1 Designated personnel may be required to enter the site as members of Emergency Response Organization or Emergency Support Organization (EPIP 1-12, EPIP 1-9, EPIP 1-8, EPIP 1-10).

- 4.2 The size of entry teams shall be two individuals or more.

**5.0      PREREQUISITES:**

**5.1**      The Emergency Coordinator has requested the dispatch of Entry Teams to the Ginna Site.

**5.2**      A current **EPIP 1-5 NEW YORK STATE (NYS) RADIOLOGICAL EMERGENCY DATA FORM (PART I), (Attachment 3a)** should be provided to the Survey Center by the RG&E emergency facility (Control Room, TSC or EOF) which has command and control.

**6.0      ACTIONS:**

**6.1      Survey Center Manager**

**6.1.1**      Using the NYS Part I Form that was faxed to the Survey Center, determine wind direction, wind speed, initiating event conditions and pertinent plant conditions and post information on status board at the Survey Center.

**6.1.3**      Assemble the Entry Teams.

**6.1.3.1**    Designate an Entry Team Leader.

**6.1.3.2**    Obtain the names of the Entry Team Members.

**6.1.3.3**    Request a Radiation Protection Technician or Survey Team member to escort the team; otherwise, designate an Entry Team Member to perform the Radiation Protection function.

**6.1.3.4**    Provide the Entry Team Leader with a portable radio.

**6.1.3.4.1**   Ensure the Entry Team Leader understands the use of the portable radio.

**6.1.4**      If the TSC has assumed command and control, notify the TSC Security Manager (or the TSC Radio Communicator) that personnel, by name, will require entry to the Ginna Site.

**6.1.4.1**    If the Control Room has command and control, notify the Control Room Communicator that personnel, by name, will require entry to the Ginna Site.

**6.1.5**      Request the Emergency Coordinator provide an entry route.

**6.1.5.1**    If available, request the TSC RP/Chemistry Manager assist with and recommend necessary radiation protection equipment, dosimetry, protective clothing and respiratory protection.

- 6.1.5.2 If available, request the TSC RP/Chemistry Manager assist in briefing the team on the radiological conditions they may encounter.
- 6.1.6 Brief the team(s) using the NYS Radiological Emergency Data Form (Part I), which was faxed to the Survey Center, before departure to the Ginna Site.
  - 6.1.6.1 The Departure briefing should include:
    - a. Name of the Entry Team Leader
    - b. Names of the members of the Entry Team
    - c. Weather conditions
    - d. Radiological conditions
    - e. Plant status, event classification
    - f. Radiological protection equipment, dosimetry and protective clothing
    - g. Respiratory protection
    - h. Route
    - i. A reminder that the teams DO NOT enter areas with radiation levels greater than 2 Rem/hr unless directed by the Emergency Coordinator
    - j. A reminder for the teams to remove their anti-contamination clothing upon arrival at the final destination in accordance with radiation protection procedures.
    - k. A reminder to perform a whole body frisk upon arrival at their destination.

## 6.2 Entry Teams

**NOTE: ENSURE DOSE RATE METER AND RADIO ARE FUNCTIONING PROPERLY PRIOR TO DEPARTURE.**

### 6.2.1 Entry Team Leader

- 6.2.1.1 Obtain the names of all members of the Entry Team.
- 6.2.1.2 Obtain a portable radio.

- 6.2.1.3** The entry team shall obtain necessary equipment as recommended by a Radiation Protection Technician, TSC RP/Chemistry Manager or the Survey Center Manager. In their absence, obtain the equipment listed below:
- a. Thermoluminescent dosimeter (TLD)
  - b. High range self-reading dosimeter (SRD) at least 0 to 1500mR
  - c. High range dose rate meter (0-1000 R/hr)
  - d. Anti-contamination clothing
  - e. Full face mask with charcoal filter
  - f. Radio
- 6.2.1.4** Ensure each Entry Team member logs in on Dosimetry Log in accordance with EPIP 1-11.
- 6.2.1.5** Ensure each Entry Team member is aware of the following:
- a) Weather conditions
  - b) Plant conditions
  - c) Event Classification
  - d) Route
  - e) Radiological conditions
- 6.2.1.6** Just before departure, contact the Emergency Coordinator and brief them on your route and obtain any last minute instructions.
- 6.2.1.7** Ensure the Entry Team does not enter areas with radiation levels greater than 2 Rem/hr unless directed by the Emergency Coordinator.
- 6.2.1.8** Ensure Entry Team members remove their anti-contamination clothing upon arrival at the final destination in accordance with radiation protection procedures.
- 6.2.1.9** Ensure Entry Team members perform a whole body frisk upon arrival at their destination.

- 6.2.1.10 Report the arrival of the Entry Team to the Emergency Coordinator.
- 6.2.1.11 Ensure each Entry Team member records their SRD dose in accordance with EPIP 1-11, using the Dosimetry Log faxed to the TSC RP/Chemistry Manager.
- 6.2.1.12 Ensure each Entry Team member is accounted for from departure from the Survey Center until arrival at the final destination.
- 6.2.1.13 Ensure the entire team attends a de-briefing.
- 6.2.1.14 Ensure all SRDs, radios and survey meters are turned over to the TSC RP/Chemistry Manager for return to the Survey Center.
- 6.2.2 Entry Team Member
  - 6.2.2.1 Notify Survey Center Manager, if present, and log on status board that team is leaving for the site.
  - 6.2.2.2 Provide name to the Entry Team Leader.
  - 6.2.2.3 Obtain the necessary radiation protection equipment, dosimetry, and respiratory protection equipment.
  - 6.2.2.4 Know the following:
    - a) Weather conditions
    - b) Plant conditions
    - c) Route
    - d) Radiological conditions
  - 6.2.2.5 Note any unusual conditions encountered during the entry.
  - 6.2.2.6 Do not enter areas with radiation levels greater than 2 Rem/hr unless directed by the Emergency Coordinator.
  - 6.2.2.7 Remove anti-contamination clothing upon arrival at the final destination in accordance with radiation protection procedures.
  - 6.2.2.8 Perform a whole body frisk upon arrival at the final destination.
  - 6.2.2.9 Report any radiation survey results to the TSC Dose Assessment Manager.

6.2.2.10 Record SRD dose on Dosimetry Log that was faxed to the TSC RP/Chemistry Manager and turn over SRD to TSC RP/Chemistry Manager.

6.2.2.11 Attend a de-briefing.

6.3 TSC RP/Chemistry Manager

6.3.1 Assists entry team by providing radiological conditions that they may encounter.

6.3.2 Ensures SRDs, radios and survey meters are returned to the Survey Center.

6.3.3 Turns over Dosimetry Logs to Dosimetry for entry into the Radiation Dose Management System (RDMS).

7.0 ATTACHMENTS:

None.

**ROCHESTER GAS AND ELECTRIC CORPORATION**

**GINNA STATION**

**CONTROLLED COPY NUMBER 23**

**PROCEDURE NO. EPIP 4-1**

**REV. NO. 7**

**PUBLIC INFORMATION RESPONSE TO AN UNUSUAL EVENT**

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**RESPONSIBLE MANAGER**

08/08/03  
**EFFECTIVE DATE**

**Category 1.0**

**This procedure contains 2 pages**

**EPIP 4-1****PUBLIC INFORMATION RESPONSE TO AN UNUSUAL EVENT****1.0 PURPOSE**

To provide instruction for implementing the Public Information response to an Unusual Event at the R.E. Ginna Nuclear Power Plant.

**2.0 RESPONSIBILITY**

2.1 Emergency Preparedness is responsible for notifying the News Center Manager and the Duty Corporate Communications Representative of the Unusual Event.

2.2 The News Center Manager is responsible for informing the appropriate News Center personnel of the Unusual Event condition as deemed necessary.

**3.0 REFERENCES****3.1 Developmental References**

3.1.1 Rochester Gas and Electric Corporation Nuclear Emergency Response Plan.

**3.2 Implementing References**

3.2.1 EPIP 4-7, Public Information Organization Staffing

**4.0 PRECAUTIONS**

None.

**5.0 PREREQUISITES**

5.1 An Unusual Event has been declared at the R.E. Ginna Nuclear Power Plant in accordance with EPIP 1-0, Ginna Station Event Evaluation and Classification.

**6.0 ACTIONS****6.1 News Center Manager**

6.1.1 Upon notification by Emergency Preparedness, notify the key personnel listed below using EPIP 4-7 and request that they stand-by for further information as the situation develops and as judgement dictates.



6.1.2 Use EPIP 4-7, Public Information Organization Staffing, to document calls and responses.

| 6.1.3 Standby for further information from Emergency Preparedness.

## **6.2 Joint Emergency News Center Personnel**

6.2.1 When notified by the News Center Manager, key JENC supervisory personnel will remain accessible to the News Center Manager.

Key Supervisory Personnel are:

- a. Media Monitoring and Public Inquiry Manager
- b. Assistant News Center Manager
- c. JENC Security personnel
- d. Facilities & Materials Coordinator
- e. Corporate Spokesperson

| 6.2.2 A News Announcement is required. The News Announcement will be prepared by  
| either the Duty Corporate Communications Representative and approved by the  
| Manager of Corporate Communications using their normal process.

| 6.2.3 No further action is required by Emergency News Center Personnel at the  
| Unusual Event Level. All News Announcements of public information will be  
| handled per normal Public Affairs departmental operating procedures.

## **7.0 ATTACHMENTS**

None.

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

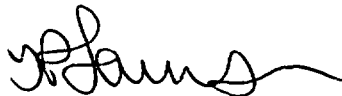
CONTROLLED COPY NUMBER 23

PROCEDURE NO. EPIP 4-3

REV. NO. 13

ACCIDENTAL ACTIVATION OF GINNA ALERT AND NOTIFICATION

SYSTEM SIRENS



RESPONSIBLE MANAGER

08/08/03

EFFECTIVE DATE

Category 1.0

This procedure contains 3 pages

**EPIP 4-3**

**ACCIDENTAL ACTIVATION OF GINNA EMERGENCY**

**NOTIFICATION SYSTEM SIRENS**

**1.0 PURPOSE:**

- 1.1 To specify the means by which notifications are to be made in the event of an accidental activation of Ginna Alert and Notification System (ANS) Sirens.

**2.0 RESPONSIBILITY:**

- 2.1 The Ginna Control Room is responsible for initiating this procedure.

**3.0 REFERENCES:**

3.1 Developmental References

- 3.1.1 IEN 81-34 Accidental Activation of Prompt Public Notification System

- 3.1.2 NRC NUREG-1022, Event Reporting Guidelines

3.2 Implementing References

None.

**4.0 PRECAUTIONS:**

None.

**5.0 PREREQUISITES:**

- 5.1 RG&E has been notified that an ANS siren has sounded.

**6.0 ACTIONS:**

**NOTE: IF THERE IS AN ACTUAL GINNA EMERGENCY, INSTRUCT THE CALLER TO REFER TO THEIR EMERGENCY PLANNING CALENDAR AND/OR TUNE IN TO THEIR EMERGENCY ALERT SYSTEM STATION (WHAM) 1180AM, (WVOR) 100.5FM OR (WHEC) TV10 FOR ADDITIONAL INFORMATION.**

6.1 Obtain the following information from the caller:

- a. Name
- b. Address
- c. Telephone number

6.2 Verify if a siren has activated. Have the Fire Brigade, I&C Special Projects or System Engineer perform a Silent Test by pushing the Silent Test button at Ginna TSC Controller or applicable County Controller. This will check the status of each siren. A siren with a failure code will show red on the screen. Review report printed on the printer, an "X" in the OVR (Overrun) column indicates that the siren inadvertently activated.

6.2.1 If the siren computer indicates no sirens activated, go to 6.5. If the siren computer indicates a siren is activated, go to 6.4.

6.3 Use Siren System Controller at Ginna TSC or at County Controller to attempt immediate siren shutdown. Push CANCEL button, hold until XMIT light comes on indicating that CANCEL signal has been sent out.

6.3.1 To determine if the siren has stopped activation, reset the status of the siren that reported the OVR (Overrun) status by performing the following steps:

- Click on menu item "Status"
- Click on "Reset Status"
- Enter password-"x", click OK
- Enter siren number in three digit form (i.e. 036), SEND.
- This should reset the Overrun Status. Check to see if the siren has stopped Alerting. Single Poll siren. If Overrun Status is cleared, then the siren has reported that it has stopped.

6.3.2 Call one of the following Nuclear Emergency Preparedness personnel and inform them of the situation. Have Emergency Preparedness make contact with the affected county, contact the Duty PIO, and ensure I&C Special Projects is made aware of the problem.

**Tim Laursen**

Work: 585-771-6185  
Pager: 585-528-5982  
Home: 585-396-1149  
Cellular: 585-315-1854

**Peter Polfleit**

Work: 585-771-6772  
Pager: 585-527-2207  
Home: 315-524-7101  
Cellular: 585-315-1201

**Frank Cordaro**

Work: 585-771-3108  
Pager: 585-527-3650  
Home: 315-524-2924  
Cellular: 585-315-1277

**Rick Watts**

Work: 585-724-8706  
Pager: 585-527-3749  
Home: 585-425-2644  
Cellular: 585-315-1204

**Jill Willoughby**

Work: 585-771-4033  
Pager: 585-528-3295  
Home: 585-787-9075  
Cellular: 585-315-1205

6.5 If no sirens are activated, ask the caller if there may be a possible source other than a Ginna siren that may be sounding. If there are more than three calls about a siren activation within ten minutes, notify the Corporate Communications Manager at (585) 771-2230 during working hours. During off hours notify the Duty Public Information Officer at (585) 771-2133 to inform them of the situation. The duty public information officer will determine if there is a need to notify the media.

6.6 The licensee shall notify the USNRC immediately after notification of Nuclear Emergency Preparedness in step 6.3.2. The notification shall not be later than four hours after the licensee was notified of the accidental activation of the siren(s) using procedure 0-9.3, "NRC Immediate Notification".

7.0 **ATTACHMENTS:**

None.

INPUT PARAMETERS: TYPE: PREPP STATUS VALUE(S): EF 5 YEARS ONLY:  
PREPIP EMERGENCY PLAN IMPLEMENTING PROCEDURE

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
EPIP-1-0	GINNA STATION EVENT EVALUATION AND CLASSIFICATION	031	06/20/2003	06/20/2003	06/20/2008	EF
EPIP-1-1	UNUSUAL EVENT	004	05/23/2003	05/23/2003	05/23/2008	EF
EPIP-1-2	ALERT	004	11/02/2001	11/02/2001	11/02/2006	EF
EPIP-1-3	SITE AREA EMERGENCY	005	12/09/1996	04/09/2003	04/09/2008	EF
EPIP-1-4	GENERAL EMERGENCY	006	05/05/2003	05/05/2003	05/05/2008	EF
EPIP-1-5	NOTIFICATIONS	055	06/20/2003	06/20/2003	06/20/2008	EF
EPIP-1-6	SITE EVACUATION	017	06/20/2003	06/20/2003	06/20/2008	EF
EPIP-1-7	ACCOUNTABILITY OF PERSONNEL	009	11/02/2001	11/02/2001	11/02/2006	EF
EPIP-1-8	SEARCH AND RESCUE OPERATION	006	05/23/2003	05/23/2003	05/23/2008	EF
EPIP-1-9	TECHNICAL SUPPORT CENTER ACTIVATION	025	08/08/2003	08/08/2003	08/08/2008	EF
EPIP-1-10	OPERATIONAL SUPPORT CENTER (OSC) ACTIVATION	013	05/23/2003	05/23/2003	05/23/2008	EF
EPIP-1-11	SURVEY CENTER ACTIVATION	029	02/25/2003	02/25/2003	02/25/2008	EF
EPIP-1-12	REPAIR AND CORRECTIVE ACTION GUIDELINES DURING EMERGENCY SITUATIONS	009	12/20/2001	12/20/2001	12/20/2006	EF
EPIP-1-13	LOCAL RADIATION EMERGENCY	004	02/25/2003	02/25/2003	02/25/2008	EF
EPIP-1-15	USE OF THE HEALTH PHYSICS NETWORK HPN	005	04/24/1996	03/03/1999	03/03/2004	EF
EPIP-1-16	RADIOACTIVE LIQUID RELEASE TO LAKE ONTARIO OR DEER CREEK	005	02/25/2003	02/25/2003	02/25/2008	EF
EPIP-1-17	PLANNING FOR ADVERSE WEATHER	004	05/23/2003	05/23/2003	05/23/2008	EF
EPIP-1-18	DISCRETIONARY ACTIONS FOR EMERGENCY CONDITIONS	006	05/05/2003	05/05/2003	05/05/2008	EF
EPIP-2-1	PROTECTIVE ACTION RECOMMENDATIONS	021	08/08/2003	08/08/2003	08/08/2008	EF
EPIP-2-2	OBTAINING METEOROLOGICAL DATA AND FORECASTS AND THEIR USE IN EMERGENCY DOSE AS	013	12/03/2002	12/03/2002	12/03/2007	EF
EPIP-2-3	EMERGENCY RELEASE RATE DETERMINATION	015	07/01/2002	07/01/2002	07/01/2007	EF
EPIP-2-4	EMERGENCY DOSE PROJECTIONS - MANUAL METHOD	014	08/08/2003	08/08/2003	08/08/2008	EF
EPIP-2-5	EMERGENCY DOSE PROJECTIONS PERSONAL COMPUTER METHOD	014	05/15/2002	05/15/2002	05/15/2007	EF
EPIP-2-6	EMERGENCY DOSE PROJECTIONS - MIDAS PROGRAM	012	02/25/2003	02/25/2003	02/25/2008	EF
EPIP-2-7	MANAGEMENT OF EMERGENCY SURVEY TEAMS	011	08/09/2002	08/09/2002	08/09/2007	EF
EPIP-2-8	VOLUNTARY ACCEPTANCE OF EMERGENCY RADIATION EXPOSURE	005	05/16/2000	05/16/2000	05/16/2005	EF
EPIP-2-9	ADMINISTRATION OF POTASSIUM IODIDE (KI)	008	05/23/2003	05/23/2003	05/23/2008	EF
EPIP-2-10	INPLANT RADIATION SURVEYS	004	08/09/2002	08/09/2002	08/09/2007	EF
EPIP-2-11	ONSITE SURVEYS	019	05/15/2002	05/15/2002	05/15/2007	EF
EPIP-2-12	OFFSITE SURVEYS	022	05/15/2002	05/15/2002	05/15/2007	EF

INPUT PARAMETERS: TYPE: PREP STATUS VALUE(S): EF 5 YEARS ONLY:

PREP EMERGENCY PLAN IMPLEMENTING PROCEDURE

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
EIP-2-13	IODINE AND PARTICULATE ACTIVITY DETERMINATION FROM AIR SAMPLES	008	07/27/1999	07/27/1999	07/27/2004	EF
EIP-2-14	POST PLUME ENVIRONMENTAL SAMPLING	015	10/08/2002	10/08/2002	10/08/2007	EF
EIP-2-15	POST PLUME EVALUATION OF OFFSITE DOSES DUE TO DEPOSITION	006	10/08/2002	10/08/2002	10/08/2007	EF
EIP-2-16	CORE DAMAGE ESTIMATION	013	12/03/2002	12/03/2002	12/03/2007	EF
EIP-2-17	HYPOTHETICAL (PRE-RELEASE) DOSE ESTIMATES	007	03/01/2002	03/01/2002	03/01/2007	EF
EIP-2-18	CONTROL ROOM DOSE ASSESSMENT	015	05/23/2003	05/23/2003	05/23/2008	EF
EIP-3-1	EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION AND OPERATIONS	023	08/08/2003	08/08/2003	08/08/2008	EF
EIP-3-2	ENGINEERING SUPPORT CENTER (ESC)	010	08/09/2002	08/09/2002	08/09/2007	EF
EIP-3-3	IMMEDIATE ENTRY	010	08/08/2003	08/08/2003	08/08/2008	EF
EIP-3-4	EMERGENCY TERMINATION AND RECOVERY	009	02/25/2003	02/25/2003	02/25/2008	EF
EIP-3-7	SECURITY DURING EMERGENCIES	010	10/08/2002	10/08/2002	10/08/2007	EF
EIP-4-1	PUBLIC INFORMATION RESPONSE TO AN UNUSUAL EVENT	007	08/08/2003	08/08/2003	08/08/2008	EF
EIP-4-3	ACCIDENTAL ACTIVATION OF GINNA EMERGENCY NOTIFICATION SYSTEM SIRENS	013	08/08/2003	08/08/2003	08/08/2008	EF
EIP-4-6	JOINT EMERGENCY NEWS CENTER ACTIVATION	009	08/31/2001	08/31/2001	08/31/2006	EF
EIP-4-7	PUBLIC INFORMATION ORGANIZATION STAFFING	023	05/23/2003	05/23/2003	05/23/2008	EF
EIP-4-8	SILENT TESTING OF THE GINNA SIRENS FROM THE TECHNICAL SUPPORT CENTER	001	02/25/2003	02/25/2003	02/25/2008	EF
EIP-4-9	ACTIVATION OF GINNA EMERGENCY SIRENS FROM THE TECHNICAL SUPPORT CENTER	002	05/08/2003	05/08/2003	05/08/2008	EF
EIP-4-10	SILENT TESTING OF THE GINNA SIRENS FROM THE COUNTY ACTIVATION POINTS	000	02/25/2003	02/25/2003	02/25/2008	EF
EIP-4-11	ACTIVATION OF THE GINNA SIRENS FROM THE COUNTY ACTIVATION POINTS	001	05/08/2003	05/08/2003	05/08/2008	EF
EIP-5-1	OFFSITE EMERGENCY RESPONSE FACILITIES AND EQUIPMENT PERIODIC INVENTORY CHECKS AN	028	06/20/2003	06/20/2003	06/20/2008	EF
EIP-5-2	ONSITE EMERGENCY RESPONSE FACILITIES AND EQUIPMENT PERIODIC INVENTORY CHECKS AND	031	06/20/2003	06/20/2003	06/20/2008	EF
EIP-5-5	CONDUCT OF DRILLS AND EXERCISES	015	05/23/2003	05/23/2003	05/23/2008	EF
EIP-5-6	ANNUAL REVIEW OF NUCLEAR EMERGENCY RESPONSE PLAN (NERP)	004	05/28/1999	05/28/1999	05/28/2004	EF
EIP-5-7	EMERGENCY ORGANIZATION	040	05/23/2003	05/23/2003	05/23/2008	EF
EIP-5-9	TESTING THE OFF HOURS CALL-IN PROCEDURE AND QUARTERLY TELEPHONE NUMBER CHECK	007	10/08/2002	10/08/2002	10/08/2007	EF
EIP-5-10	EMERGENCY RESPONSE DATA SYSTEM (ERDS)	007	12/03/2002	12/03/2002	12/03/2007	EF
NERP	GINNA STATION NUCLEAR EMERGENCY RESPONSE PLAN	022	07/31/2003	07/31/2003	07/31/2005	EF

PREP TOTAL: 57

GRAND TOTAL: 57