

THE ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

DRAFT

EMERGENCY PREPAREDNESS EXERCISE MANUAL

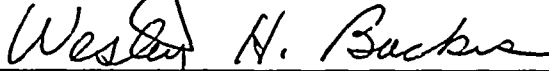
1992 PLUME EXPOSURE EMERGENCY PREPAREDNESS EXERCISE

October 8, 1992

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SCOPE AND OBJECTIVES



1.0 SCOPE AND ONSITE OBJECTIVES - PLUME EXPOSURE PATHWAY

1.1 Scope

The 1992 Emergency Preparedness Plume Exposure Pathway Exercise will simulate accident events culminating in a radiological accident resulting in the activation of onsite and offsite facilities. The Exercise will involve events that test the effectiveness of the Ginna Station Emergency Preparedness Program and the integrated capabilities of certain elements of the State of New York, Wayne County and Monroe County emergency organizations. The Exercise will include the partial mobilization of state and local resources to adequately verify their capability to respond to an accident at the Ginna Nuclear Power Plant.

1.2 Onsite Objectives for the 1992 Ginna Evaluated Plume Exposure Pathway Exercise

The major objective of the Exercise is to demonstrate the response capabilities of the Rochester Gas and Electric Corporation Emergency Organization. Within this overall objective, numerous individual objectives are specified as follows:

- 1.2.1 Demonstrate the ability to mobilize, staff and activate Emergency Response Facilities promptly.
- 1.2.2 Demonstrate the ability to fully staff facilities and to maintain staffing on an around-the-clock basis through the use of relief shift rosters (limited shift changes may occur to allow for operational restrictions).
- 1.2.3 Demonstrate the ability to make decisions and to coordinate emergency activities.
- 1.2.4 Demonstrate the adequacy of facilities and displays and the utilization of procedures to support emergency operations.
- 1.2.5 Demonstrate the ability to communicate with all appropriate locations, organizations, and field personnel.
- 1.2.6 Demonstrate the ability to mobilize and deploy Radiation Survey Teams.
- 1.2.7 Demonstrate the appropriate equipment and procedures for the determination of ambient radiation levels.



- 1.2.8 Demonstrate the proper use of appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 1.0 E-7 uCi/cc in the presence of noble gases.
- 1.2.9 Demonstrate the ability to project dosage to the public via plume exposure, based on Plant and field data, and to determine appropriate protective measures, based on plant conditions, Protective Action Guidelines, available shelter, evacuation time estimates, expected release duration, and other appropriate factors.
- 1.2.10 Demonstrate the ability to notify offsite officials and agencies within 15 minutes of declaration of an emergency.
- 1.2.11 Demonstrate the ability to periodically update offsite officials and agencies of the status of the emergency based on data available at Ginna Station.
- 1.2.12 Demonstrate the ability to notify emergency support pools as appropriate (i.e., INPO, ANI, etc.).
- 1.2.13 Demonstrate the ability to notify onsite personnel using plant alarms and public address systems.
- 1.2.14 Demonstrate the organization's ability to assess plant parameters and symptoms indicative of degrading plant conditions, and relate such symptoms to prescribed Emergency Action Levels.
- 1.2.15 Demonstrate the organization's ability to properly classify emergency conditions.
- 1.2.16 Demonstrate the organizational ability and resources necessary to manage an accountability of personnel within the restricted area.
- 1.2.17 Demonstrate the organizational ability and resources necessary to control access to the site.
- 1.2.18 Demonstrate the ability to continuously monitor and control emergency workers' exposure.
- 1.2.19 Demonstrate the adequacy of facilities and displays to support the Joint Emergency News Center operations.

- 1.2.20 Demonstrate the ability to brief the media in a clear, accurate, and timely manner.
- 1.2.21 Demonstrate the ability to provide advanced coordination of information released to the public.
- 1.2.22 Demonstrate the ability to establish and operate rumor control in a coordinated fashion.
- 1.2.23 Demonstrate the adequacy of in-plant post-accident sampling techniques and analysis.
- 1.2.24 Demonstrate the ability to develop preliminary short-term and long-term actions to support plant recovery.
- 1.2.25 Demonstrate the proper use of back-up communications in the event of selected communications equipment malfunction.
- 1.2.26 Demonstrate the ability to mobilize principal portions of the licensee emergency organization on an off-hours, unannounced basis. (To be performed as a mustering drill during November, 1992).
- 1.2.27 Demonstrate the ability to conduct a post-exercise critique which adequately characterizes licensee performance based upon controller and observer assessments.

1.3 Summary of Proposed Activities

Table 1.1 provides a list of proposed RG&E activities.



TABLE 1.1

1992 GINNA STATION EMERGENCY PREPAREDNESS EXERCISE
(PLUME EXPOSURE)

PROPOSED ONSITE ACTIVITIES

	<u>RG&E</u>
Notification of Agencies	Actual
Call Up of Personnel	Actual*
Activate Organization	Actual*
Maintain Security	Actual
Conduct Dose Assessment	Actual
Protective Action Recommendations	Actual
Operate Joint News Center	Actual
Dispatch Field Survey Teams	Actual-3**
Obtain PASS Sample	Actual

* Call up of personnel and facility activation will be performed in sequence. A separate, off-hours mustering drill will be conducted during the week of November 9, 1992.

** Field teams will be deployed and will demonstrate appropriate field monitoring techniques and communications with respective emergency response facilities. A minimum of 1 onsite and 2 offsite teams will be deployed.

SIMULATIONS

- o Respiratory protection and protective clothing will be simulated by onsite/offsite survey teams. In-Plant teams will don respiratory protection and protective clothing prescribed by Health Physics and Chemistry personnel according to postulated scenario plant conditions.
- o In general, Exercise participants should follow applicable plant procedures as closely as possible, and will be stopped by Controllers before actual equipment is manipulated (except PASS). Simulated repairs and other corrective actions should be described to Controller-/Evaluators as fully as possible.

1.4

SUMMARY OF PROPOSED OFFSITE ACTIVITIES

It is anticipated that Wayne and Monroe Counties and New York State personnel will participate to perform the following minimum functions:

1. Command and Control
2. Dose Assessment
3. Joint New Center Staffing
4. Protective Action Decisionmaking
5. Communications

EXERCISE SCENARIO

GINNA STATION
1992 EMERGENCY PREPAREDNESS EXERCISE

INITIAL CONDITIONS

1. The R. E. Ginna Nuclear Power Plant is operating at approximately 97% rated thermal power. The Plant has been operating at this power level continuously for approximately 150 days.
2. The "A" Steam Generator (S/G) primary to secondary leak rate increased approximately 5 days ago to a calculated 60cc/min. At approximately 0630 hours this morning the primary to secondary leak rate has again increased significantly as indicated by a substantial increase in radiation monitor R-15 (Air Ejector). Radiation monitor R-19 (S/G Blowdown) has also indicated an increase in activity. The Health Physics/ Chemistry Department is in the process of analyzing samples to determine the calculated leak rate.
3. Equilibrium Primary Coolant Isotopic activity as of 0300 hours (10/8/92 is provided in table 9.2 of scenario Section 9.3. Total activity is 2.56 microcuries/gram. Chemistry Log Sheet, available from the Controller.
4. The Reactor Coolant System (RCS) total leakage is 0.361 GPM as of 0400 hours this morning and has been increasing. Identified RCS Leakage is 0.073 GPM.
5. General weather conditions are partly cloudy with no current precipitation. For purposes of the Exercise, additional meteorological information in the Simulator Control Room should be obtained from the Plant Process Computer System (PPCS).
6. The Primary Water Treatment Plant is secured for major maintenance that will take approximately 3 days. the 100,000 Gallon Outside Condensate Storage Tank is at 20% Level. A Demineralizer Trailer has been ordered and is scheduled to arrive at 1300 hours today.
7. The House Heating Boiler is in service and Nuclear Steam is secured.

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1992 EMERGENCY PREPAREDNESS EXERCISE

ONSITE SEQUENCE OF EVENTS

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
0700	-00/15	Initial Conditions established
0715	00/00	Announcement to Commence Annual Emergency Exercise
0730	00/15	The Health Physics/Chemistry Department informs the Control Room that the "A" S/G calculated leak rate is approximately 450cc/min (i.e., ≈ 0.125 gpm).

UNUSUAL
EVENT

ANTICIPATED RESULTS

Control Room

Operators should begin performing the applicable actions of Operating Procedure O-6.10 (Plant Operations with Steam Generator Tube Leak Indication).

An orderly Plant shutdown should commence to be in Hot Shutdown within 6 hours and to be less than 350°F in the RCS within the next 6 hours as required by Plant Technical Specification.

An Unusual Event should be declared in accordance with EPIP 1-0, "Ginna Station Event Evaluation and Classification," EAL: Steam Generator Tube Rupture (SGTR); Steam Generator Tube Leakage > .1 GPM as identified by sampling. Appropriate offsite notifications should be made per EPIP 1-5.

If an Unusual Event not declared in approximately 15 minutes, a contingency message should be given out to declare it.

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
0755	00/40	<p>The "A" S/G ARV pops open and cannot be closed from the Control Room.</p> <p><u>ANTICIPATED RESULTS</u></p> <p><u>Control Room</u></p> <p>Should send an Auxiliary Operator to the Steam Header Area to close the Isolation Valve on the "A" S/G ARV.</p> <p>Operators performing the applicable actions of O-2.1.</p> <p><u>Technical Support Center</u></p> <p>The Plant Manager, Operations Assessment Manager, and Duty Engineer should be manning the TSC for Offsite Communications Assistance per EPIP 1-5.</p>
0810	00/55	<p>The Auxiliary Operator sent to isolate the "A" S/G ARV reports to the Control Room that the "A" S/G ARV is isolated, but he has noticed a steam leak on the "B" S/G ARV, between the ARV and the ARV Isolation Valve.</p> <p><u>ANTICIPATED RESULTS</u></p> <p><u>Control Room</u></p> <p>Should inform people manning the TSC of the "B" S/G ARV Line steam leak.</p> <p>May request Auxiliary Operator to isolate the "B" S/G ARV.</p> <p>Operators performing the applicable actions of O-2.1.</p> <p>Should inform the people manning the TSC of the "A" S/G ARV problem and isolation.</p>

APPROPRIATE
TIME

SCENARIO
TIME

EVENT DESCRIPTION

Technical Support Center

May request that the "B" S/G ARV be isolated or may wait until Maintenance personnel have inspected it.

May inform Control Room that they will take actions to have Maintenance personnel inspect for the "A" And "B" S/G ARV problems.

0815

01/00

Annunciator G-22 (ADFCS System Trouble) alarms.

ANTICIPATED RESULTS

Control Room

Operators perform the applicable actions of AR-G.22.

Operators should check the S/G levels to ensure proper level control.

Operators should inform the people manning the TSC and I & C Department of the ADFCS problem.

0840

01/25

The CCW Surge Tank Lo Level Alarm (AR-A-13) annunciates and the CCW level indicates it is decreasing.

ANTICIPATED RESULTS

Control Room

Operators perform the applicable actions of Alarm Response Procedure AR-A-13 (CCW Surge Tank Lo Level 41.2%).

Operators should send an Auxiliary Operator into the Auxiliary Building to identify the CCW Leak.

Should inform the people manning the TSC of the CCW leak.



<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
0850	01/35	<p>Auxiliary Operator checking the CCW leak in Auxiliary Building informs Control Room that the 1A CCW Pump Mechanical Seal is leaking and spraying on the pump motor.</p> <p>The running 1A CCW Pump trips out on overcurrent and annunciator (AR-A-17) alarms. The standby 1B CCW pump starts automatically and delivers required flow.</p> <p><u>ANTICIPATED RESULTS</u></p> <p><u>Control Room</u></p> <p>Operators perform the applicable actions of abnormal procedure AP-CCW.2 (Loss of CCW during power operation).</p> <p>Operators request the Auxiliary Operator sent to identify the CCW leak in the Auxiliary Building, to isolate the suction and discharge of the 1A CCW Pump and rack out its electrical breaker.</p> <p>Operators should inform the people manning the TSC of the 1A CCW Pump problems.</p>
0855	01/40	<p>The ADFCS problem with the MFW Regulating Valves is repaired.</p> <p><u>ANTICIPATED RESULTS</u></p> <p><u>Control Room</u></p> <p>Operators continue shutting Plant down per 0-2.1.</p>
0905	01/45	<p>Auxiliary Operator isolating the 1A CCW Pump informs Control Room that the Suction and Discharge Valves are closed and the electrical breaker is racked out.</p> <p><u>ANTICIPATED RESULTS</u></p> <p><u>Control Room</u></p> <p>Operators should ensure that 1A CCW Pump Control Switch is in pull stop and CCW Surge Tank level has returned to normal.</p>

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
0915	02/00	The following events occur simultaneously: <ul style="list-style-type: none"> • Pressurizer level and pressure decreases uncontrollably. • A reactor trip occurs automatically from low pressurizer pressure <u>or</u> is manually activated by the operator. • A safety injection occurs automatically from low pressurizer pressure <u>or</u> is manually activated by the operator. • The "A" S/G water level increases uncontrollably. • All safeguards equipment required is operating.

ALERT

ANTICIPATED RESULTS

Control Room

Operators performing the immediate actions of E-0 (Reactor trip or safety injection).

An ALERT should be declared in accordance with EPIP 1-0, "Ginna Station Event Evaluation and Classification," EAL: Steam Generator Tube Rupture (SGTR): SGRT > 100 GPM. Appropriate onsite and offsite notifications should be made per EPIP 1-5.

If and ALERT is not declared in approximately 15 minutes, a contingency message should be given out to declare it.

Operators transition to E-3 (Steam Generator Tube Rupture) and start performing its applicable actions.

0945	02/30	Accident Response and Evaluation continues.
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ANTICIPATED RESULTS

Control Room

Operators performing the applicable actions of E-3 (Steam Generator Tube Rupture) to stabilize the Plant.



<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
		<u>Technical Support Center</u> The TSC should be nearing operational readiness of the Emergency Response Organization. The TSC, when operational, should send repair teams into the Auxiliary Building to evaluate the 1A CCW Pump and motor problems. The TSC, when operational should send repair teams out to evaluate the "A" and "B" S/G ARV problems if not already done.
		<u>Emergency Operations Facility</u> EOF may be activating at this time due to Plant conditions.
1000	02/45	Accident response and evaluation continues. <u>ANTICIPATED RESULTS</u> <u>Control Room</u> Operators performing the applicable actions of E-3 (Steam Generator Tube Rupture) to stabilize the Plant. <u>Technical Support Center</u> The TSC should be assuming command and control.
1015	03/00	Annunciator J-9 (Safeguard Breaker Trip) Alarms. <u>ANTICIPATED RESULTS</u> <u>Control Room</u> When operators check the Board, the "A" SW Pump Switch indicates a white disagreement light and the "A" SW Pump indicates tripped. Operators/TSC should send an Auxiliary Operator to the Screen House to check on "A" SW pump. Operators should inform the TSC of the "A" SW Pump problem.

APPROPRIATE
TIME

SCENARIO
TIME

EVENT DESCRIPTION

1030

03/15

SITE AREA
EMERGENCY

The Auxiliary Operator sent to the Screen House to check the "A" SW Pump reports to the Control Room/TSC that he can find nothing wrong with the "A" SW Pump but he has smelled the strong odor of gas throughout the building with the strongest odor in the Basement.

ANTICIPATED RESULTS

Control Room

Should request that the Auxiliary Operator find the shutoff valves for the natural gas and propane gas to the Screen House and close them.

Should inform the TSC of the gas problem in the Screen House.

If not already isolated, should send an Auxiliary Operator to isolate the "B" S/G ARV when requested to do.

Technical Support Center

The TSC, after assessing Plant conditions, should:

Declare a SITE AREA EMERGENCY in accordance with EPIP 1-0, "Ginna Station Event Evaluation and Classification," EAL: Hazards being experienced or projected; entry of uncontrolled flammable gases into vital areas.

Appropriate notifications of offsite agencies should be made per EPIP 1-5.

If a Site Area Emergency is not declared in approximately 15 minutes, a contingency message should be given to declare it.

TSC should inform the EOF of Plant conditions and the Site Area Emergency Declaration.

A Site Evacuation should be commenced if it is determined necessary.

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
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Repair Teams

Repair team sent out to check the CCW Pump should report that the 1A CCW Pump Mechanical seal needs replacing and that the 1A CCW Pump motor needs to be cleaned and dried. They report this will take approximately 8 hours. They also report that the 1B CCW Pump Mechanical Seal is leaking a small amount.

Repair Team sent out to check the "A" S/G ARV control problem should report that the ARV's Mercoïd controller needs to be replaced. They report that it will take approximately 1 hour to do.

If not done earlier, the Repair Team sent out to check the "B" S/G ARV Steam leak request that it be isolated.

1045

03/30

Accident response and evaluation continues.

If not done earlier, the Auxiliary Operator sent out to isolate the "B" S/G ARV steam leak reports back that it is isolated.

ANTICIPATED RESULTS

Control Room

Operators performing the actions of E-3 (Steam Generator Tub Rupture) should have stabilized the Plant at approximately this time and be awaiting determination by the TSC as to what post SGTR cooldown procedure to use.

If not done earlier, should inform the TSC of the "B" S/G ARV steam leak isolation.

Technical Support Center

The TSC should be evaluating the flammable gas problem in the Screen House and be taking corrective actions required to return the Screen House to a safe condition.

The TSC Dose Assessment should calculate and quantify any release paths to the environment.

TSC should have determined and informed the Control Room to use ES-3.1 (Post-SGTR Cooldown using Backfill).

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
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Repair Teams

Repair Team sent out to check the "B" S/G ARV steam leak reports that it appears that the steam leak was from a ½-inch hole drilled almost through the pipe, and also that a flange is leaking.

They report that it will take approximately one and a half hours to repair the leak.

1100

03/45

Condensate Storage Tank (CST) levels decrease to 5 feet.

ANTICIPATED RESULTS

Control Room

Operators should refer to ER-AFW.1 (Alternate Water Supply to AFW Pumps) per foldout page of ES-3.1, Statement 4, which states, "If CST level decreases to less than 5 feet, then switch to alternate AFW supply (Refer to ER-AFW.1, Alternate Water Supply to AFW Pumps) and perform applicable actions.

Should inform TSC of the low level in the CSTs.

TECHNICAL SUPPORT CENTER

TSC evaluating Plant conditions and taking action where required.

TSC should inform security of the as found condition of the "B" S/G ARV steam leak.

TSC Dose Assessment performing offsite dose calculations as required.

TSC should be expediting the repair of the S/G ARVs because of their use during such events as loss of condenser and Plant cooldown.

TSC should send a Repair Team to check out the "A" SW Pump problem when the Screen House is declared safe for entry.

TSC should inform EOF of Plant status and problems.



APPROPRIATE TIME	SCENARIO TIME	EVENT DESCRIPTION
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Security

Should be evaluating the drilled hole in the "B" S/G ARV pipe.

Emergency Operation Facility

The EOF, after it is manned, should start assessing Plant conditions and take action as required.

1120

04/05

The "A" S/G ARV Mercoid is repaired and ready for return to service.

ANTICIPATED RESULTS

Control Room

Operators performing applicable actions of ES-3.1 (Post-SGTR Cooldown using Backfill).

Operators performing applicable actions ER-AFW.1.

Operators should return the "A" S/G ARV to service if requested by the TSC.

Technical Support Center

TSC evaluating Plant conditions and taking actions where required.

TSC Dose Assessment performing offsite dose calculations as required.

TSC may request the Control Room to return the "A" S/G ARV to service.

Security

Should be evaluating the drilled hole in the "B" S/G ARV pipe.

Emergency Operations Facility

EOF should be assessing Plant conditions and taking action as required.

APPROPRIATE TIME	SCENARIO TIME	EVENT DESCRIPTION
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EOF Dose Assessment should be performing offsite Dose Assessment, as required, in parallel with the TSC Dose Assessment.

The EOF should be assuming command and control at approximately this time.

Repair Teams

Performing actions as required to return equipment to service as soon as possible.

1145

04/30

The "B" S/G ARV steam leak is repaired and ready for return to service.

ANTICIPATED RESULTS

Control Room

Operators should be performing the applicable actions of the ES-3.1 (Post-SGTR Cooldown using Backfill).

Technical Support Center

TSC evaluating Plant conditions and taking action as required.

EOF evaluating Plant conditions and taking action as required.

TSC should request Control Room to return the "B" S/G ARV to service.

~1230

~05/15

Recover/Re-entry discussions should commence. This should include preliminary discussions about short term and intermediate term concerns, including preliminary designation of the Recovery Organization.

State and counties may also conduct parallel discussions. Recovery/Re-entry interface between TSC/EOF and offsite agencies should be demonstrated as time allows.

~1315

~06/00

After all Exercise Objectives have been demonstrated, the Exercise will be terminated.



RADIOLOGICAL SUMMARY

9.1 Radiological Summary

A. Source Term

The radiological source term assumed for this scenario was selected to include appropriate quantities of noble gas and radioiodine resulting from the postulated accident scenario.

Protective action recommendations i.e., sheltering or evacuation for certain Emergency Response Planning Areas (ERPAs) will not be required based upon the anticipated declaration of a Site Area Emergency and plant conditions. As a result of accident release rates, the projected whole body and thyroid doses will not exceed EPA Protective Action Guides beyond the Site Boundary.

The assumed noble gas and radioiodine release quantities are shown in Figure 9.1 as a function of time. The scenario involves two release points which is from the Air Ejector and the "A" Atmospheric Relief Valve (ARV). This occurs as follows:

Pre-Steam Generator Tube Rupture

<u>Time</u>	<u>Release Point</u>	<u>Release Rate (Ci/sec)</u>
0700-	Air Ejector	1.77 E-3 (Noble Gas)
0915		2.24 E-8 (Radioiodine)

The noble gas-to-radioiodine ratio assumed is 7.89 E4:1 during this period of release.

<u>Time</u>	<u>Release Point</u>	<u>Release Rate (Ci/sec)</u>
0755-	ARV	8.32 E-3 (Noble Gas)
0810		1.76 E-9 (Radioiodine)

The noble gas-to-radioiodine ratio assumed is 7.89 E4:1 during this period of release.

Steam Generator Tube Rupture

<u>Time</u>	<u>Release Point</u>	<u>Release Rate (Ci/sec)</u>
0915-	Air Ejector	5.24 E-1 (Noble Gas)
0935		2.55 E-4 (Radioiodine)

The noble gas-to-radioiodine ratio assumed is 2000:1 during this period of release. Isotopic breakdowns of assumed noble gas, radioiodine and particulate release quantities are provided in Table 9.1.

<u>Time</u>	<u>Release Point</u>	<u>Release Rate (Ci/sec)</u>
0935-	Air Ejector	6.23 E-2 (Noble Gas)
0955		3.12 E-5 (Radioiodine)

The noble gas-to-radioiodine ratio assumed is 2000:1 during this period of release. Isotopic breakdowns of assumed noble gas, radioiodine and particulate release quantities are provided in Table 9.1.

B. Integrated Offsite Doses Due to Plume Exposure

The downwind integrated doses from the scenario release are as follows:

<u>Time</u>	<u>Release Point</u>	<u>Integrated Dose (Rem)</u>
0700-	Air Ejector	1.25 E-4 (Whole Body)
0915		8.75 E-7 (Child Thyroid)
0755-	ARV	6.52 E-5 (Whole Body)
0810		7.63 E-9 (Child Thyroid)
0915-	Air Ejector	5.34 E-3 (Whole Body)
0935		1.48 E-3 (Child Thyroid)
0936-	Air Ejector	6.51 E-4 (Whole Body)
0955		1.81 E-4 (Child Thyroid)

Total Whole Body Dose (at Site Boundary) = 6.13 E-3 Rem

Total Child Thyroid Dose (at Site Boundary) = 1.66 E-3 Rem

C. Principal Plant Radiological Indications

Figures 9.1 through 9.3 provide trend plots for key plant radiological indications, including plant vent concentration, letdown monitor level, containment radiation level and reactor coolant concentration.

TABLE 9.1

The assumed release quantities for the Ginna Exercise Scenario are summarized as follows:

<u>Time : 0915-0935 hr</u>		
<u>Nuclide</u>	<u>Curie/Sec</u>	<u>Total Curies Released</u>
Kr-85	4.0 E-04	4.8 E-01
Kr-85m	1.3 E-02	1.7 E+01
Kr-87	1.8 E-02	2.3 E+01
Kr-88	2.1 E-02	2.5 E+01
Xe-131m	4.9 E-03	5.9 E+00
Xe-133	3.3 E-01	4.0 E+02
Xe-133m	4.9 E-02	5.9 E+01
Xe-135	4.9 E-02	5.9 E+01
Xe-135m	1.6 E-02	1.9 E+01
Xe-138	6.3 E-02	7.6 E+01
Total Noble Gas	5.2 E-01	6.3 E+02
I-131	7.5 E-05	9.0 E-02
I-132	4.9 E-05	5.9 E-02
I-133	4.6 E-05	5.5 E-02
I-134	4.2 E-05	5.0 E-02
I-135	4.3 E-05	5.2 E-02
Total Radioiodine	2.6 E-04	3.1 E-01
Long-Lived Particulate	1.2 E-09	1.5 E-06

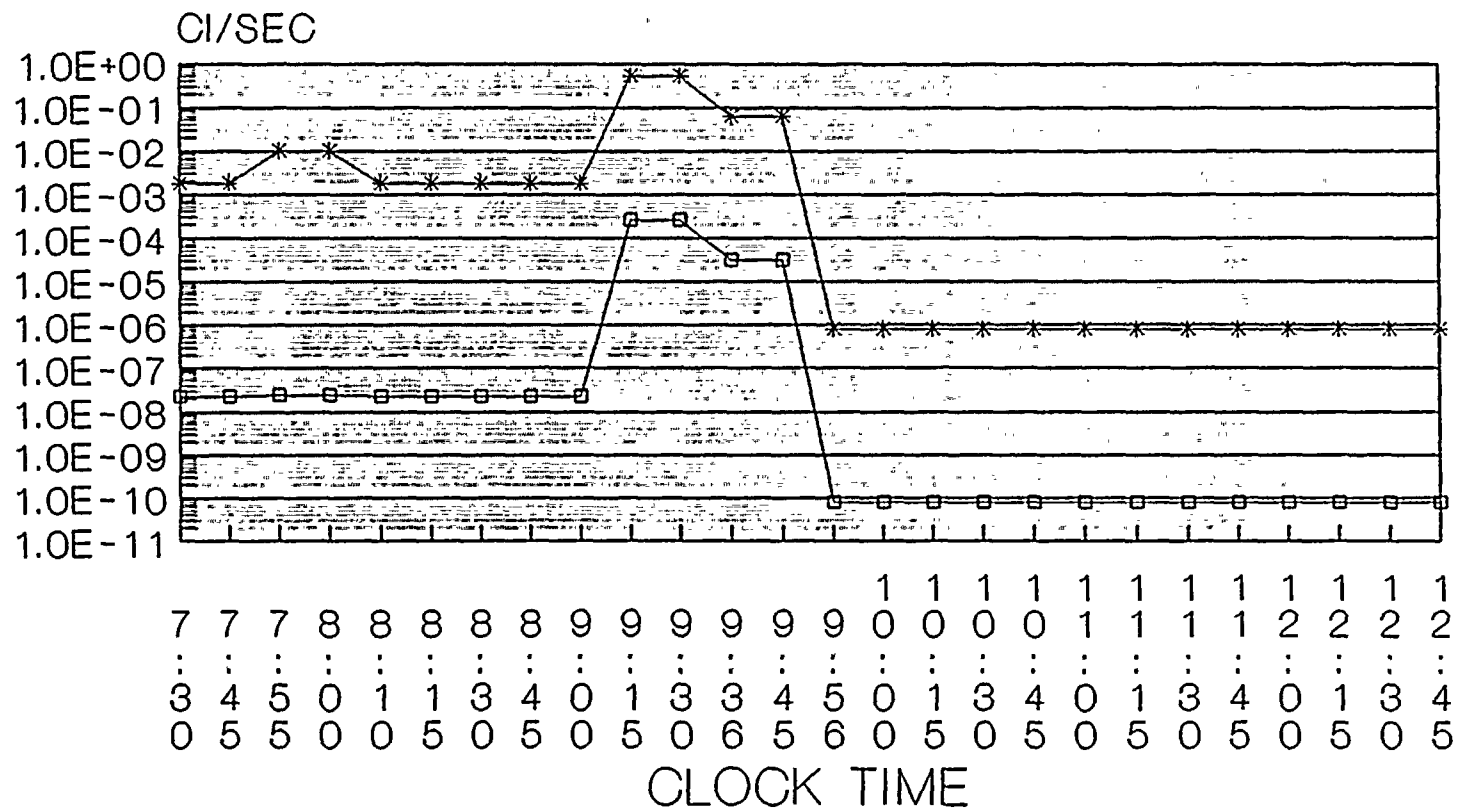


TABLE 9.1 (continued)

The assumed release quantities for the Ginna Exercise Scenario are summarized as follows:

<u>Time : 0936-0955 hr</u>		
<u>Nuclide</u>	<u>Curie/Sec</u>	<u>Total Curies Released</u>
Kr-85	4.8 E-05	5.8 E-02
Kr-85m	1.5 E-03	1.8 E+00
Kr-87	2.1 E-03	2.5 E+00
Kr-88	2.5 E-03	3.0 E+00
Xe-131m	5.8 E-04	7.0 E-01
Xe-133	3.9 E-02	4.7 E+01
Xe-133m	5.8 E-03	7.0 E+00
Xe-135	5.8 E-03	7.0 E+00
Xe-135m	1.9 E-03	2.3 E+00
Xe-138	7.5 E-03	9.0 E+00
Total Noble Gas	6.2 E-02	7.5 E+01
I-131	8.9 E-06	1.1 E-02
I-132	5.8 E-06	7.0 E-03
I-133	5.5 E-06	6.6 E-03
I-134	5.0 E-06	6.0 E-03
I-135	5.1 E-06	6.1 E-03
Total Radioiodine	3.1 E-05	3.7 E-02
Long-Lived Particulate	1.4 E-10	1.7 E-07

FIGURE 9.1 ASSUMED SOURCE TERMS



—*— NOBLE GAS CI/SEC —□— RADIOIODINE CI/SEC

FIGURE 9.2

AIR EJECTOR VENT CONCENTRATIONS

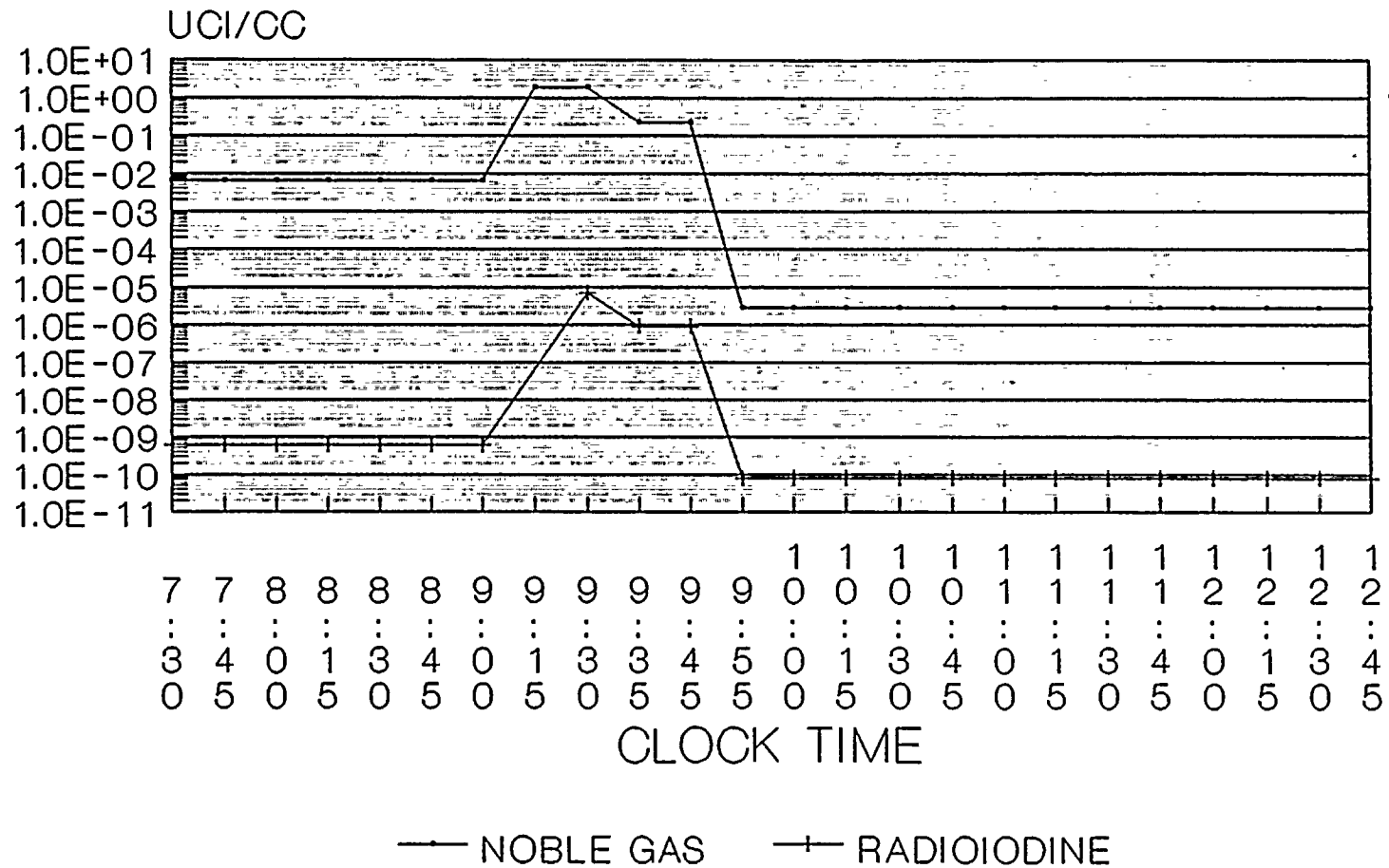
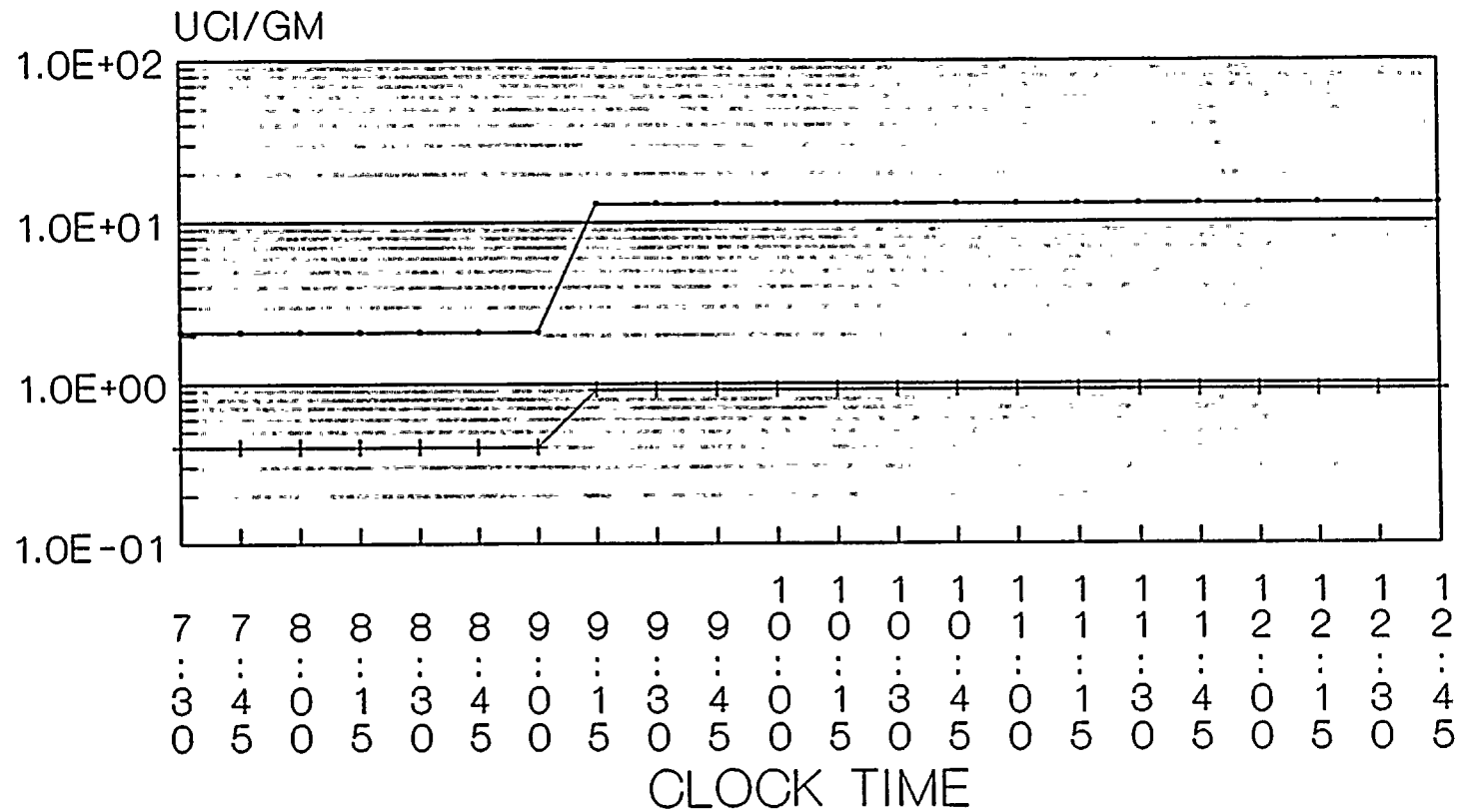


FIGURE 9.3 RCS CONCENTRATIONS VS TIME





METEOROLOGICAL ASSUMPTIONS



10.1

Meteorological Conditions

A. Basis

The meteorological conditions for this scenario were based upon historical meteorological data recorded by the Ginna primary weather tower and the National Weather Service on August 22, 1988. Minor editing was performed on the data to provide the wind direction and atmospheric stability conditions required by the scenario during the period of release.

National Weather Service and other Exercise controllers will provide Exercise participants weather forecast summaries based on the meteorological data and other supporting information available from the historical record. The goal of this approach is to provide participants with more realistic forecast information.

B. Scenario Assumptions

The scenario begins with light, southerly winds which shift and become northeasterly by mid-morning.

During the period of release due to the Steam Generator Tube Rupture (0915-0955 hr), the average meteorological conditions are as follows:

Wind Speed = 5 mph (at 33 ft)

Wind Direction = 50 degrees (at 33 ft; wind from)

Pasquill Stability = E

FIGURE 10.1 DIRECTION OF THE PLUME

