NINE MILE POINT NUCLEAR STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-EPP-05A

REVISION 02

LOCAL AREA/BUILDING EVACUATION

TECHNICAL SPECIFICATION REQUIRED

Approved by: _____ 3 Sep 02
G. L. Detter General Manager Support Services Date

Effective Date: 09/16/2002

PERIODIC REVIEW DUE DATE JANUARY, 2003

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1.0 PURPOSE

To outline the method for evacuating local areas and buildings without evacuating the entire Protected Area or Exclusion Area when required to ensure the health and safety of personnel within those areas.

2.0 RESPONSIBILITIES

2.1 **The Station Shift Supervisor (SSS)/Emergency Director (SSS/ED) or Emergency Director/Recovery Manager (ED/RM)** directs a Local Area or Building Area Evacuation in accordance with this procedure when the health and safety of personnel is or may be in question.

2.2 **The Chief Radiation Protection (RP) Technician or Lead RP Technician** provides assistance for evacuees as necessary at the Radiologically Controlled Area (RCA) access control point.

2.3 **All station personnel** listen to and follow instructions given in station announcements.

2.4 **Security Site Supervisor** coordinates with the SSS/ED as required to ensure an orderly evacuation.

2.5 **Relocation Building Management Representative**

2.5.1 Coordinates the arrival of evacuees to the building.

2.5.2 Provides for emergency status announcements for the building as information is made available.

2.5.3 Provides for the orderly return of personnel to work or home when appropriate.

2.6 **First Line Supervisors/Fire Wardens** should ensure that their people are accounted for following an evacuation involving the area/building they normally occupy.

3.0 PROCEDURE

3.1 Station Shift Supervisor/Emergency Director (SSS/ED

3.1.1 When it is determined that conditions exist that pose a localized hazard to employees the SSS/ED should:

a. Determine extent of area/building to be evacuated.

b. If accounting of personnel is determined to be necessary, implement EPIP-EPP-05D, "Accountability".

c. Contact Security Site Supervisor to coordinate the orderly evacuation of personnel. This discussion should include:

- Evacuation direction based upon location of hazard and wind direction
- Where evacuees are to be re-located (another building in a safe area or home)
- Traffic Controls required/needed
- Order of evacuation if multiple buildings/areas are involved (to limit confusion and traffic congestion)

d. Provide required information to the CSO.

e. IF an emergency has been declared, ensure the announcement for a Local Area/ Building Evacuation is made in accordance with EPIP-EPP-18.

OR

IF no emergency has been declared, ensure the announcement for a Local Area/ Building Evacuation is made in accordance with Attachment 1.

3.1.2 When conditions that necessitated the evacuation have been terminated the SSS/ED shall:

a. Ensure the announcement for termination in accordance with EPIP-EPP-18 is made.

3.2 Security Site Supervisor

3.2.1 When notified that a local area/building evacuation may be in order, coordinate with the SSS/ED to:

a. Determine where evacuees should be relocated to ensure safety and minimize confusion and traffic congestion.

b. Recommend order of area/building evacuation if multiple areas/building are involved.

c. Determine security needs to ensure an orderly evacuation. Consider:

- Evacuation control at evacuation site and relocation area
- Traffic control at parking areas near evacuation site, at relocation area and along access road. (Request assistance as necessary from any available department or Local Law Enforcement Agency)

d. If evacuating to another building, contact a management representative located in the building (ex: Training Manager at NLC, VP Engineering at ESB etc.) and inform them to prepare for the arrival of evacuees.

e. If accountability is directed, implement EPIP-EPP-05D.

3.2.2. When the emergency requiring evacuation has been terminated, and return of personnel is permitted, coordinate with the SSS/ED for the orderly return of evacuees.

3.3 All Station Personnel Within the Evacuated Area/Building

NOTE: Ensure compliance with all escort responsibilities. Visitors should be escorted to site access and carded out of the area.

3.3.1 Immediately upon hearing the Evacuation Alarm and announcement to evacuate the area/building:

a. Leave the area immediately, as directed.

b. Adhere to directions provided by the announcement.

c. Do not return until the situation is terminated or your assistance is required to resolve the situation as directed by SSS/ED or your supervisor.

d. If the area/building is contaminated

1. Leave the area removing PC's as directed by the announcement.

2. Go directly to the nearest Radiologically Controlled Area (RCA) access control point.

3. If necessary, obtain Radiation Protection Technician assistance in removal of PC's and decontamination.

4. Leave the RCA access control point and remain out of the area until informed that the situation has been terminated or your assistance is required to resolve the situation as directed by the SSS/ED or your supervisor.

3.4 The Chief Radiation Protection Technician or Lead Technician

3.4.1 Immediately upon hearing the Evacuation Alarm and announcement to evacuate the area/building:

a. Ensure an RP Tech reports to the RCA access control point to provide assistance as required for evacuees requiring PC removal and/or decontamination until situation is terminated or directed otherwise by the SSS/ED or your supervisor.

b. On back shift, request the SSS/ED contact RP Supervision and obtain additional RP Support as necessary.

3.5 Relocation Building Management Representative

3.5.1 Coordinate the arrival of evacuees to the building by ensuring adequate space is made available. (Cancel classes, open/unlock doors, direct personnel to where you want them etc..).

3.5.2 Obtain emergency status information from the control room and provide emergency status announcements for the building, using available PA systems, or runners.

3.5.3 If accountability was not announced, obtain accountability information from first line supervisors/fire wardens from building being evacuated.

3.5.4 If anyone is reported missing, contact the SSS/ED and request the implementation of EPIP-EPP-03 for the missing person(s).

3.5.5 Contact the SSS/ED and determine future plans for evacuees. (Home or return to work)

3.5.6 Coordinate with Security Site Supervisor to ensure the orderly return of personnel to work or home when appropriate.

3.6 First Line Supervisors/Fire

3.6.1 If accountability was not announced for the evacuation involving the area/building you normally occupy, ensure your people are accounted for at the relocation building.

3.6.2 Inform the Relocation Building Management Representative of the status of your department personnel. (All accounted for or provide names of those missing)

4.0 DEFINITIONS

4.1 A **local area** may be any area that is physically separated from other areas, by walls or elevation differences, or partitions, or doors.

4.2 A **building** may be any enclosed structure, such as the Reactor Building, Turbine Building, Screen house, L-Building, etc, whose ventilation system is separate from other structure's ventilation system.

5.0 REFERENCES AND COMMITMENTS

5.1 Technical Specifications

None

5.2 Licensee Documentation

Nine Mile Point Site Emergency Plan

5.3 Standards, Regulations, and Codes

NUREG-0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980

5.4 Policies, Programs, and Procedures

5.4.1 EPIP-EPP-18, Activation and Direction of the Emergency Plans

5.4.2 EPIP-EPP-05D, Accountability

5.5 Commitments

Sequence Number	Commitment Number	Description

None

6.0 RECORD REVIEW AND DISPOSITION

The following records generated by this procedure shall be maintained by Records Management for the Permanent Plant File in accordance with NIP-RMG-01, Records Management

- Attachment 1, Emergency Announcement

The following records generated by this procedure are not required for retention in the Permanent Plant File:

- None

LAST PAGE

LOCAL AREA/BUILDING EVACUATION

(No emergency has been declared)

Instructions: (check boxes to select appropriate announcement)

1. Place GAltronics in Merge,
2. Sound the EVACUATION alarm for 10 seconds
3. Announce (if checked, include in announcement),

☐ a. *Attention, Attention all personnel, this (is / is not) _____ a drill.*

☐ b. *Nine Mile Point (Unit 1 or 2) is ordering an evacuation of the (Unit 1 or 2): (Provide specific location or building to be evacuated)*

_____

☐ c. *Due to: (provide conditions necessitating the evacuation)*

_____

☐ d. *All personnel are to leave the (Unit 1 or 2) _____ (area/building)*

☐ 1. *Staying clear of _____ (area/elevation) and report to _____.*

OR

☐ 2. *Using the closest possible exit, and report to _____ _____.*

☐ e. *Accountability is being performed, all personnel shall report to an assembly area, card in and remain in the area until further notice.*

☐ f. *Personnel in protective clothing should* (select appropriate)*:*

☐ 1. *Leave the area removing PC's as indicated at the step off pad.*

OR

☐ 2. *Leave the area immediately and obtain Radiation Protection assistance at the control point.*

☐ g. *I repeat this is/is not a drill.*

4. Repeat the alarm and announcement.

5. Consult with opposite unit SSS and determine if GAltronics should be left in Merge (required for declared emergencies for the duration of the event.

NINE MILE POINT NUCLEAR STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-EPP-08

REVISION 13

OFF-SITE DOSE ASSESSMENT AND PROTECTIVE ACTION RECOMMENDATION

TECHNICAL SPECIFICATION REQUIRED

Approved by:
G. L. Detter

General Manager Support Services

23 Sep 02
Date

Effective Date: 09/30/2002

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1.0 PURPOSE

To provide the methods for determining meteorology data, release rates, dose assessment and protective actions during accident conditions at Nine Mile Point.

2.0 PRIMARY RESPONSIBILITIES

2.1 The **Station Shift Supervisor/Site Emergency Director (SSS/ED)**:

2.1.1 Ensures meteorological data acquisition, release rate determination, and dose assessment are performed during the initial stages of an emergency to support development of Protective Action Recommendations (PARs)

2.1.2 Approves PARs and ensures their timely issue to the State and County

2.2 The **Emergency Director/Recovery Manager (ED/RM)** approves PARs prior to their transmittal to the State and County, following EOF activation.

2.3 The **Radiation Assessment Manager (RAM)** is responsible to the TSC Manager for managing the onsite radiological monitoring and assessment aspects of the station during an emergency, following TSC activation.

2.4 **Chemistry Technicians** perform release rate assessments, obtain meteorological data, and develop PARs, prior to EOF activation.

2.5 The **Offsite Dose Assessment Manager (ODAM)** manages the offsite dose aspects of an emergency in order to assess the radiological consequences to the public, following EOF activation.

2.6 The **Radiological Assessment Staff** is responsible to the ODAM for obtaining meteorological data, determining source term, performing dose assessment, and developing PARs, following EOF activation.

3.0 PROCEDURE

3.1 Dose Assessment and Protective Action from the Control Room

* *

CAUTION

Calculation involving the determination of release rates and/or protection action shall be self-checked for accuracy.

* *

3.1.1 Chemistry Technician Actions

a. Consult the SSS/ED on plant conditions and possible release paths. If a General Emergency has been declared, assist SSS/ED in making Protective Action Recommendations based on plant conditions using Attachment 1.

b. Access EDAMS computer using Attachment 2

c. Obtain meteorological data using Attachment 3.

d. Assess effluent monitor readings and conditions.

e. Determine release rate using Attachment 4. Combine multiple release points as follows:

   1. Sum all release points from the same elevation (ground or elevated).

   2. Calculate the total release rate from combined ground and elevated sources using the workspace on Attachment 1.

f. Use Attachment 1 flowchart and advise SSS/ED of any PARs recommended by the flowchart.

g. IF an unmonitored atmospheric release is suspected or known to be in progress, then assist the SSS/ED in the following actions:

   1. Advise the SSS/ED to expedite the dispatch of Radiation Protection (RP) Technician. Request assistance of the unaffected Unit or J.A. Fitzpatrick if needed.

   2. The RP Technician should be dispatched to potential plume centerline (wind direction (degrees) ± 180° = plume centerline), as close to the site boundary as practicable. See Attachment 1, Figure 1.4 for Site boundary location.

   3. IF readings indicate > 1 rem/hr based on field survey perform the actions indicated in Attachment 1.

3.1.1 (Cont)

h. Assist Communications Aide in completing the meteorological data and release rate sections of the Part 1 Notification Fact Sheet.

i. Continue to monitor meteorological data, changes in effluent conditions or conditions that might lead to abnormal radiological effluents.

j. When contacted by EOF Dose Assessment Staff, provide briefing on:

- Status of any radiological releases
- Dose assessments efforts to date
- Impending or actual PARs

3.1.2 SSS Actions

a. Verify that the Chemistry Technician is performing dose assessment and protective action development in a timely fashion and in accordance with Attachment 1.

b. Assess any release rates provided by the Chemistry Technician against the Emergency Action Levels (EAL).

c. Review AND approve PARs recorded on the Notification Fact Sheet Part 1, as required. Use ERPA map in Attachment 1 if desired.

3.2 Dose Assessment and Protective Actions from the EOF

3.2.1 Offsite Dose Assessment Manager (ODAM) Actions

a. IF at any time the initiating conditions listed in Attachment 1 are met, THEN perform the actions listed in that attachment.

b. Perform actions as indicated in EPIP-EPP-23.

c. Verify Environmental Survey Sample Team Coordinator has been assigned and is:

1. Preparing for the dispatch of downwind survey teams.

2. Aware of meteorological advisor status.

3.2.1 (Cont)

d. Perform or have performed the following:

1. Obtain meteorology data using Attachment 3 of this procedure.

2. Obtain effluent monitor readings and calculate release rate using Attachment 4 of this procedure.

3. Perform dose assessment calculations and PARs using Attachment 5 of this procedure.

e. Interface with State and County representatives in the EOF.

1. Keep State/County representatives informed of confirmed data and results.

f. Complete Part 2 Notification Fact Sheet in accordance with EPIP-EPP-23.

g. Constantly reassess effluent monitors (release rate) and meteorological data for changes. Perform new dose assessment as needed. Develop new PARs and/or verify the adequacy of PARs already made.

h. As Downwind Survey Team (DST) becomes available, utilize it to verify release rates. If these refined release rates differ significantly from those calculated from effluent monitor readings, reperform dose assessment using refined release rates.

i. Provide data for the Part 1 Notification Fact Sheet as requested.

j. Provide ED/RM with pertinent information as needed.

1. Changing radiological conditions that may lead to PARs.

2. Protective actions for site staff.

k. Maintain Chronological Release Rate Log (see Attachment 5.1).

3.2.2 EOF Dose Assessment Staff

a. IF at any time the initiating conditions listed in Attachment 1 are met, THEN perform the actions listed in that attachment.

b. Perform actions as indicated in EPIP-EPP-23.

c. Perform any actions as requested by the ODAM, including:

- Obtaining meteorological data (Attachment 3)
- Obtaining release rate data (Attachment 4)
- Performing dose assessment and protective action recommendations (Attachment 5)

4.0 DEFINITIONS

4.1 CDE_T. Committed dose equivalent to the thyroid for the child.

4.2 EDAMS. Emergency Dose Assessment Modeling System. A PC-based computer program that calculates release rates, doses and protective actions, and obtains meteorological data for emergencies.

4.3 MMS. Meteorological Monitoring System. Consists of the dedicated computer, main, backup and inland towers and software. Stores and edits site meteorological data.

4.4 RADDOSE. A subprogram of EDAMS, it performs the dose assessment functions during emergencies.

4.5 SHELTERING. A protective action whose benefit is to bring the public to a heightened state of awareness. No dose reduction is assumed for sheltering.

4.6 TEDE. Total Effective Dose Equivalent.

5.0 REFERENCES/COMMITMENTS

5.1 Technical Specifications

None

5.2 Licensee Documentation

5.2.1 NMP Unit 1 FSAR, Section XV

a. Table XV-32

b. Table XV-28

c. Table XV-29

d. Table XV-23

e. Table XV-29d

f. Section 1.3.1

g. Section 2.1

5.2.2 NMP Unit 2 USAR, Section 15

a. Table 15.6-15b

b. Table 15.4-12

c. Table 15.7-11

d. Table 15.6-8

e. Table 15.7-4

f. Table 15.6-3

g. Table 16.6-19

5.2.3 SEP, Nine Mile Point Nuclear Station Site Emergency Plan

5.2.4 NMPC Correspondence 96-MET-001 (Backup Tower Wind Speed Correction Factor)

5.2.5 NMP Correspondence 96-MET-002 (Main Tower Wind Speed Correction Factor)

5.2.6 NMP Correspondence 96-MET-004 (Backup Tower Wind Direction Concerns)

5.2.7 NMP Correspondence 96-MET-003 (Discussion at DER C-95-0693)

5.2.8 NMP Correspondence 96-MET-005 (Main Tower 30' Sigma Theta Concern)

5.2.9 NMP Correspondence 97-MET-002 (Main Tower Wind Obstructions)

5.3 Standards, Regulations, and Codes

NUREG-0654, FEMA-REP-1, Rev 1, Supp 3, Criteria for Protective Action Recommendations for Severe Accidents

5.4 Policies, Programs, and Procedures

5.4.1 EPIP-EPP-07, Downwind Radiological Monitoring

5.4.2 EPIP-EPP-15, Health Physics Procedure

5.4.3 EPIP-EPP-23, Emergency Personnel Action Procedures

5.5 Commitments

DER C-95-0693 (for Attachment 3)

6.0 RECORDS REVIEW AND DISPOSITION

6.1 The following records generated by this procedure shall be maintained by Records Management for the Permanent Plant File in accordance with NIP-RMG-01, Records Management:

NOTE: For records generated due to an actual declared emergency only.

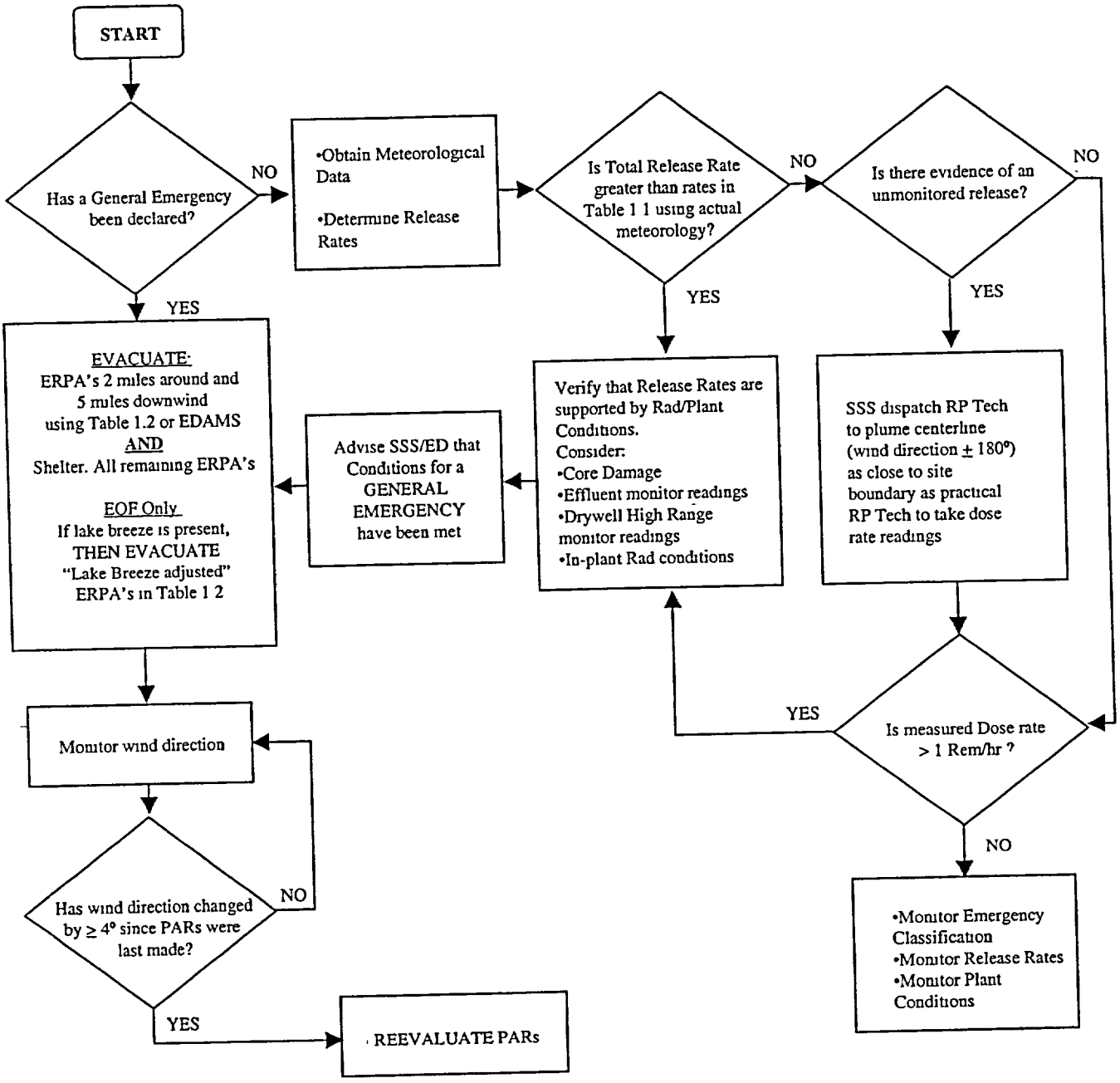
- Attachment 1, Initial Dose Assessment and Protective Actions
- Attachment 4, Release Rate Determination
- Figure 5.1, Chronological Release Rate Log
- Figure 5.2, EDAMS Data Entry Form

6.2 The following records generated by this procedure are not required for retention in the Permanent Plant File:

NOTE: For records generated NOT due to an actual declared emergency only.

- Attachment 1, Initial Dose Assessment and Protective Actions
- Attachment 4, Release Rate Determination
- Figure 5.1, Chronological Release Rate Log
- Figure 5.2, EDAMS Data Entry Form

ATTACHMENT 1: INITIAL DOSE ASSESSMENT AND PROTECTIVE ACTIONS



*Use this formula if release has a ground AND elevated source:

$$\left[\frac{\text{Ground Release Rate (Ci/s)}}{\text{Table 1.1 Ground Release Rate (Ci/s)}}\right] + \left[\frac{\text{Elevated Release Rate (Ci/s)}}{\text{Table 1.1 Elevated release rate (Ci/s)}}\right] = \text{IF} \geq 1\text{, A General Emergency Exists}$$

$$\left[\frac{\quad}{\quad}\right] + \left[\frac{\quad}{\quad}\right] =$$

TABLE 1.1 - GENERAL EMERGENCY RELEASE RATES

Ground Release (Ci/s)				
Wind Speed (mi/h)	Stability Class			
	A	B/C	D	E/F/G
0-3	1333	213	119	38
4-6	3226	286	143	48
7-9	5556	526	250	83
10-13	7692	769	357	117
14-17	10753	1075	500	164
18-21	13514	1389	667	213
>21	16393	1667	833	256

Elevated Release (Ci/s)				
Wind Speed (mi/h)	Stability Class			
	A	B/C	D	E/F/G
0-3	2041	1124	3030	769
4-6	3703	909	769	769
7-9	5882	1515	1075	1250
10-13	7692	2083	1388	1724
14-17	11494	2857	1818	2273
18-21	14286	3704	2273	2778
>21	17241	4348	2632	3226

TABLE 1.2 - AFFECTED ERPAs

Wind Direction From	2 Miles Around and 5 Miles Downwind	EOF Only beyond this line!	Lake Breeze Adjusted (5 Mile Radius)
214 to 222	1, 2, 3, 26, 27		
223 to 233	1, 2, 3, 26, 27		4, 7
234 to 240	1, 2, 3, 7, 26, 27		4
241 to 254	1, 2, 3, 4, 7, 26, 27		9
255 to 262	1, 2, 3, 4, 7, 26, 27		9
263 to 278	1, 2, 3, 4, 7, 9, 26, 27		5
279 to 292	1, 2, 3, 4, 5, 7, 9, 26, 27		10
293 to 305	1, 2, 3, 4, 5, 7, 9, 10, 26, 27		
306 to 311	1, 2, 3, 4, 5, 7, 9, 10, 26, 27		
312 to 332	1, 2, 3, 4, 5, 7, 9, 10, 26, 27		6, 11
333 to 340	1, 2, 3, 4, 5, 9, 10, 11, 26, 27		6, 7, 12
341 to 349	1, 2, 3, 4, 5, 9, 10, 11, 26, 27		6, 7, 12
350 to 356	1, 2, 3, 5, 6, 9, 10, 11, 26, 27		4, 7
357 to 0 0 to 12	1, 2, 3, 5, 6, 9, 10, 11, 26, 27		4
13 to 20	1, 2, 3, 5, 6, 10, 11, 26, 27		4, 9
21 to 51	1, 2, 3, 5, 6, 10, 11, 26, 27		9
52 to 56	1, 2, 3, 5, 6, 11, 26, 27		10
57 to 61	1, 2, 3, 5, 6, 11, 26, 27		10
62 to 70	1, 2, 3, 6, 11, 26, 27		10
71 to 89	1, 2, 3, 6, 26, 27		11
90 to 95	1, 2, 3, 6, 26, 27		5, 11, 12
96 to 114	1, 2, 3, 26, 27		6, 12
115 to 146	1, 2, 3, 26, 27		
147 to 213	1, 2, 3, 26, 27		

TABLE 1.3 - EPA 400 Protective Action Guidelines (EPA PAGs)

PAR	TEDE (rem)	CDE_T (rem)
Evacuate	> 1	> 5

FIGURE 1.4 - Site Boundary Map

Site Boundary Map

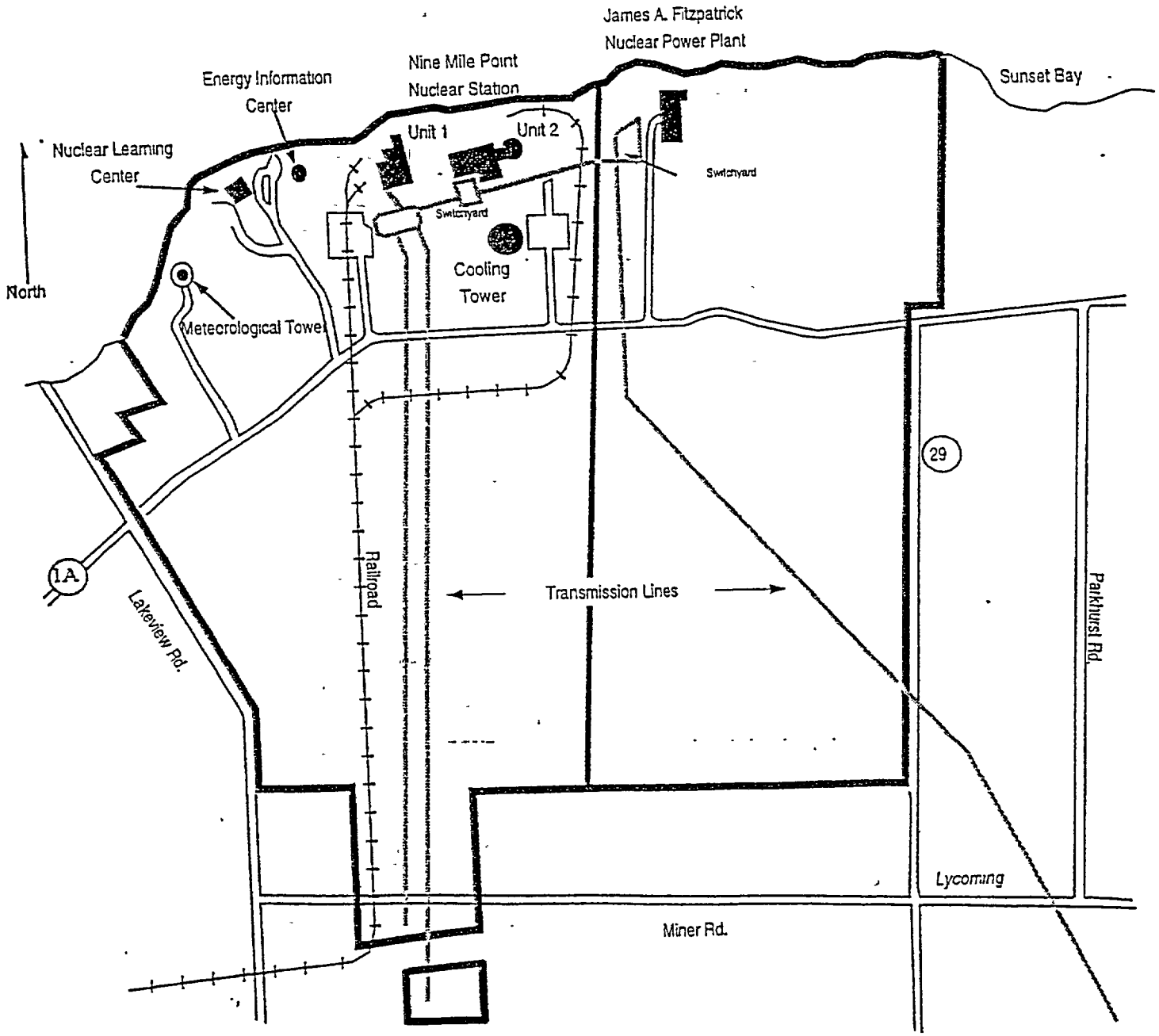
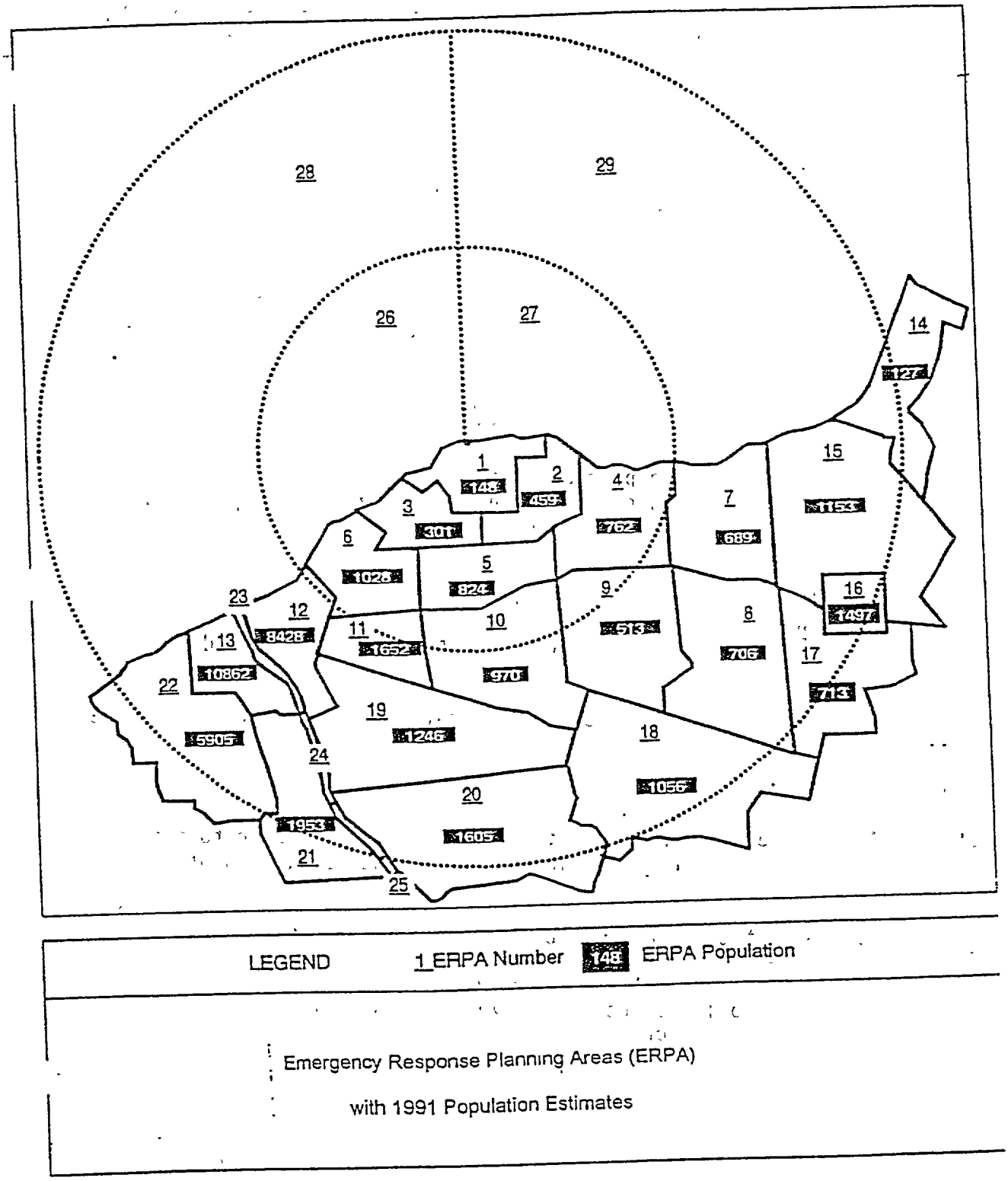


FIGURE 1.5 - ERPA Map



ATTACHMENT 2: USE OF THE EDAMS COMPUTER

1.0 CONTROL ROOM EDAMS

1.1 If necessary, turn the system on: Turn on the power to the EDAMS computer, monitor, and printer. After the computer boots:

a. Select the "EDAMS" icon.
b. Select the "Login" icon.
c. Select "Continue" or hit the enter key.
d. Select "Direct Connect to Met Data".
e. Once Login is successful/complete, select "OK".
f. Select appropriate icon.

1.2 Computer or Connect Problems

a. If "Direct Connect to Met Data" fails repeat Step 1.1 and then, select "Automatic Dial-In to Met Data".

b. If "Automatic Dial-In to Met Data" fails, select "Manual Dial-In to Met Data", and select "number to dial" from the drop down box. Repeat with different number if necessary.

c. If at any time problems are experienced with the computer, depress the eject button on the side of the computer. This will eject the laptop computer. Continue this procedure with the laptop.

d. If the laptop should fail, have Chemistry Tech from the unaffected Unit go to the unaffected Control Room and bring the EDAMS laptop back to the affected Control Room and continue with this procedure.

NOTE: In this case, meteorological data will have to be obtained manually.

2.0 EOF EDAMS

2.1 If necessary, turn the system on: Turn on the power to the EDAMS computer, monitor, and printer. After the computer boots:

a. Select the "EDAMS" icon.
b. Select the "Login" icon.
c. Select "Continue" or hit the enter key.
d. Select "Automatic Dial-In to Met Data"
e. Once Login is successful/complete, select "OK".
f. Select appropriate icon.

2.2 Computer or Dial-In Problems

a. If "Automatic Dial-In to Met Data" fails, select "Manual Dial-In to Met Data", and select "Number to Dial" from the drop-down box. Repeat with a different number if necessary.

b. If at any time problems are experienced with the computer,
   1. Re-boot the computer
   2. Reset the modem by toggling the power switch
   3. Repeat step 2.1
   4. If problems are still evident, use the duplicate computer in the EOF.

3.0 EDAMS DOSE MODEL LIMITATIONS

3.1 A calculational limitation of the dose assessment model occurs when an extreme wind (direction) shift takes place. The model may not calculate doses in sectors that the plume skips over entirely within a single 15 minute calculation step.

3.2 EDAMS only allows the operation of one application at time.

3.3 Dose rates and deposition rates reported by the model are the maximum for the sector, not necessarily the dose rate or deposition rate at the center of the sector. This avoids the situation of a narrow (stable) plume slipping between receptor points and being missed.

3.4 Deposition data reported is not intended for an environmental evaluation; its intent is to indicate areas of potentially high ground level concentrations.

ATTACHMENT 3: METEOROLOGICAL DATA ACQUISITION

1.0 OBTAINING METEOROLOGICAL DATA

NOTE: The Meteorological Advisor may use the following steps or skills of the trade to obtain meteorological data.

1.1 Obtain ground/elevated meteorological data appropriate to the radiological release point in the order listed below. If no release is in progress, or the release path is unknown obtain the elevated data.

A. EDAMS (see Section 2.0 of this Attachment)
B. Strip chart recorder (see Section 3.0 of this attachment)
C. Manual input from alternate sources (see Section 4.0 of this attachment)

1.2 **EOF only** - Determine if Lake Breeze or Land Breeze is a possibility in accordance with Figures 3.2 and 3.3.

1.3 **EOF only** - If using the main tower and wind direction is between 0° and 100° or if using the backup tower and wind direction is between 220° and 270° notify the ESSTC and ODAM that the plume may arrive sooner than the wind speed would indicate.

1.4 Repeat Section 1.0 every 15 minutes.

2.0 USING EDAMS TO OBTAIN METEOROLOGICAL DATA

2.1 Log in the EDAMS computer in accordance with Attachment 2 of this procedure.

2.2 Select "Emergency Meteorological Report" to obtain meteorological data.

2.3 Select affected unit.

2.4 Select "Continue" or hit "enter" key.

2.5 Requery, if necessary.

2.6 Select "Print Met Data" to print the data, as required.

2.7 Determine whether to use ground or elevated data in accordance with Step 1.1.

2.8 Use data as obtained; data may be recorded in Table 3.7.

2.9 If data is not available through the EDAMS computer, proceed to Section 3.0.

3.0 USING STRIP CHART RECORDERS TO OBTAIN METEOROLOGICAL DATA

* *

CAUTION

Do not use the LED readouts associated with the strip chart recorders.

* *

NOTE: Use this method only if the method described in Section 2.0 of this attachment is unavailable. If the strip chart data is unavailable, proceed to Section 4.0.

3.1 Locate the chart recorders in the Unit 1 or 2 Control Rooms or the TSC.

NOTES:

1. Figure 3.4 shows a sample strip chart trace of air temperature, 100' ΔT, 200'ΔT, and $\sigma\theta$ and Figure 3.5 shows a sample of wind speed and wind direction data.
2. The Meteorological Advisor may use the following steps or skills of the trade to obtain meteorological data.

3.2 Apply the hierarchy in accordance with Table 3.1 to determine what data to obtain.

TABLE 3.1

Parameter	Hierarchy	Elevated Release	Ground Release
Wind Speed & Direction	Primary	200' Main	30' Main
	Substitutes	100' Main	
		JAF Backup	
		30' Main	200' Main
Stability	Primary	200' ΔT	100' ΔT
	Substitute	100' ΔT	200' ΔT
		200' $\sigma\theta$(1)	30' $\sigma\theta$(1)
		100' $\sigma\theta$(1)	
		JAF Backup $\sigma\theta$	
		30' $\sigma\theta$(1)	200' $\sigma\theta$(1)

(1) If using 30', 100' or 200' $\sigma\theta$ stability, AND the wind is form a direction listed is Step 3.13, THEN substitute the next source of data in accordance with this step.

3.3 If substitute data is to be used consult the meteorological advisor if available; otherwise use the data as obtained.

3.4 Determine wind direction as follows:
a. Locate the wind direction trace
b. Estimate the average wind direction over the last 15 minutes; data may be recorded in Table 3.7.

3.5 Determine wind speed as follows:
a. Locate the wind speed trace
b. Estimate the average wind speed over the last 15 minutes; data may be recorded in Table 3.7.

3.6 Determine ΔT as follows:
a. Locate the ΔT
b. Estimate the average ΔT over the last 15 minutes.
c. Compare ΔT values to the Stability Classification chart (Table 3.6).
d. Select the appropriate stability class (For 200' ΔT use column 6 and for 100' ΔT use column 4); data may be recorded in Table 3.7.

3.7 If ΔT values are not available, then locate the $\sigma\theta$ from the main or backup tower recorder.

3.8 If using 30', 100', or 200' $\sigma\theta$ stability and the wind is reading from a direction listed below, substitute the next stability source in accordance with Table 3.1.

Main Tower $\sigma\theta$ Stability	Wind Direction
200'	030° to 096°
100'	030° to 077°
30'	035° to 076°

3.9 Compare the value of $\sigma\theta$ to Table 3.6 (Column 5)

3.10 Select the appropriate stability class (Column 3); data may be recorded in Table 3.7.

3.11 If using JAF Backup $\sigma\theta$ stability, the following adjustments should be made:

JAF Backup Tower Wind Direction	JAF Backup $\sigma\theta$ Stability Adjustment
232° to 246° or 270° to 281°	Add one stability class, such that: A→B B→C C→D D→E E→F F or G→G
247° T 269°	Add two stability class, such that: A→C B→D C→E D→F E, F or G→G

3.12 If neither ΔT or $\sigma\theta$ is available, observe the wind direction trace (200' for elevated data or 30' for ground data or substitute per Table 3.1) over the last 15-minute period.

3.13 Estimate $\sigma\theta$ from the trace by dividing the horizontal deviation of the wind direction trace (over the last 15 minutes) by 6. To make reading the chart easier, you may want to advance the chart.

3.14 Compare this calculated value to Table 3.6 (Column 5).

3.15 Select the appropriate stability class (Column 3); data may be recorded in Table 3.7.

4.0 MANUAL INPUT FROM ALTERNATE SOURCES

NOTE: Use this data only if the methods described in Section 2.0 and 3.0 unavailable.

* *

CAUTION

Data obtained by the following methods may not be site-representative and may introduce errors into dose assessments. The Meteorological Advisor should be consulted regarding the use of all substitute data. Use the data as obtained if the Meteorological Advisor is not available.

* *

4.1 To obtain National Weather Service (NWS) Meteorological Data

a. Telephone the NWS in Buffalo at 800-462-7751 or 716-565-9001.
b. Request the current wind speed, direction, stability class, and temperature.
c. Use the data as follows:
   1. Wind speed = elevated and ground wind speed
   2. Wind Direction = elevated and ground wind direction
   3. Stability Class = elevated and ground stability classes
   4. Temperature = ambient temperature

4.2 **EOF Only** - (Directions for the following may be found at the EOF at the Meteorological Advisor Station.)
Other sources of meteorological data that may be utilized are:

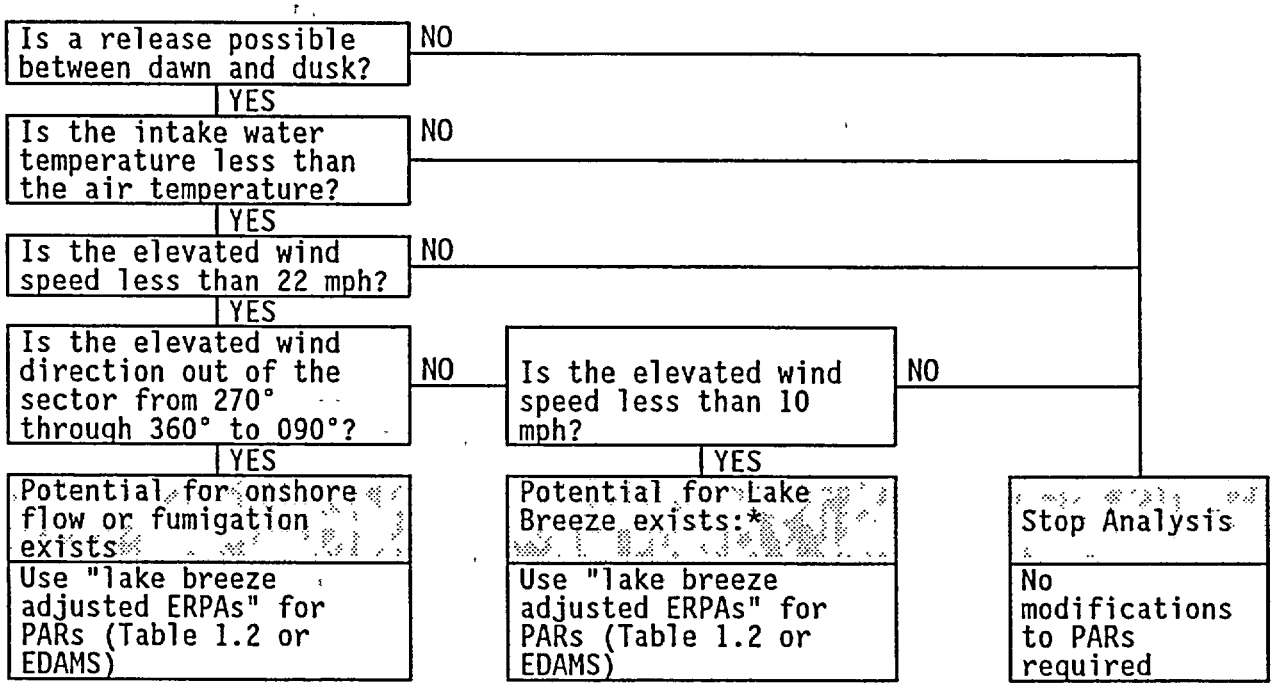
1. SODAR
2. Other Meteorology towers
3. Commercial weather services
4. **Meteorological Advisor only** - Characterization tables
5. **Meteorological Advisor only** - Skills of the trade

4.3 Once the data is obtained Table 3.7 may be used to record the values.

FIGURE 3.2
Lake Breeze/On-Shore Flow and Fumigation Flow Chart

EOF only - Refer to the following step and the flowchart below to determine if a lake breeze is a possibility.

1. Obtain meteorological data in Section 1.0 of this attachment.
2. Obtain lake temperature from Unit 1 or 2 process computer, control rooms, EDAMS, or meteorological advisor (if available).
3. Follow the flowchart answering the appropriate questions.

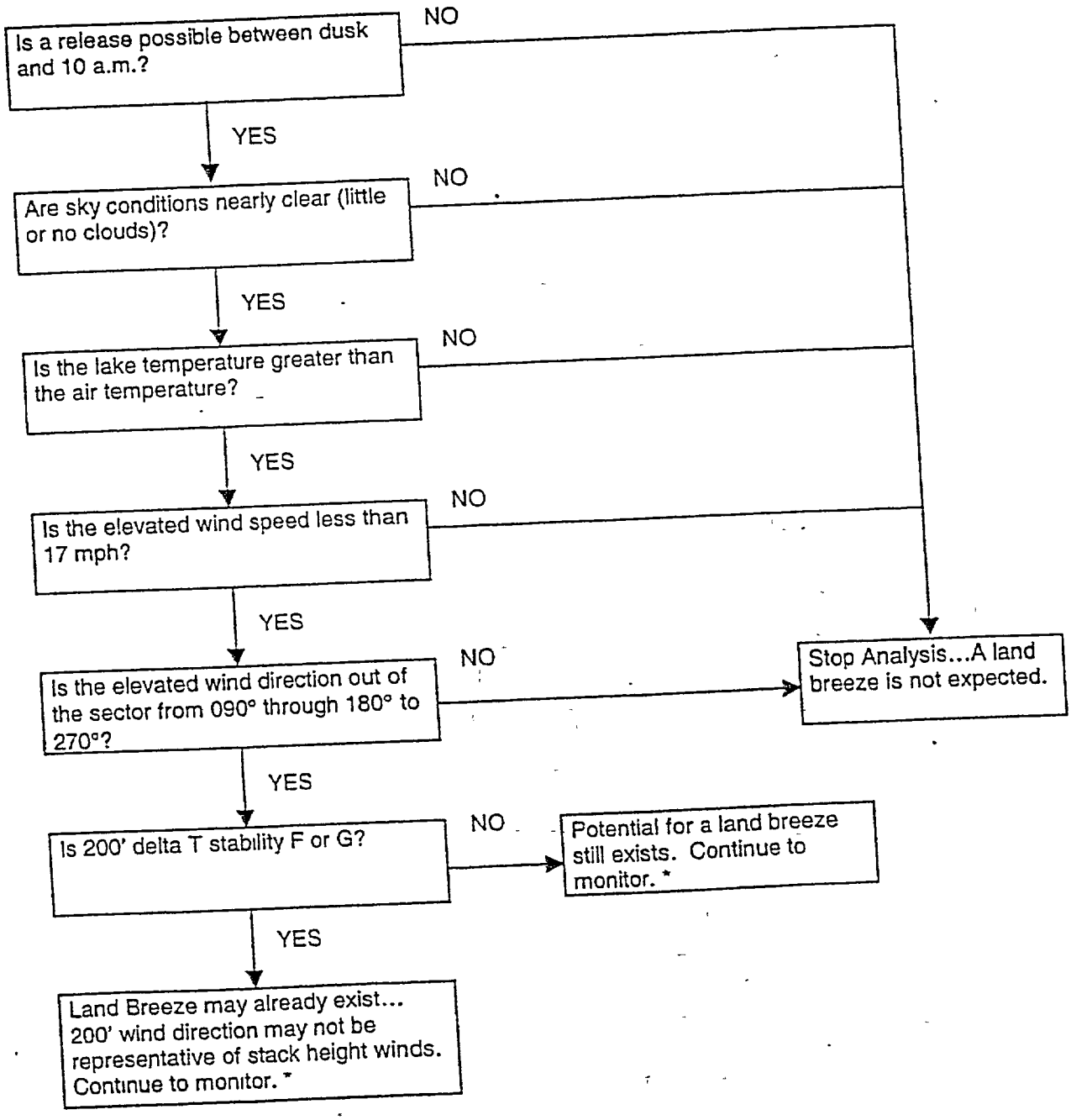


* **NOTE**: There is a potential for a shift in wind direction to 245° through to 065° if the lake breeze has not already formed.

FIGURE 3.3
LAND BREEZE FLOW CHART

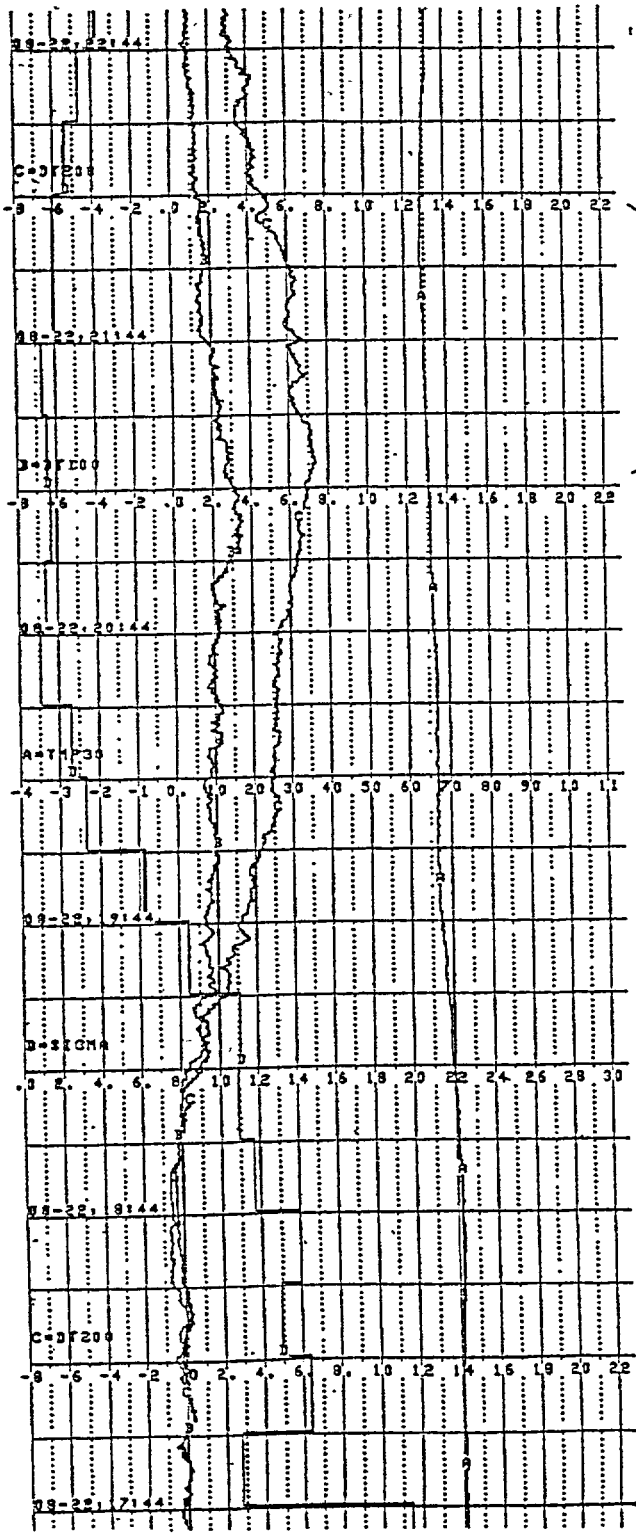
EOF only - Refer to the flowchart below to determine if a **land breeze** is a possibility.

1. Obtain meteorological data in accordance with Section 1.0 of this Attachment.
2. Obtain lake temperature from Unit 1 or 2 process computer, control rooms, EDAMS or meteorological advisor (if available).
3. Follow the flowchart answering the appropriate questions.



*NOTE: There is a potential for a shift in wind direction to 090° through 180° to 270°.

FIGURE 3.4
Sample Air Temperature, Delta Temperature and Sigma Theta Trace Control Room



Scale/Trace A - Temperature
Scale/Trace B - 100' ΔT
Scale/Trace C - 200' ΔT
Scale/Trace D - Sigma Theta

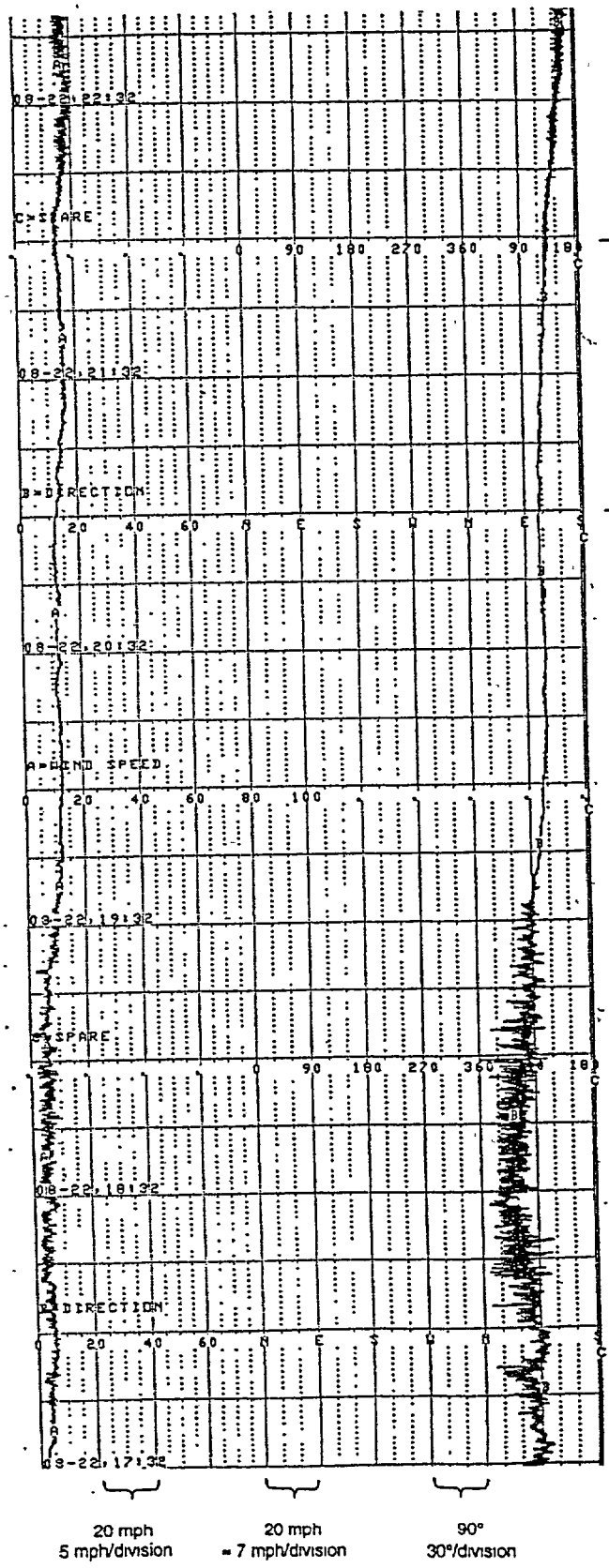
Delta temperature (ΔT) scales in °F.

15-minute data segment

Ambient temperature scale in °F. (Multiply by 10 for data points below 0° and above 90°).

Sigma Theta (σθ) scale.

FIGURE 3.5
Sample Wind Speed and Wind Direction Trace
Control Room and TSC



Scale/Trace A - Wind Speed
Scale/Trace B - Wind Direction

→ Wind direction scale (0-360°)

→ Wind speed and direction (Cardinal points) scale

→ Wind speed scale (0-100 mph)

} 15-minute data segment

TABLE 3.6 - Stability Classification Chart

1	2	3	4	5	6
STABILITY CLASSIFICATION	TURBULENCE CLASS	PASCAL STABILITY CLASS	TEMP CHANGE WITH HEIGHT, °F/72ft[1] (100 ft. ΔT)	σ_θ DEGREES RANGE OF VALUES[2]	TEMP CHANGE WITH HEIGHT, °F/168ft[3]
Extremely Unstable	I	A	$\Delta T/\Delta Z \leq -0.75$	$22.5 \leq \sigma_\theta$	$\Delta T/\Delta Z \leq -1.75$
Moderately Unstable	II	B	$-0.75 < \Delta T/\Delta Z \leq -0.67$	$17.5 \leq \sigma_\theta < 22.5$	$-1.75 < \Delta T/\Delta Z \leq -1.57$
Slightly Unstable	II	C	$-0.67 < \Delta T/\Delta Z \leq -0.59$	$12.5 \leq \sigma_\theta 17.5$	$-1.57 < \Delta T/\Delta Z \leq -1.38$
Neutral	III	D	$-0.59 < \Delta T/\Delta Z \leq -0.20$	$7.5 \leq \sigma_\theta < 12.5$	$-1.38 < \Delta T/\Delta Z \leq -0.46$
Slightly Stable	IV	E	$-0.20 < \Delta T/\Delta Z \leq 0.59$	$3.8 \leq \sigma_\theta < 7.5$	$-0.46 < \Delta T/\Delta Z \leq 1.38$
Moderately Stable	IV	F	$0.59 < \Delta T/\Delta Z \leq 1.58$	$2.1 \leq \sigma_\theta < 3.8$	$1.38 < \Delta T/\Delta Z \leq 3.69$
Extremely Stable	IV	G	$1.58 < \Delta T/\Delta Z$	$\sigma_\theta < 2.1$	$3.69 < \Delta T/\Delta Z$

(1) Adjusted to correspond to the ΔT measured between the 30-foot and 100-foot levels on the main tower.
(2) Note on symbol convention "$3.8 \leq \sigma\theta < 7.5$" means that $\sigma\theta$ is greater than or equal to 3.8 degrees but less than 7.5 degrees
(3) Adjusted to correspond to the ΔT measured between the 30-foot and 200-foot levels on the main tower.

ATMOSPHERIC STABILITY CHARACTERIZATION

A. (I) Mid-afternoon only, with clear skies or skies with very few thin clouds; late spring to early fall, winds usually are below 6 miles per hour.

B. (II) Late morning to mid-afternoon only, with clear or partly cloudy skies; mid spring to mid-fall, winds are usually below 9 miles per hour.

C. (II) Late morning to late afternoon only, with partly cloudy skies; spring through fall, wind usually are below 11 miles per hour.

D. (III) All daytime, with overcast or partly cloudy skies or early morning and late afternoon with clear or partly cloudy skies, all night time with overcast skies or partly cloudy year round, winds are moderate to high (greater than 6 miles per hour).

E. (IV) Typically night time only, with thin overcast or partly cloudy skies, all year round, winds less than 10 miles per hour.

F. (IV) Typically night time only, with clear to partly cloudy skies, all year round, winds less than 7 miles per hour.

G. (IV) Typically night time only, with clear skies or very few thin clouds all year round, winds less than 5 miles per hour.

Table 3.7: MANUAL MET DATA WORKSHEET

Date/Time	Release Height (circle one)	Source of Data (circle one)	Wind Direction (degrees)	Wind Speed (mph)	Stability Class
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			
	Elevated/Ground	EDAMS/Strip Chart/Other			

ATTACHMENT 4: RELEASE RATE DETERMINATION

1.0 METHOD

a. Access the EDAMS Computer using Attachment 2 of this procedure.

b. Select the "EDAMS" Icon.

c. Select "Release Rate Calculations"

d. IF Unit 1 was selected, go to Section 2.0 of this Attachment.

e. IF Unit 2 was selected, go to Section 3.0 of this Attachment.

f. Assess all calculated release rates against Tech Spec limits by implementing Attachment 4a.

2.0 UNIT 1 METHODS

2.1 OGESMS

a. Select monitor (7, 8, 10a or 10b)

NOTE: Monitor 7 = indicator 112-07A
Monitor 8 = indicator 112-08A
Monitor 10a = indicator RN10A
Monitor 10b = indicator RN10B

b. Enter time that reading was obtained (using 24 hour format)

c. Enter monitor reading (cpm for monitors 7 or 8, cps for monitors 10a or 10b). Use J panel readings or the following computer points:

- monitor 7, use E334
- monitor 8, use E335
- monitor 10a, use E488
- monitor 10b, use E489

d. Enter process computer calibration factor. If unavailable, use default values below:

- 4.4E-8 for 7 or 8
- 4.4E-7 for 10a or 10b

e. Enter Stack Flow (kcfm). Use J Panel OR computer point C320 or calculate from Table 4.1.

f. Hit the "F9" key.

g. Print results.

2.2 Stack Teletector

a. Enter the time that the reading was obtained (24-hour format).

b. Enter the monitor reading (mrem/hr).

c. Enter the calibration factor. If unavailable, use default value of 0.5.

d. Enter Total Stack Flow (kcfm). Use computer point C320 or calculate from Table 4.1.

e. Hit the "F9" key.

f. Print the results.

2.3 Grab Sample (Noble Gas)

* *

CAUTION

In using grab samples to determine release rate, the results may be invalid if significant changes in source terms have occurred since the sample was taken.

* *

a. Enter the time that the reading was obtained (24-hour format).

b. Enter total Noble Gas concentration (μCi/cc) (for EDAMS) OR the concentration of each isotope (μCi/cc)(for Raddose).

c. Enter Total Stack Flow (kcfm). Use computer point C320 or calculate from Table 4.1.

d. Hit the "F9" Key.

e. Print the results.

2.4 Back Calculation

NOTE: Use back calculation of downwind survey team data to determine release rate when no other method is available, AND to verify calculated release rates.

a. If this method is to be used to make an initial determination of release rate, then back calculate using EDAMS (not Raddose). This value can then be input into Raddose in accordance with Attachment 5 of this procedure.

b. Enter the time that the reading was obtained (24-hour format).

c. Enter the wind speed (mi/hr). Use the method described in Attachment 3.

d. Enter "E" for elevated/stack or "G" for ground/vent release.

e. Enter the stability class (A-G).

f. Enter the three foot closed window reading from the ion chamber (mrem/hr). If readings are in CPM, then convert using 3500 CPM = 1 mrem/hr, or other appropriate conversion constant for the detector being used.

g. Enter the downwind distance that the above reading was obtained.

h. Hit the "F9" key.

i. Print the results.

2.5 UFSAR

* *

CAUTION

This selection is only appropriate if no other sources of data are available (including downwind survey data) AND the accident conditions are identical to those described in the UFSAR for the accident selected.

* *

NOTE: Input from the Control Room, TSC or EOF Technical Staff may be necessary to select the FSAR accident type that most closely describes the conditions being experienced.

a. Select the accident being experienced or projected (Use Attachment 5, Table 5.1).

b. Print results.

2.6 Containment High Range Monitor

NOTES: 1. This method is only valid if the monitor is able to "see" the release. Therefore, consult Operations personnel on the validity of monitor readings.

2. The following may be used for this calculation:

- Unit 1 primary containment free-air volume = 314,000 ft^3
- Tech Spec leakage from primary containment = ~1%/day

a. Enter the monitor ID or number.

b. Enter the time that the reading was obtained (24-hour format).

c. Enter the date that the reading was obtained.

d. Enter the time of reactor shutdown (24-hour format).

e. Enter the date that the reactor was shutdown.

f. Enter the monitor reading (rem/hr). Use computer point E467 or E468.

g. Enter the expected flow rate (kcfm) to the environment. Consult with Operations personnel if needed.

h. Hit the "F9" key.

i. Print results.

2.7 For liquid releases, consult N1-CSP-M204

2.8 Severe Accident Source Team (SAST)

NOTE: SAST assumes 20% fuel damage.

a. Select "Containment Leak Rate"

1. Enter the estimated leak rate from containment.

b. Select "Through Filters" option.

1. If the source team travels through any filters, select "Y". Otherwise select "N".

2.8 (Cont)

c. Select the "Sprays On" option.

1. If containment sprays are in use, select "Y". Otherwise select "N".

d. Select the "Hold-Up Time"

1. Enter the estimated time that the source team remained in containment before release.

3.0 UNIT 2 METHODS

3.1 GEMS

a. Enter the time that the reading was obtained (24-hour format).

b. Enter "S" if this is a stack reading or "V" if it is a vent reading.

c. Enter monitor reading (μCi/s). Use GEMS readings from SPDS display or the 882 panel. If offscale, use GEMS computer.

d. Hit the "F9" key.

e. Print results.

3.2 Grab Sample (Noble Gas)

* *

CAUTION

In using grab samples to determine release rate, the results may be invalid if significant changes in source terms have occurred since sample was taken.

* *

a. Enter the time that the reading was obtained (24-hour format)

b. Enter total Noble Gas reading (μCi/cc) (for EDAMS) OR the concentration of each isotope (μCi/cc)(for Raddose).

c. Enter total stack or vent flow (kcfm). Calculate from Figure 4.2 or 4.3.

d. Hit the "F9" Key.

e. Print the results.

3.3 Back Calculation

Use Section 2.4 of this Attachment.

3.4 USAR

Use Section 2.5 of this Attachment.

3.5 Containment High Range Monitor

NOTES: 1. This method is only valid if the monitor is able to "see" the release. Therefore, consult Operations personnel on the validity of monitor readings.

2. The following may be used for this calculation:

- Unit 2 primary containment free-air volume = 497,000 ft^3
- Tech Spec leakage from primary containment = ~1%/day

Use Section 2.6 of this Attachment. Monitor readings are available on the DRMS system (RMS1a,b,c or d), the SPDS display or the 880 panel.

3.6 For liquid releases, consult N2-CSP-LWS-M203

3.7 Severe Accident Source Team

See Section 2.8 of this Attachment.

TABLE 4.1
UNIT 1 STACK: FAN CONFIGURATION

Fan	Nominal Flow (KCFM)	Computer Point	Workspace
Drywell Vent, Purge, and Fill Line	10		
Turbine Building High Speed Fan	170		
Turbine Building Low Speed Fan	120		
Reactor Building High Speed Fan	70		
Reactor Building Low Speed Fan	35		
Waste Building	8		
Waste Building Extension	5.3		
Offgas Building	6		
Reactor Building Emergency Ventilation	1.6		
RSSB Extension	10.25		
Total Stack Flow		C320	

TABLE 4.2
UNIT 2 STACK: FAN CONFIGURATION

Fan	Nominal Flow (KCFM)	Computer Point	Workspace
CST Room	2.2		
Stack Substructure	1.4		
Turbine Building - 1 fan	40		
Turbine Building - 2 fans	80		
Standby Gas Treatment	4		
Total Stack Flow			

TABLE 4.3
UNIT 2 VENT: FAN CONFIGURATION

Fan	Nominal Flow (KCFM)	Computer Point	Workspace
Turbine Building 250' and 306' Decon Rm Fan	3.3		
Radwaste Liner Fan	0.8		
Radwaste Tank Fan	4.9		
Radwaste Building - 1 fan	47.8		
Radwaste Building - 2 fans	95.6		
Aux Boiler	23		
Refueling Floor Above	70		
Refueling Floor Below	70		
Total Vent Flow			

ATTACHMENT 4A: DETERMINATION OF PERCENT OF TECHNICAL SPECIFICATION RADIOLOGICAL RELEASE

Procedure:

1. Determine release rate in accordance with Attachment 4 of this procedure.

2. Complete the following as applicable:

   a. Unit 1 Stack release:

      1. assume calculated stack release rates represent Noble Gas release rates
      2. calculate:

      % Tech Spec =
      Noble Gas release rate (Ci/sec) _____x 8850 = % Tech Spec =_____

   b. Unit 1 Emergency Condenser (EC) Vent release:

      1. calculate:

      % Tech Spec =
      EC Vent monitor reading (mr/hr) _____x 5 = % Tech Spec =_____

   c. Unit 2 Stack release:

      1. assume calculated stack release rates represent Noble Gas release rates
      2. calculate:

      % Tech Spec =
      Noble Gas release rate (Ci/sec) _____x 1042 = % Tech Spec =_____

   d. Unit 2 Vent release:

      1. assume calculated stack release rates represent Noble Gas release rates
      2. calculate:

      % Tech Spec =
      Noble Gas release rate (Ci/sec) _____x 3704 = % Tech Spec =_____

3. IF any % Tech Spec from any source is > 100% Tech Spec, THEN advise the SSS/ED or the ODAM that a release that exceeds Tech Specs has taken place.

ATTACHMENT 5: REFINED DOSE ASSESSMENT AND PROTECTIVE ACTIONS

1.0 DOSE ASSESSMENT

1.1 General Considerations

1.1.1 The dose assessment program is called RADDOSE.

1.1.2 Meteorological data is automatically sent to RADDOSE by the Meteorological Monitoring System (MMS). The user can use this data or manually input data.

1.1.3 Source term and release rate determination is identical to that described in Attachment 4.

1.2 Dose Assessment Procedure

NOTE: The dose assessment model has many capabilities beyond those used in this procedure. Use the "EDAMS Operators Manual" (available in the EOF) for further reference.

1.2.1 Log on to EDAMS computer using Attachment 2.

1.2.2 Select the affected Unit "Dose Assessment Model."

1.2.3 Utilize "EDAMS Data Entry Form", Attachment 5.2, or equivalent.

1.2.4 Select "Begin New Incident" at the options.

1.2.5 Select "Yes" to erase all previous data when prompted.

1.2.6 Enter the following at the Accident Scenario Definition screen:

a. Reactor Trip Date. This is the date that the reactor scrammed or was manually tripped. IF the reactor is not shut down, enter tomorrow's date.

b. Reactor Trip Time (24-hour format). This is the time that the reactor scrammed or was manually tripped.

c. Release Date. This is the date that the release to the atmosphere began, or is projected to begin.

d. Release Time (24-hour format). This is the time that release to atmosphere began or is projected to begin.

e. Enter the lake temperature (deg F). If unknown, hit "Enter" and historical data will be entered.

f. Enter the initials of the user (two or three initials).

g. Verify entries, make any necessary changes, and select accept to continue.

1.2.7 Select "Enter/Edit Source Term Data" from the EDAMS main menu.

NOTES: 1. Use Attachment 4 to obtain the information needed to complete this section.

2. The preferred source of release rate data is the actual isotopic distribution, if available.

a. Select "Accident Type" by choosing the accident that most suits the current conditions. Use Table 5.1 in making the choice.

b. Select "Y" for elevated releases OR "N" for ground releases when asked, "Is this release Elevated?".

NOTE: "Elevated" releases are releases from the stack. "Ground" releases are from any other release point.

c. Select the "Method" used to determine the release rate by selecting the highlighted cell or by hitting the "F2" key and selecting.

1. Utilize Attachment 4 Section 2.0 for Unit 1 releases.

2. Utilize Attachment 4 Section 3.0 for Unit 2 releases.

d. Select the Iodine release rate "Method" by selecting the highlighted cell or by hitting "F2" key. Utilize one of the following:

1. Grab Sample: This section can be used if concentrations (μCi/cc) by isotope, and associate flow rate are available

a. obtain sample analysis results from TSC

b. enter concentration of each isotope

c. enter flow rate (cfm) associated with sample

NOTE: This method will override previously input Total Release Rate method

2. Direct: This selection utilizes direct entry of the release rate (in Ci/Sec) obtained by any method, including the following

a. Use of downwind survey team data

1. determine the representative I/NG ratio using field data and the methodology described in EPIP-EPP-07

2. multiply the NG or total release rate (obtained from Attachment 4) by the I/NG ratio

3. enter the Iodine release rate in the appropriate column

3. Ratio: This selection utilizes the UFSAR/USAR I/NG ratio and multiplies it by the Total Release Date

4. UFSAR: CAUTIONS:

1. This selection should only be used if none of the above methods are not currently or projected to be available. It is appropriate to wait for field data

2. This selection will override any previously input Total Release Rate

e. Up to three Accident Types (and therefore three release paths) can be entered. To enter additional release paths, repeat Steps a - d above. When all applicable accident types have been entered, proceed to the next step.

f. Upon completion of this screen, verify data and make any necessary changes before "Accept".

1.2.8 The user will be queried only for the meteorological data required. Enter meteorological data as required:

a. Select "Enter/Edit Meteorological Data", Elevated or Ground as appropriate.

b. If the MMS is available, the data will be automatically displayed for the current time step.

1. Select "Requery MMS".

2. Select "Accept" as necessary.

c. If the MMS is unavailable, then enter both ground and elevated met data obtained from alternate sources, as outlined in Attachment 3 of this procedure and select "Accept"

1.2.9 Select "Perform Calculations" from the EDAMS main menu.

NOTE: The purpose of the following steps is to determine the projected avoidable dose resulting from the incident.

* *

CAUTION

Any calculations performed on actual data shall be verified. The ODAM may act as the checker for calculations performed by the Rad Assessment Staff.

* *

a. The map of the 10 mile Emergency Planning Zone (EPZ) will appear with centerline dose rates when the calculation is complete.

b. Select "Continue" to go to the output menu.

c. Select "Continue Calculations" from the output menu.

d. Select "Perform Forecast" from the RADDOSE main menu.

e. Verify meteorology and source term data as required.

f. Enter "Forecast Period" (i.e. - release duration). Use 4 hours as a default value.

g. Select "OK".

h. After the forecast map appears "Continue" to go to the output menu.

i. Select "Go to Report Menu".

j. Select "Print 10-Mile ERPA Map".

k. Select "Print Complete Dose/Dose Rate Report".

ℓ. Attach results of Step 1.2.9.j and k to EDAMS Data Entry Form, Attachment 5.2 or equivalent.

m. Verify that any results are supported by radiological and plant conditions. Consider:

- Core damage
- Drywell high range monitor readings
- Effluent monitor readings
- Inplant radiological conditions
- Containment hydrogen monitor readings

n. Document the verification of the calculation using the signature lines on Figure 5.2 or equivalent.

1.3 If it is desired to utilize EDAMS to track near real-time doses, then perform the following steps:

* *

CAUTION

The results of this step shall NOT be utilized to determine PARs.

* *

1.3.1 Enter accident, source term and meteorological data in accordance with Steps 1.2.1 through 1.2.8 of this attachment.

1.3.2 Select "Perform Calculations" from the EDAMS main menu.

1.3.3 Enter meteorological and source term data at 15 minute intervals.

1.3.4 Determine dose at any time by viewing displayed 10 mile ERPA map.

2.0 REFINED PROTECTIVE ACTIONS

2.1 These actions are initiated for the purpose of verifying the adequacy of PARs made using Attachment 1 of this procedure OR to develop PARs using projected doses obtained from Attachment 5, Step 1.2.9 of this procedure.

2.2 In determining PARs based on dose assessment, carefully consider factors such as release duration and Evacuation Travel Time Estimates (ETTE). (For example, puff releases may yield doses in excess of Protective Action Guidelines for an evacuation, but the plume will pass before an evacuation could be completed). ETTEs are available in the EOF.

NOTE: County and State PARs take many factors into account that NMP procedures do not (i.e. - road conditions, special population needs, evacuation scenarios, and shelter vs evacuation doses). Therefore, differences in PARs may occur. The ODAM must account for differences in PARs, when those differences exist. This can be accomplished via consultation with County and State representatives in the EOF as to the assumptions used in their dose calculations and PAR development.

2.3 Obtain dose projection for each ERPA.

2.3.1 PARs are listed on the 10 mile ERPA map obtained per Attachment 5, Step 1.2.9. j.

2.3.2 The following criteria are used in determining the PAR for each ERPA.

PAR	TEDE (rem)	CDE_T (rem)
Evacuate	> 1	> 5

2.3.3 Record the PAR for each ERPA on the Part 1 Notification Form and give to the ED/RM for approval.

2.3.4 PARs that have been made previously must be accounted for when PARs are revised. For example, if a PAR to evacuate an ERPA was previously made to the State/County and that PAR does not appear on a revised map from 1.2.9.j, that PAR must still be included on the revised recommendation to the State/County.

2.3.5 If projected doses exceed values listed in Attachment 5 Step 2.3.2 for distances greater than 10 miles, PARs shall be made using convenient geographic boundaries (such as townships).

TABLE 5.1 - FSAR/USAR ACCIDENT TYPE

Accident Type	Noble Gas Release Rate (Ci/s)	Iodine Release Rate (Ci/s)	Analyzed Release Point
Unit 1:			
DBA Loss of Coolant	5.50E+0	4.53E-3	Elevated
Control Rod Drop	2.51E+1	6.03E-5	Elevated
Refueling Accident	3.78E-2	3.84E-5	Elevated
Steam Line Break	6.36E+0	4.86E+1	Ground
Loss of Coolant (Realistic)	1.79E-3	1.00E-6	Elevated
Unit 2:			
DBA Loss of Coolant	1.03E+1	2.03E-1	Elevated
Control Rod Drop	4.22E-2	4.70E-4	Ground
Refueling Accident	1.77E+1	1.65E-1	Ground
Steam Line Break	3.64E+0	1.22E+2	Ground
Rad Gas Waste System Leak	4.06E+0	0.00	Ground
Instrument Line Failure	0.00	2.17E-2	Ground
Fuel Cask Drop	2.06E+0	2.68E-3	Ground
Loss of Coolant (Realistic)	1.05E-2	2.38E-5	Elevated

CHRONOLOGICAL RELEASE RATE LOG

Date:	Release Form:	Survey Location:	Completed By:

Effluent Monitor Data				Environmental Sampling Data								Release Log			
Time of Monitor Reading	Monitor System	Release Rate (Ci/sec)	Duration of Release	Survey Time	Location	Gamma Dose Rate (mR/hr)	Distance (Mi)	Wind Speed (mph)	*** Transit Time (min)	**** Est. Time of Release from Site	Release Rate (Ci/sec)	Assigned Release Rate (Ci/sec)	Assigned Time Interval Start	Stop	ODAM Review

Notes: *** Transit Time (min) = (Distance/Wind Speed) x 60 min/hr **** Est. Time of Release = Survey Time - Transit Time

ATTACHMENT 5.2: EDAMS DATA ENTRY FORM

☐ "What If"
☐ Actual Data (Checker Required!)

Rx Trip: Date: _____ Time: _____
☐ Unit 1 ☐ Unit 2

Release:
Release Duration (Hr): _____

Accident Type	Release Point *(Circle One)*
Containment DBA	Elev/Grd
Control Rod Drop	Elev/Grd
Refueling Accident	Elev/Grd
Steam Line Break	Elev/Grd
Loss of Coolant	Elev/Grd
Rad Gas Waste System	Elev/Grd
Inst. Line Failure	Elev/Grd
Fuel Cask Drop	Elev/Grd
Severe Accident	Elev/Grd

Flow Rate _____

Method _____

Monitor Reading _____

Iodine Method _____

Iodine Monitor _____

Met Data: ☐ Automatic ☐ Manual *(Below)* Lake Temp ___°F or Default

	Elevated	Ground
Wind Speed (mi/hr)		
Wind Direction (from - degrees)		
Stability (A-G)		
Temperature (°F)		
Precipitation (in/15 min)		

Attach:
- Map from color printer
- "Complete Dose/Dose Rate" report

Misc: _____

_____

_____

Calculations Performed By: _____

Calculations Verified By: _____

NINE MILE POINT NUCLEAR STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-EPP-09

REVISION 03

DETERMINATION OF CORE DAMAGE UNDER ACCIDENT CONDITIONS

TECHNICAL SPECIFICATION REQUIRED

Approved by: G. L. Detter — General Manager Support Services — 23 Sep 02 — Date

THIS IS A FULL REVISION

Effective Date: 09/30/2002

PERIODIC REVIEW DUE DATE: SEPTEMBER, 2003

LIST OF EFFECTIVE PAGES

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1.0 PURPOSE

The purpose of this procedure is to provide an initial estimate of core damage (e.g. percent clad failure or percent of fuel melted) by using containment radiation monitor readings or using containment hydrogen values or from the measured fission product concentrations in either the reactor water or containment gas samples taken under accident conditions. Subsequent refinement of core damage estimates can be achieved by a Ba, Sr, La and Ru analyses.

2.0 RESPONSIBILITIES

2.1 **The Chemistry and Radiation Protection Departments** are responsible for performing sampling and analysis of reactor water and containment atmosphere as necessary to support the calculations contained within this procedure.

2.2 **Reactor Engineering** is responsible for performing fission product inventory correction factor calculations for calculating percent of core damage based on the isotopic data in accordance with the methodology contained within this procedure.

2.3 **The TSC Reactor Analyst** is responsible for performing an initial estimate of core damage.

2.4 **THE STA** may use this procedure to perform an initial estimate of core damage. (Attachment 1 to 2).

3.0 ESTIMATION OF CORE DAMAGE

NOTE: Substantial increases (orders of magnitude) in radiation levels, as determined by radiation monitor readings (e.g., Containment High Range Monitors), can provide an early estimate of the extent of core damage and should be used. However, the following should be considered:

- The release may bypass the monitor.
- Monitors may be influenced by a source not intended to be monitored.
- Areas monitored may not be representative of the entire containment.
- Calibration assumptions may not match accident conditions.
- Shielding or other design factors may have been incorrectly considered.
- Monitor may show high, low, or center range if it fails.
- Monitor may be read incorrectly.
- Shine from low RPV level may affect readings.

3.1 **The TSC Reactor Analyst or STA may:**

Perform core damage assessment using one of the following methods listed in order of preference:

3.1.1 Compare Attachment 1 or 2 as appropriate, to the actual containment high range radiation monitor readings.

3.1.2 Compare Attachment 3 to the actual containment hydrogen readings (if available) estimate core damage. Determine the hydrogen concentration (%) in the primary containment by:

- For Unit 1 Reference #11 and #12, H_2/O_2 monitoring systems or by gas chromatographic analysis of a containment atmosphere sample.
- For Unit 2 reference H_2/O_2 monitors CMS-66A, CMS-66B, CMS-73A and CMS-73B H_2/O_2 (or use SPDS) or by gas chromatographic analysis of a containment atmosphere sample.

NOTE: The following step is to be performed by the TSC Reactor Analyst only:

3.1.3 Following receipt of chemistry reactor coolant and/or atmosphere .... sample analysis data, perform the calculations in Attachment 4 and compare results to Attachment 10 through 13 as appropriate.

3.1.4 Following performance of one of the above three methods, the TSC Reactor Analyst or STA should provide an initial estimate of core damage to the Technical Data Coordinator or to the SSS/ED as appropriate.

3.2 During event recovery, the TSC Rx Analyst should provide for damage assessment refinement by performing:

3.2.1 Ba, Sr, La and Ru Analyses

a. Obtain Gamma Isotopic analysis of reactor water from Chemistry.

b. Determine the concentration (C_{wi} in µCi/g) of those less volatile elements which are indicators of core melt (i.e., Ru-103, Sr-91, Sr-92, Ba-140, La-140) from the isotopic analysis printout and which can be determined from the isotopic.

c. Calculate the normalized concentration of each isotope, i, in the reference plant in accordance with Attachment 4, Step 2.8.

$$(= C_{wi}^{ref})$$

3.2.1 (Cont)

d. Calculate the fraction of each isotope released from the core, FR_i (approximately equal to the fraction of core meltdown) using the equation:

$$Fr_i = C_{wi} \times \left(\frac{3.920\ E9g}{I_i^{Ref}} \right)$$

where 3.920 E9 = Total primary coolant mass (g), reference plant, and

I_i^{Ref} = Total core inventory of isotope i in the reference plant (see Attachment 6)

e. Provide results of refined assessment to the Technical Data Coordinator.

3.2.2 Continually, assess the status of the critical safety functions by answering the following questions:

- Is the plant sub-critical (shutdown)? How is this confirmed?
- Is the core covered now and will it be in the long term? How is this confirmed?
- Is the amount of water being injected into the primary or secondary system sufficient to remove the decay heat? Use Method A.1 to confirm that there is sufficient injection of water.
- Is decay heat being removed to the environment? How is this confirmed?
- What is the status of the vital auxiliaries? DC power? AC power?

3.2.3 If any of the critical safety functions are not being met or are degraded, estimate when the core may be uncovered.

3.2.4 If the core is projected to be uncovered, inform the Technical Data Coordinator. Continue to monitor containment parameters for indications of core damage.

3.2.5 Additionally, the TSC Reactor Analyst should monitor the following indications for detecting imminent uncovering of the reactor core.

NOTE: Consider the reliability of the indications or instrument readings during accident conditions as discussed below.

Water level can be used under some accident conditions to confirm that insufficient water is being injected to protect the core and to estimate the time at which the core will be uncovered. Consider the following limitations:

- The lower limit of the water measurement system is at or above the level at which core heat-up begins (20% uncovered).
- High drywell temperature (e.g., LOCA) can cause the reactor water level to read erroneously high.
- During low pressure accidents, the water level can read erroneously high.
- Mechanical Yarway instruments may indicate a false on-scale water level at about 1 ft above the top of core if the actual water level fell below the lower end of the instrument range.

3.2.6 If there are indications of imminent uncovering of the core, inform the Technical Data Coordinator. Continue to monitor containment parameters for indications of core damage.

3.2.7 If there are no indications of imminent uncovering of the core, provide an assessment of critical safety functions and core status to the TSC Tech Data Coordinator

3.2.8 When provided with a reactor coolant sample analysis, the TSC Reactor Analyst should use Attachment 4, Core Damage Determination, to provide a more complete analysis of core damage.

4.0 DEFINITIONS

4.1 Reference Plant

The estimation of core damage will be calculated by comparing the measured concentrations of major fission products in gas and/or liquid samples, after appropriate normalization, with reference plant data from a BWR-6/238 with Mark III containment. Fission product inventories in the primary system were calculated based on postulated design basis loss-of-coolant accident conditions after three years (1095 days) of continuous operation at 3651 Mwt or 102% of rated power by using a computer code developed at Los Alamos and adopted to the GE computer system.

4.2 Gap release

The release into containment of all the fission products in the fuel pin gap (see Attachment 9) after the fuel cladding has failed from being uncovered for more than 15 min.

4.3 Spiked coolant release

The release into containment of 100 times the non-noble gas fission products normally found in the coolant.

4.4 Typical (normal) coolant release

The release into containment of the fission products normally found in the coolant (see Attachment 6 and 7).

5.0 REFERENCES AND COMMITMENTS

5.1 Technical Specifications

None

5.2 Licensee Documentation

5.2.1 Lin, Chien C, Procedure for the Determination of Core Damage Under Accident Conditions, General Electric Co., NEDO 22215, 1982

5.2.2 Nuclear Services Department, Post-Accident Sampling System Evaluation, General Electric, 1983

5.2.3 Stone and Webster Calculation, 12/77, PR (c), 21-V, Attachment C (NMPNS Document Control No. 01457-0869)

5.2.4 DRF 268-DEV-009, unpublished document, General Electric

5.2.5 NMPC Engineering Calculation #S0.0-RX-VOL01, Calculation of Unit 1 Secondary Containment Volume

5.3 Standards, Regulations, and Codes

RTM-96, Response Technical Manual

5.4 Policies, Programs, and Procedures

None

5.5 Commitments

None

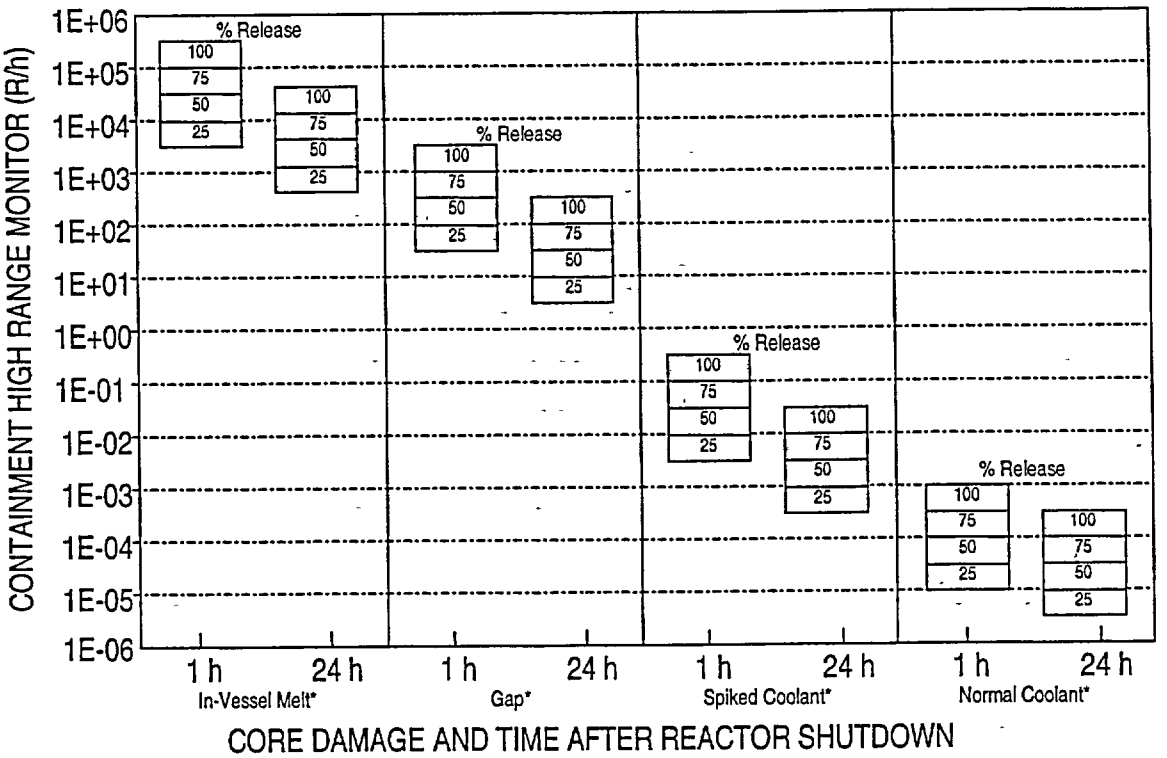
6.0 RECORD DISPOSITION

The following records generated by this procedure as the result of an actual declared emergency shall be maintained by Records Management for the Permanent Plant File in accordance with NIP-RMG-01:

- Any calculations or other paperwork generated as the result of performance of this procedure.
- Attachment 15, Core Damage Estimate Based on I-131 and Xe-133 Concentrations
- Attachment 16, Fission Product Inventory Correction Factor for I-131
- Attachment 17, Fission Product Inventory Correction Factor for Xe-133

Any records generated by this procedure that are not the result of an actual declared emergency are not required for retention in the Permanent Plant File.

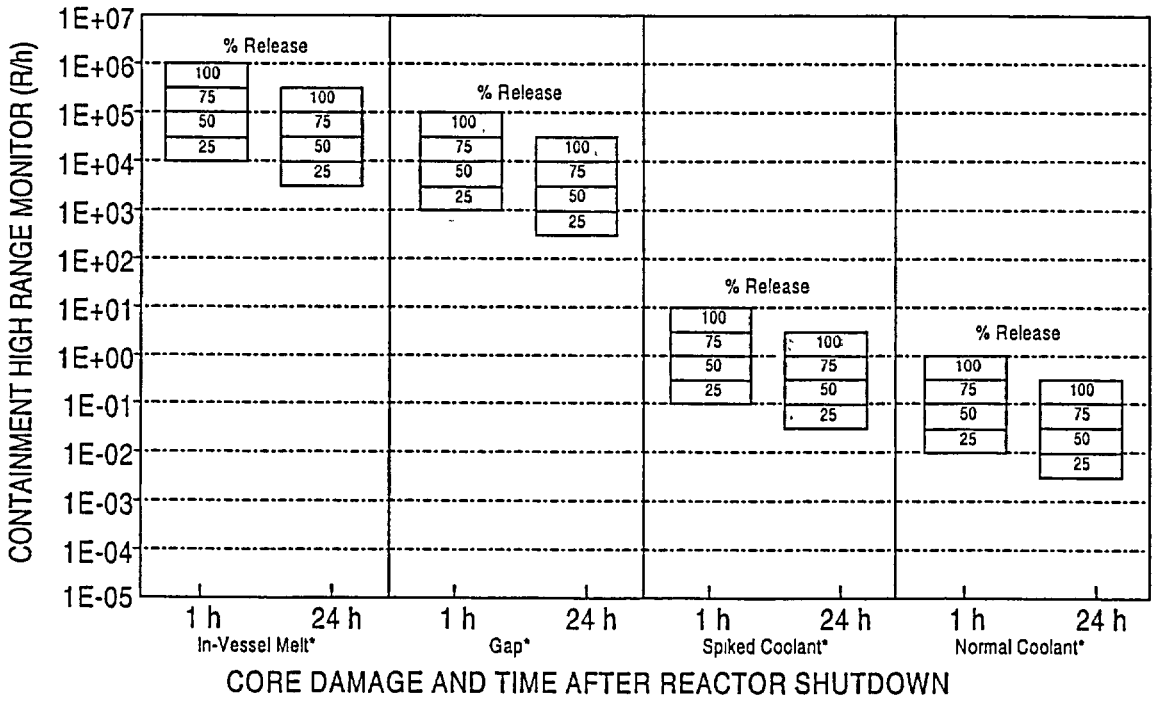
ATTACHMENT 1: CORE DAMAGE ESTIMATE USING RELEASE INTO CONTAINMENT AND ASSOCIATED RADIATION LEVELS WITH **SPRAYS ON**



NOTE: In-line check source readings should be considered when determining monitor readings.

* NUREG/BR-0150, Vol. 1, RTM-96, *Response Technical Manual*, Revision 4, March 1996

ATTACHMENT 2: CORE DAMAGE ESTIMATE USING RELEASE INTO CONTAINMENT AND ASSOCIATED RADIATION LEVELS WITH **SPRAYS OFF**

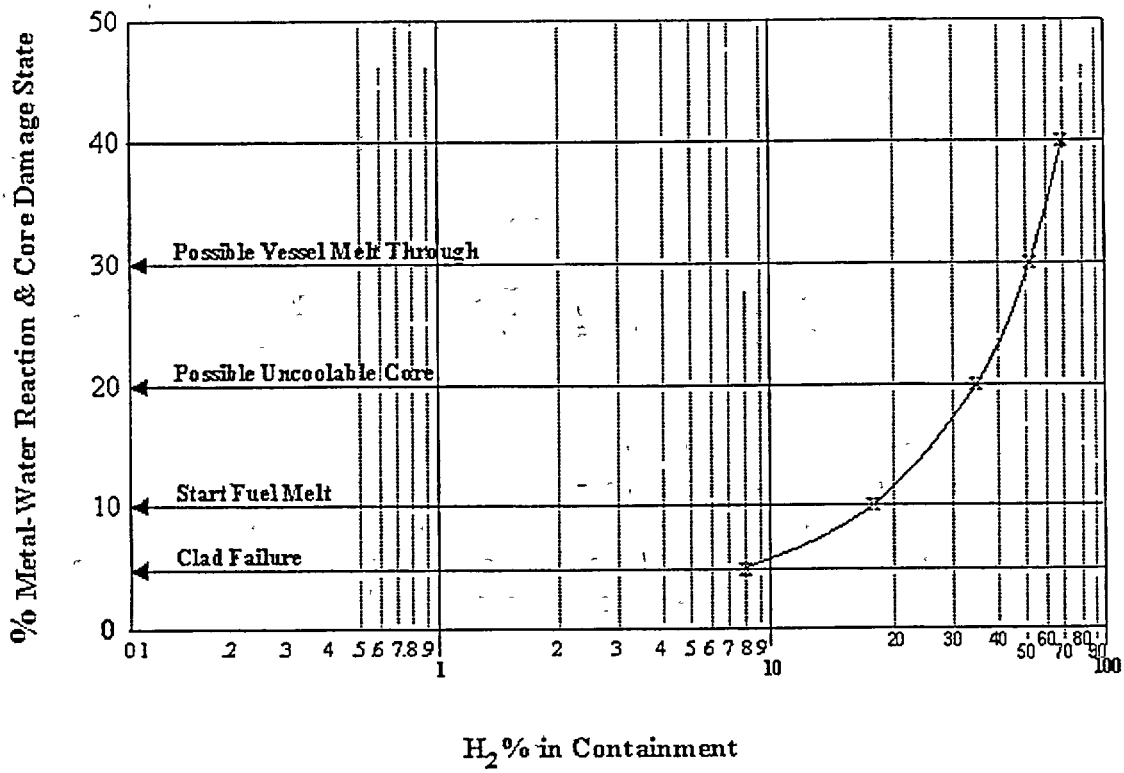


NOTE: In-line check source readings should be considered when determining monitor readings.

* NUREG/BR-0150, Vol. 1, RTM-96, *Response Technical Manual*, Revision 4, March 1996

ATTACHMENT 3:

Percentage of H_2 in containment relative to core damage



ATTACHMENT 4: CORE DAMAGE DETERMINATION

1.0 Description

Gas/water samples taken from the Post-Accident Sampling System are analyzed for major fission product concentrations with a Jupiter Gamma Spectroscopy System or equivalent. After incorporation of appropriate decay and normalization correction factors to the isotopic analysis results for I-131, Cs-137, Xe-133 and Kr-85, the extent of fuel or cladding damage can be determined by reference to Attachment 10 through 13. The ratios of isotopes released from either the fuel gap or from the molten fuel are significantly different as shown in Attachment 9.

In order to use the correct curve on Attachment 10 through 13, the release mode must be determined. Using the ratios of noble gas concentrations to Xe-133 concentration and the ratios of iodine isotopes to I-131 concentration, either a fuel melt or cladding failure can be determined. (Refer to Step 3.0) I-131 and Cs-137 samples are obtained from reactor water and Xe-133 and Kr-85 samples are obtained from primary containment atmosphere. Measurements of Cs-137 and Kr-85 activities are not likely until the reactor has been shut down for longer than a few weeks and most of the shorter-lived isotopes have decayed. This procedure requires only the Xe-133 or I-131 sample results. Long lived Cs-137 and Kr-85 activities may be analyzed in a similar manner when sample results are available.

Furthermore, some less volatile fission products (e.g., Sr, Ba, La and Ru) may also start to migrate from the core as fuel melting starts. If these less volatile elements are found to have unusually high concentrations in the water sample relative to baseline reactor water concentrations, some degree of fuel melting may be assumed. The isotopes Sr-92 (t ½ = 2.71h /1.388 MeV) and La-140 (t ½ = 40.2h/1.597 MeV) in a mixture of fission products should be relatively easy to identify and measure from a gamma spectrum.

2.0 Estimation Procedure

2.1 Obtain samples from the Post-Accident Sampling System in accordance with Unit 1 or Unit 2 Chemistry procedures.

2.2 Using a Jupiter Gamma Spectroscopy System or equivalent, determine the concentrations of fission products, namely I-131 and Xe-133. (C_{wi} in water, C_{gi} in gas)

2.3 Correct the measured concentrations for sample dilution.

2.4 Note: Use Attachment 5 for reference plant values.
Correct the measured gaseous activity concentrations for temperature and pressure difference between the sample vial and the containment atmosphere as follows:

$C_{gi} = C_{gi}\,(vial) \times (P_2\,T_1)/(P_1\,T_2)$

where:

$C_{gi}\,(vial)$ = Sample vial isotopic concentration
C_{gi} = Containment isotopic concentration
P_1 = Absolute atmospheric pressure (i.e.,14.7 psig)
T_1 = Absolute atmospheric temperature (i.e., 298° K) See Attachment 14
P_2 = Absolute containment pressure at time of sample
T_2 = Absolute containment temperature at time of sample

2.5 Calculate the fission product inventory correction factor, F_{Ii}, as follows:

F_{Ii} = Inventory in reference plant * / Inventory in operating plant

$$= \frac{3651 Mwt\,[1-\exp(-1095\,\lambda_i)]}{\sum_j [P_j(1-\exp(-\lambda_i T_j))\exp(-\lambda_i T_j^o)]}$$

where:

P_j = Steady reactor power operated in period j (Mwt)**

T_j = Duration of operating period j (day)**

T_j^o = Time between the end of operating period j and time of the last reactor shutdown (day of accident)

λ_i = Decay constant for isotope i (day^{-1})

** In each period, the variation of steady power should be limited to ± 20%.

*NOTE: For I-131 and Xe-133, if operating steady state for greater than 50 days:
F_I = 3651/core thermal power in MW.

2.6 To assist in computing the fission product inventory correction factor, F_{Ii} (Step 2.5), use Attachment 16 and 17. Each worksheet will guide you through the calculation for fission product inventory of the following isotopes:

Attachment 16 = I-131
Attachment 17 = Xe-133

2.7 Calculate the plant parameter correction factors (F_w and F_g), as follows:

$$F_w = \frac{\text{Operating plant coolant mass (g)*}}{\text{Reference plant coolant mass (3.920E9g)}}$$

$$F_g = \frac{\text{Operating plant primary containment gas volume (cc)*}}{\text{Reference plant primary containment gas volume (4.0E10cc)}}$$

*Assumes torus down comer submergence of 3 ft. (570,000 gal total). Adjust if necessary to account for HPCI or Containment Spray raw water additions.

2.8 Calculate the normalized concentrations, C^{Ref}_{wi} or C^{Ref}_{gi} by using the correction factors as follows:

$$C^{Ref}_{wi} = (C_{wi})\ (F_{Ii})\ (F_w)$$

or

$$C^{Ref}_{gi} = (C_{gi})\ (F_{Ii})\ (F_g)$$

where:

C^{Ref}_{wi} = Concentration of isotope i in the reference plant coolant (µCi/g)

C^{Ref}_{gi} = Concentration of isotope i in the reference plant containment gas (µCi/cc)

C_{wi} = Measured concentration of isotope i in the operating coolant at time, t (µCi/g)

C_{gi} = Measured concentration of isotope i in the operating containment gas at time, t (µCi/cc)

F_{Ii} = Inventory correction factor for isotope i

F_g = Containment gas volume correction factor

F_w = Primary coolant mass correction factor

2.9 Determine the concentrations of the shorter-lived isotopes shown in Attachment 8 (e.g. with a Jupiter Gamma Spectroscopy System or equivalent).

2.10 Correct the measured fission products to the time of reactor shutdown.

2.11 Calculate isotopic ratios where

$$\text{Noble Gas Ratio} = \frac{\text{Noble gas isotope concentration}}{\text{Xe-133 concentration}}$$

$$\text{Iodine Ratio} = \frac{\text{Iodine isotope concentration}}{\text{I-131 concentration}}$$

2.12 Determine release source by comparing results obtained in Step 2.11 to the noble gas and iodine ratios supplied in Attachment 8.

2.13 Utilize C_{wi}^{Ref} or C_{gi}^{Ref} to estimate the extent of fuel or cladding damage from Attachment 10 through 13.

3.0 Sample Concentration (Cwi or Cgi) Averaging

If the fission product concentrations are measured separately for the reactor water and suppression pool water or the drywell gas and the suppression chamber gas, the measured concentrations C_{wi} of C_{gi} would be averaged from the separate measurements:

$$C_{wi} = \frac{(\text{Rx water conc})(\text{Rx water mass}) + (\text{Pool conc})(\text{Pool water mass})}{\text{Reactor water mass} + \text{Pool water mass}}$$

$$C_{gi} = \frac{(\text{Drywell conc})(\text{Drywell gas vol}) + (\text{Supp cham conc})(\text{Supp cham gas vol})}{\text{Drywell gas volume} + \text{Suppression Chamber Gas Volume}}$$

ATTACHMENT 5: PARAMETERS FOR REFERENCE PLANT AND NMP

The pertinent plant parameters for the reference plant and the Nine Mile Point plant are given below:

	Ref. Plant	NMP-I	NMP-II
Rated reactor thermal power	3579 Mwt	1850 Mwt	3467 Mwt
Number of fuel bundles	748	532	764
	Ref. Plant	**NMP-I**	**NMP-II****
Reactor water mass (g)	2.46E8	2.17E8	2.74E8
Suppression pool water mass (g)	3.67E9	2.16E9 *	4.12E9
Total primary coolant (reactor plus suppression pool) mass (g)	3.92E9	2.38E9 *	4.39E9
Reactor Bldg. Volume, ft^3 (Secondary Containment)		2.14E6	3.88E6
Drywell gas volume (cc)	7.77E9	5.10E9	8.59E9
Suppression pool gas/containment gas volume (cc)	3.25E10	3.70E9 *	5.44E9
Total primary containment and drywell gas space volume (cc)	4.03E10	8.80E9 *	1.40E10

*Assumes torus downcomer submergence of 3 ft. (570,000 gallons total). Adjust if necessary to account for HPCI or Containment Spray raw water additions.

**Data and calculations used for NMP2

NMPNS Unit II Data

From Unit II FSAR: conversion factor: 2.832E4 cc/ft^3

Suppression Pool gas volume = 192,028 ft^3 or 5.44E9 cc

Drywell gas volume = 303,418 ft^3 or 8.59E9 cc

Suppression Pool water = 145,495 ft^3 @24 ft, or a mass of 4.12E9 grams

Estimation for reactor water mass:

Reference plant is BWR-6 with diameter of 238 inches and a mass of 2.46E8 grams

Unit 2 has a diameter of 251 inches. A ratio of diameters was used to estimate NMP2 water mass:

$$\frac{251}{238}^2 \times 2.46E8g = 2.74E8g$$

Data from Stone & Webster calculation 12/77, PR (C), 21-V, Attachment C on Unit II secondary containment volume:

a. Recirculation volume for accident conditions = 3,876,630 Ft^3 or 1.098E11cc

b. Other areas not included in secondary containment volume:

   N. Auxiliary Bay El. 240' = 69,200 Ft^3 or 1.960E9cc
   S. Auxiliary Bay El. 240' = 62,300 Ft^3 or 1.764E9cc

ATTACHMENT 6: CORE INVENTORY OF MAJOR FISSION PRODUCTS IN A REFERENCE PLANT OPERATED AT 3651 MWT FOR THREE YEARS

Isotope	Half-Life	Inventory * 1012μCi	Major Gamma Ray Energy (Intensity) KeV (γ/d)
Ru-103	39.4 d	155	497(0.89)
Sr-91	9.5 h	115	750(0.23), 1024(0.325)
Sr-92	2.71 h	123	1388(0.9)
Ba-140	12.8 d	173	537(0.254)
La-140	40.2 h	184	487(0.455), 1597(0.955)

*At the time of reactor shutdown.

ATTACHMENT 7: REFERENCE PLANT FISSION PRODUCT CONCENTRATIONS IN REACTOR WATER AND DRYWELL GAS SPACE DURING REACTOR SHUTDOWN UNDER NORMAL CONDITIONS

Isotope	Reactor Water (µCi/g)		Drywell Gas (µCi/cc)	
	Upper Limit	Normal	Upper Limit	Nominal
I-131	29	0.7	------	------
Cs-137[c]	0.3[a]	0.03[b]	------	------
Xe-133	-------	-------	1E-4[a]	1E-5[b]
Kr-85	------	------	4E-5[a]	4E-6[b]

a Observed experimentally, in an operating BWR-3 with MK I containment, data obtained from GE unpublished document, DRF 268-DEV-0009.

b Assuming 10% of the upper limit values.

c Release of Cs-137 activity would strongly depend on the core inventory which is a function of fuel burnup.

ATTACHMENT 8: REFERENCE PLANT RATIOS OF ISOTOPES IN CORE INVENTORY AND FUEL GAP

Isotope	Half-Life	Activity Ratio* in Core Inventory	Activity Ratio* in Fuel Gap
Kr-87	76.3 m	0.233	0.0234
Kr-88	2.84 h	0.33	0.0495
Kr-85m	4.48 h	0.122	0.023
Xe-133	5.25 d	1.0	1.0
I-134	52.6 m	2.3	0.155
I-132	2.3 h	1.46	0.127
I-135	6.61 h	1.97	0.364
I-133	20.8 h	2.09	0.685
I-131	8.04 d	1.0	1.0

*Ratio = Noble gas isotope concentration for noble gases
Xe-133 concentration

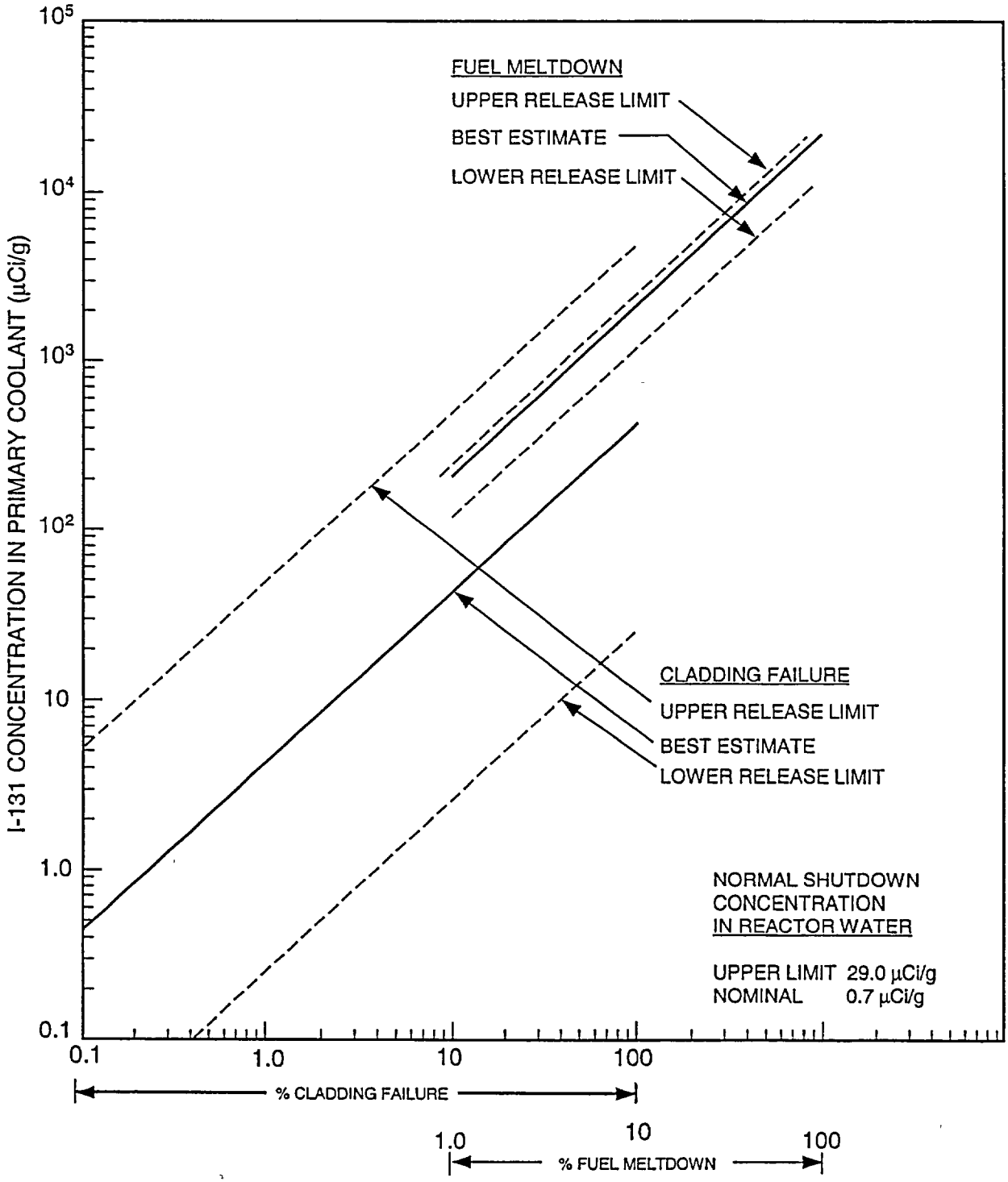
= Iodine isotope concentration for iodines
I-131 concentration

NOTE: Measured concentrations must be corrected for decay from time of reactor shutdown till sample time for comparison to activity ratios.

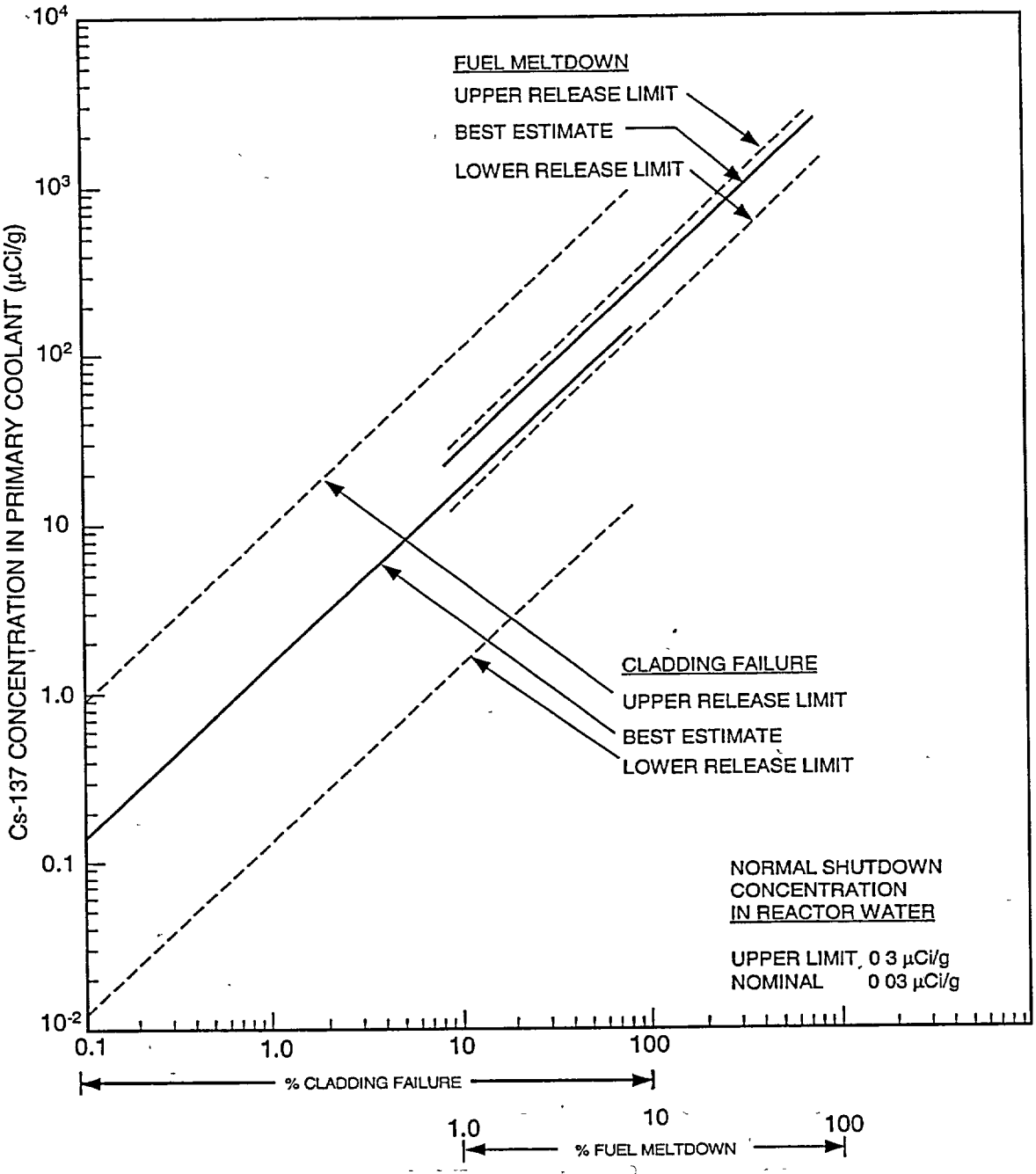
ATTACHMENT 9: REFERENCE PLANT BEST-E[illegible] .ATE FISSION PRODUCT RELEASE FRACTIONS

	Gap Release			Meltdown Release			Oxidation Release			Vaporization Release		
	Nominal	Lower Limit	Upper Limit	Nominal	Lower Limit	Upper Limit	Nominal	Lower Limit	Upper Limit	Nominal	Lower Limit	Upper Limit
Noble Gases (Xe, Kr)	0.030	0.010	0.12	0.873	0.485	0.970	0.087	0.078	0.097	0.010	0.010	0.010
Halogens (I,Br)	0.017	0.001	0.20	0.885	0.492	0.983	0.088	0.078	0.098	0.010	0.010	0.010
Alkali Metals (Cs,Rb)	0.050	0 004	0.30	0.760	0.380	0.855	---	---	---	0.190	0.190	0.190
Tellurium Group (Te,Se,Sb)	0 0001	3xE-7	0 04	0.150	0 05	0.250	0.510	0.340	0.680	0.340	0 340	0.340
Noble Metals (Ru,Rh,Pd,Mo,Tc)	---	---	---	0.030	0 01	0.10	0.873	0.776	0.970	0.005	0.001	0 024
Alkaline Earths (Sr,Ba)	1xE-6	3xE-9	.0004	0.100	0 02	0.20	---	---	---	0.009	0.002	0.045
Rare Earths (Y,La,Ce,Nd,Pr,Eu, Pm,Sm,Np,Pu)	---	---	---	0.003	0.001	0.01	---	---	---	0.010	0.002	0.050
Refractories (Zr,Nb)	---	---	---	0.003	0.001	0.01	---	---	---	---	---	---

ATTACHMENT 10

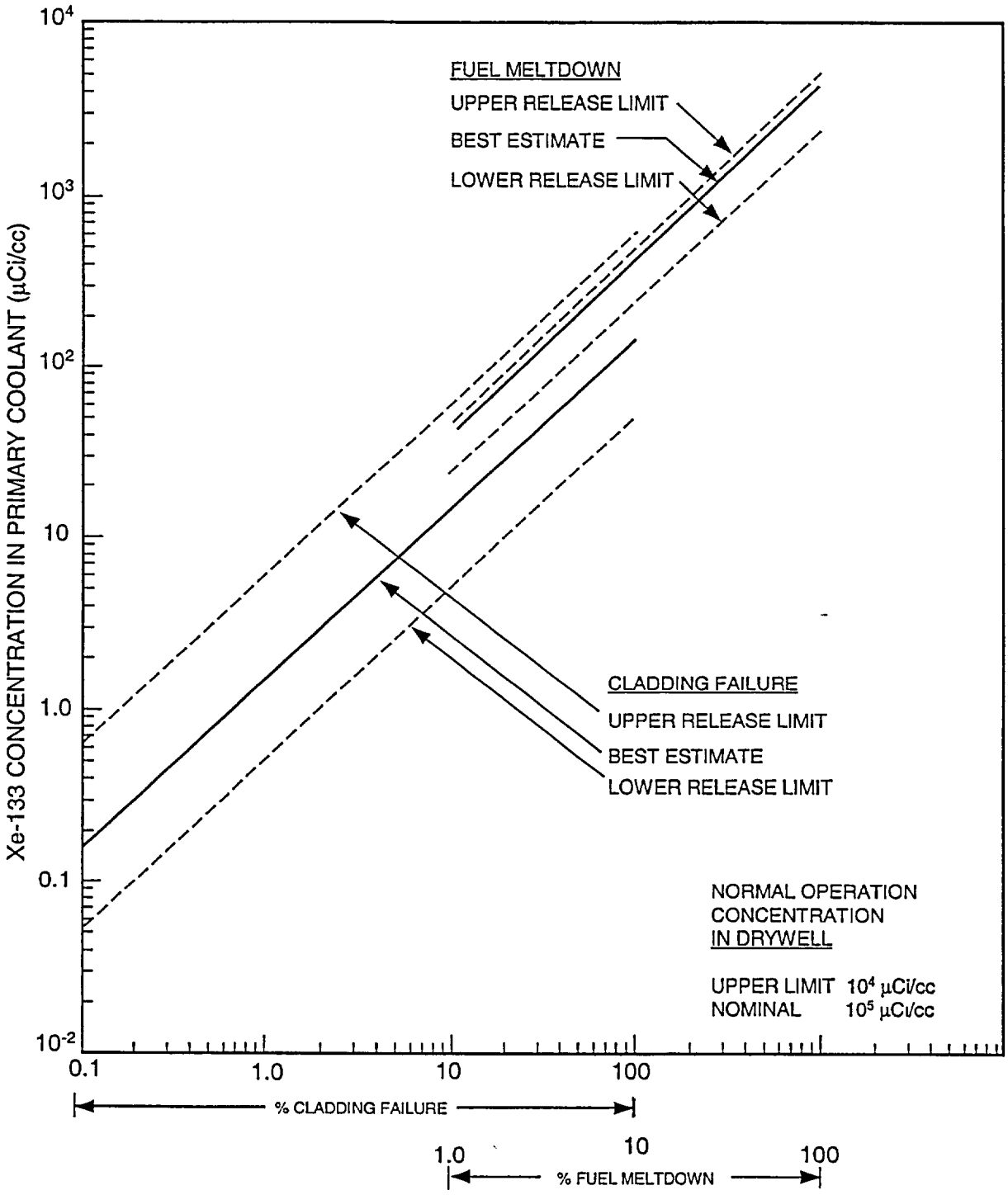


Relationship between I-131 Concentration in the Primary Coolant (Reactor Water + Pool Water) and the extent of Core Damage in Reference Plant.

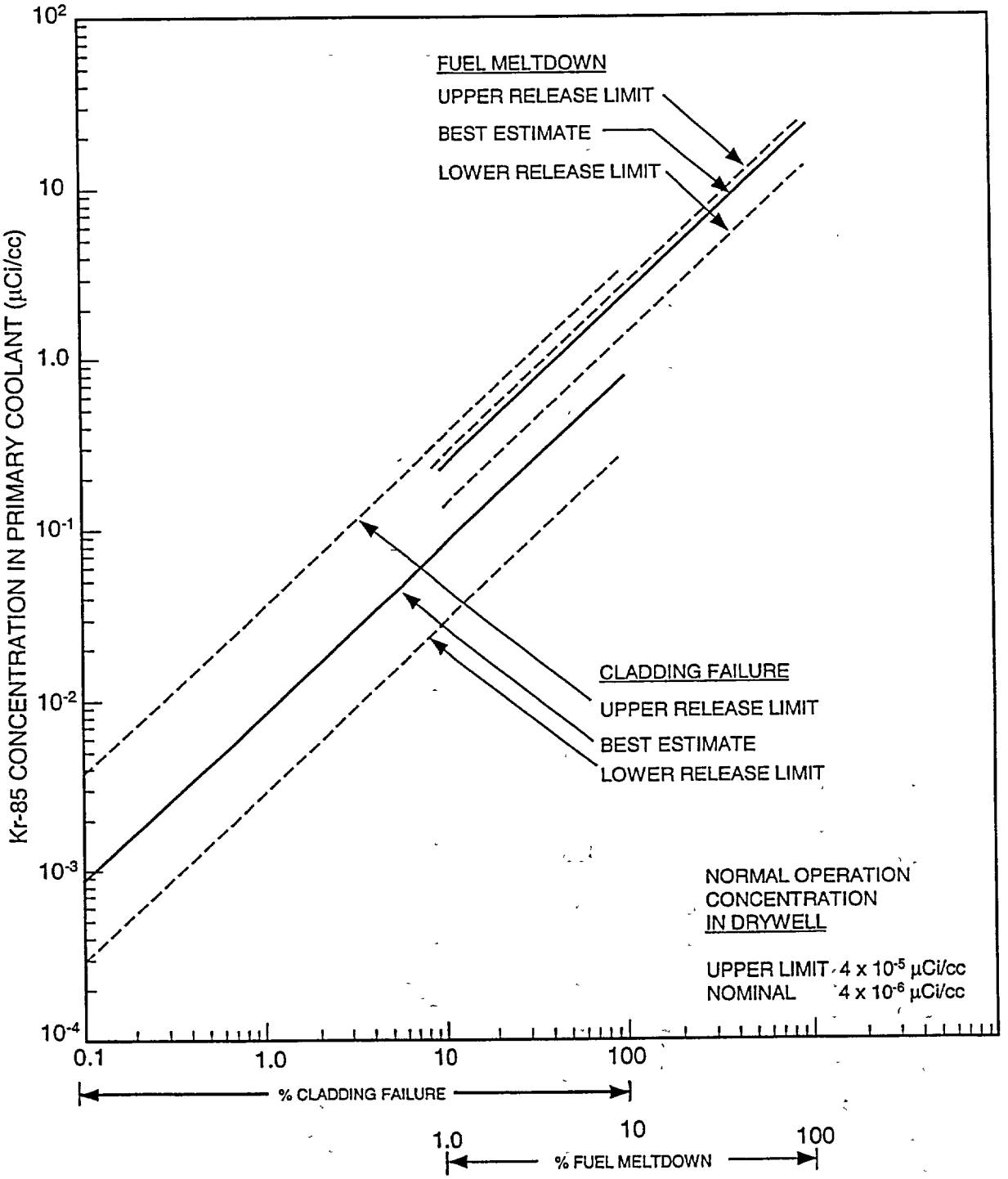


Relationship between Cs-137 Concentration in the Primary Coolant (Reactor Water + Pool Water) and the extent of Core Damage in Reference Plant.

ATTACHMENT 12



Relationship between Xe-133 Concentration in the Containment Gas (Drywell + Torus Gas) and the extent of Core Damage in Reference Plant.



Relationship between Kr-85 Concentration in the Containment Gas (Drywell + Torus Gas) and the extent of Core Damage in Reference Plant.

ATTACHMENT 14: TEMPERATURE CONVERSION TABLE

DEGREES: FAHRENHEIT / KELVIN

°F	°K	°F	°K	°F	°K
50	283	235	385	420	488
55	285	240	388	425	491
60	288	245	391	430	494
65	291	250	394	435	496
70	294	255	396	440	499
75	296	260	399	445	502
80	299	265	402	450	505
85	302	270	405	455	508
90	305	275	408	460	510
95	308	280	410	465	513
100	310	285	413	470	516
105	313	290	416	475	519
110	316	295	419	480	521
115	319	300	421	485	524
120	321	305	424	490	527
125	324	310	427	495	530
130	327	315	430	500	533
135	330	320	433	505	535
140	333	325	435	510	538
145	335	330	438	515	541
150	338	335	441	520	544
155	341	340	444	525	546
160	344	345	446	530	549
165	346	350	449	535	552
170	349	355	452	540	555
175	352	360	455	545	558
180	355	365	458	550	560
185	358	370	460	555	563
190	360	375	463	560	566
195	363	380	466	565	569
200	366	385	469	570	571
205	369	390	471	575	574
210	371	395	474	580	577
215	374	400	477	585	580
220	377	405	480	590	583
225	380	410	483	595	585
230	383	415	485	600	588

ATTACHMENT 15: CORE DAMAGE ESTIMATE BASED ON I-131 AND XE-133 CONCENTRATIONS

NOTE: Follow Attachment 4 Step 2 of procedure text while completing this worksheet.

1) List the radionuclide concentrations (C_w or C_g) decayed to the time of reactor shutdown as determined from Chemistry analysis. Attach Sample Analysis Data Sheets.

$C_{w(I\text{-}131)}$ = _____ µCi/ml (from reactor water)

uncorrected

$C_{g(Xe\text{-}133)}$ = _____ µCi/cc at 14.7 psig, 298°K (from Containment Gas)

2) Correct the measured gaseous activities for T, P differences between the sample vial and containment atmosphere per step 2.4 in Attachment 4

uncorrected

$$C_{gi} \times \frac{P_2\,(298)}{T_2\,(14.7)} = C_{gI}$$

For Xe-133: _____ X _____ (298) = _____ µCi/cc
_____ (14.7)

3) Calculate the Fission Product Inventory Correction Factor for I-131 and Xe-133. Use Attachment 16 and 17. If steady state operation for greater than 50 days: F_I (1-131) and F_I (Xe-133) = 3651 ▯ Core Thermal Power.

$F_{I(I\text{-}131)}$ = _____

$F_{I(Xe\text{-}133)}$ = _____

4) Calculate the Plant Parameter Correction Factors per step 2.7 of Attachment 4. If downcomer submergence equals 3 feet:

NMP1	NMP2
F_w (Torus water diluted sample) = 0.607	F_w (Suppression Pool Water diluted sample) = 1.12
F_w (No mixing of Torus water with sample) = 0.055	F_w (no mixing of suppression pool water with sample) = 0.070
Fg = 0.22	Fg = 0.35

5) Calculate the Normalized Concentrations of the isotopes as shown below:

C_{wi}^{Ref} or $C_{gi}^{Ref} = C_{wi}^{Ref}$ or $C_{gi}^{Ref} \times F_{Ii} \times F_w$ or F_g

For I-131: $C_{w(I\text{-}131)}^{Ref} = \frac{\_\_}{C_w} \times \frac{\_\_\_\_}{F_{I(I\text{-}131)}} \times \frac{\_\_}{F_w} = \frac{\_\_\_\_}{\mu Ci/ml}$

For Xe-133: $C_{g(Xe\text{-}133)}^{Ref} = \frac{\_\_}{C_{gi}} \times \frac{\_\_\_\_}{F_{I(Xe\text{-}133)}} \times \frac{\_\_}{F_g} = \frac{\_\_\_\_}{\mu Ci/cc}$

6) Refer to Attachment 10 and 12 to determine the best estimate of the extent of core damage.

Best Estimates:

I-131: _____% clad failure (From Attachment 10)
=_____% fuel melt
Xe-133: =_____% clad failure (From Attachment 12)
=_____% fuel melt

Ave: _____% clad failure
=_____% fuel melt

7) As necessary, confirm and/or refine the core damage estimate by applying the parameters found in Step 3.0 of Attachment 4.

8) Submit all data sheets/worksheets for independent review.

Technical Review Performed by:_____

9) Completed worksheet(s) forwarded to the Technical Data Coordinator for disposition.

Worksheet forwarded by:_____

ATTACHMENT 16: FISSION PRODUCT INVENTORY CORRECTION FACTOR FOR I-131

$F_{I(I-131)} = \frac{\text{Inventory of I-131 in reference plant}}{\text{Inventory of I-131 in operating plant}}$

F_i(I-131) = 3651 ÷ Core Thermal Power – (if steady state greater than 50 days)

(1) EQUATION FOR: Inventory of I-131 in operating plant

$$\Sigma j \left[(Pj) \quad (1-e^{-(\lambda T j)}) \quad (e^{-(\lambda T j)})\right]$$

WHERE: Inventory of I-131 in Reference Plant = 3651

λ = I-131 decay constant in days = 0.0862

Pj = Average Power in Mwt for operations period j

Tj = Numbers of days operated in period j

$\overset{o}{T}j$ = Number of days between the shutdown date of period j and last shutdown date (accident date).

(2) Operating Period* S/U Date	S/D Date	Days Operated	Decay Days	Ave. Power (Mwt)
j (YY,MM,DD)	(YY,MM,DD)	Tj	$\overset{o}{T}j$	Pj
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____

*Operating Period need only extend back 50 days prior to sample date (Six Halflives of I-131)

(3) Calculate Fission Product Inventory Correction Factor For I-131:

$$F_{I(I-131)} = \frac{3651}{\Sigma j \left[Pj \left(1-e^{(-0.0862\,Tj)}\right) \quad \left(e^{(-0.0862\,\overset{o}{T}j)}\right)\right]} = \_\_\_\_\_$$

CALCULATION PERFORMED BY:_____

CALCULATION REVIEWED BY:_____

DATE: ____/____/____
MM DD YY

TIME:_____ (24 hr.)

ATTACHMENT 17: FISSION PRODUCT INVENTORY CORRECTION FACTOR FOR XE-133

$F_{I(Xe\text{-}133)}$ = Inventory of Xe-133 in reference plant / Inventory of Xe-133 in operating plant

F_I(Xe-133) = 3651 ÷ Core Thermal Power – (if steady state greater than 50 days.)

(1) EQUATION FOR: Inventory of Xe-133 in operating plant

$$\Sigma j \left[(Pj)(1-e^{-(\lambda T j)})\ (e^{-(\lambda T j)})\right]^{o}$$

WHERE: Inventory of Xe-133 in Reference Plant = 3651

λ = Xe-133 decay constant in days = 0.132

(2)

j	Operating Period* S/U Date (YY,MM,DD)	S/D Date (YY,MM,DD)	Days Operated Tj	Decay Days T_j^{o}	Ave. Power (Mwt) Pj
1					
2					
3					
4					

*Operating Period need only extend back 50 days prior to sample date

(3) Calculate Fission Product Inventory Correction Factor For Xe-133:

$$F_{I(Xe\text{-}133)} = \frac{3651}{\Sigma j \left[Pj\ (1-e^{(-.132\ Tj)})\ (e^{(-.132Tj)})\right]^{o}} = \_\_\_\_\_$$

CALCULATION PERFORMED BY:_____

CALCULATION REVIEWED BY:_____

DATE: ____/____/____
MM DD YY

TIME:_____ (24 hr.)

NINE MILE POINT NUCLEAR STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-EPP-20

REVISION 15

EMERGENCY NOTIFICATIONS

TECHNICAL SPECIFICATION REQUIRED

Approved by:
G. L. Detter

General Manager Support Services

9/24/02
Date

Effective Date: 09/30/2002

PERIODIC REVIEW DUE DATE: OCTOBER, 2002

LIST OF EFFECTIVE PAGES

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TABLE OF CONTENTS

1.0 PURPOSE

To provide instructions for prompt initial notification and appropriate follow-up notification of emergency conditions at Nine Mile Point Nuclear Station (NMPNS) to offsite authorities, emergency response agencies, and selected NMPNS personnel.

2.0 RESPONSIBILITIES

2.1 Station Shift Supervisor/Emergency Director (SSS/ED) maintains overall control of emergency notifications until relieved by the Emergency Director/Recovery Manager (ED/RM).

2.2 Emergency Director/Recovery Manager (ED/RM) maintains control of notifications to offsite authorities at the Emergency Operations Facility.

2.3 The Technical Data Coordinator (TDC) ensures continuous communication with the NRC from the Technical Support Center.

3.0 PROCEDURE

3.1 Notifications of an Emergency Event From the Control Room (SSS/ED) Including Updates/Reclassifications

NOTES:
1. Initial notifications to State and County officials shall be commenced within 15 minutes of event declaration.
2. If a GENERAL EMERGENCY is declared, Protective Action Recommendations (PARs) shall be transmitted to offsite officials within 15 minutes.

3.1.1 The SSS/ED shall direct Communications Aides report to the Control Rooms.

3.1.2 The SSS/ED shall direct the Communications Aide to perform actions contained in the Communications Aide Flowchart (Attachment 2).

3.1.3 The SSS/ED shall:

a. Complete Part I Notification Fact Sheet (Attachment 1A) using the instructions on the back of the form.

NOTE: Notification must be started within 15 minutes from event declaration.

b. Complete the Community Alert Network Form (Attachment 4E).

NOTES: 1. Notifications should be completed as soon as possible after Part 1 Notification Fact Sheets.

2. The Dose Assessment Advisor should be consulted to determine if Alternate Emergency Reporting Locations may be appropriate due to offsite doses.

1. Provide appropriate information in steps 2 and 4C of Attachment 4E.

2. If the site becomes inaccessible for any reason, and response is required, indicate response required to Alternate Emergency Duty Location (Volney Service Center, Howard Rd.).

3. Sign the CAN contact form.

4. Provide to Communications Aide.

c. Complete the NRC Event Notification Worksheet (Attachment 6).

NOTES: 1. NRC shall be notified as soon as practical, but in all cases within 1 hour of event declaration.

2. If any Emergency Response Facility is less than 100% operational, then provide ERF status information in the event description block.

1. Complete all applicable sections.

2. Provide brief description.

3. Provide completed form to Communications Aide.

3.1.4 The SSS/ED should complete the Part I Notification Fact Sheet (Attachment 1A) every 30 minutes for as long as notifications remain in Control Room OR as requested by NY State Emergency Management Office and/or Oswego County Emergency management Office.

3.1.5 The SSS/ED shall ensure followup notifications are made to off-site officials (NYS and Oswego County) approximately every 30 minutes OR as requested by NY State Emergency Management Office and/or Oswego County Emergency management Office.

3.1.6 The SSS/ED shall ensure the Communications Aide:

- Completes turnover of communications duties to the EOF Communications Coordinator when directed by ED/RM.
- Transfers ENS communications to the TSC when appropriate.

3.1.7 For termination of Unusual Events only, the SSS/ED shall complete the Part I - Notification Fact Sheet (Attachment 1A) through line 5 and:

a. Sign where appropriate.

b. Provide to Communications Aide.

c. Direct Communications Aide to notify the NRC upon event termination.

3.2 Notifications for Transitory Event

3.2.1 Completing a Part 1 Notification Fact Sheet for a Transitory Event:

a. IF a transitory event has occurred (as defined in EPIP-EPP-01 or 02), AND NO emergency classification currently exists, the SSS/ED shall:

1) Complete a Part 1 Notification Fact Sheet, Items 1-5, and Item 8, using appropriate instructions on back of form.

2) Circle the emergency classification met during the transitory event AND the "Emergency Terminated" selection on Item 4.

3) Ensure RECS line notifications are completed within one hour in accordance with Attachment 2, Communications Aide Flowchart.

3.2.1 (Cont)

b. IF a transitory event has occurred (as defined in EPIP-EPP-01 or 02), AND emergency classification currently exists, the SSS/ED shall:

1) Complete a Part 1 Notification Fact Sheet (Attachment 1A) using instruction provided on back of form and;

- On Item 4, circle the emergency classification that currently exists.

- Note the emergency classification met during the transitory event and the time and date of termination in Item 8.

2) Implement emergency notifications in accordance with Step 3.1 of this procedure.

3.2.2 If appropriate, make notifications to the NRC in accordance with 10CFR50.72.

3.2.3 No other notifications are required for transitory events that do not result in a continued emergency classification.

3.3 Notifications of an Emergency Event From the EOF (ED/RM) Including Updates/Reclassifications

NOTES: 1. If emergency event is reclassified, State and County official notification shall be commenced within 15 minutes of each reclassification.

2. If a GENERAL EMERGENCY is declared, Protective Action Recommendations (PARs) shall be transmitted to offsite officials within 15 minutes.

3.3.1 The ED/RM shall direct transfer of communications responsibilities from the Control Room to the EOF when the EOF Communications Coordinator is prepared to accept duties.

3.3.2 The ED/RM shall verify updates are made to offsite officials (NYS and Oswego County) approximately every 30 minutes.

NOTE: Initial notification should already have been completed from the control room.

3.3.3 The ED/RM shall ensure the EOF Communications Coordinator performs notifications specified on Communications Coordinator Checklist (Attachment 3).

3.3.4 The ED/RM shall ensure the following documents are provided to the EOF Communications Coordinator:

a. Updated Part I - Notification Fact Sheet (Attachment 1A) from the EOF Administrator for every emergency classification upgrade and/or approximately every 30 minutes.

b. When appropriate, completed Part II - Dose Assessment Fact Sheet (Attachment 1B) from the ODAM.

c. Part III - Plant Status Board (Attachment 1C Unit 1 or Attachment 1D Unit 2) from Tech Assessment.

3.3.5 When the event is terminated, the ED/RM shall:

a. Obtain a Part 1 Notification Fact Sheet from the EOF Administrator, completed through Line 5

b. Sign where appropriate.

c. Provide to the EOF Communications Coordinator.

d. Direct TSC ENS Communicator to notify the NRC that event is terminated.

3.3.6 The ED/RM shall specify any specific or additional instructions for site facilities such as the Nuclear Learning Center (NLC), Energy Information Center (EIC), P Building, etc. to appropriate personnel (i.e. Security, Unaffected Control Room, Communications Coordinator, etc.).

3.4 Notifications of an Emergency Event From the Technical Support Center(TSC) Including Updates/Reclassifications

3.4.1 The Technical Data Coordinator (TDC) shall assign a person from the Technical Assessment Group to act as Emergency Notification System (ENS) Communicator.

3.4.2 The TDC shall direct the ENS Communicator to:

a. Activate the Unit 2 Emergency Response Data System (ERDS) per Attachment 5.

NOTE: For Unit 1, ERDS is activated by the Control Room

b. Call the Communications Aide in the Control Room and transfer ENS communications from the Control Room to the TSC.

c. Monitor ERDS every 60 minutes (If link is lost, restart per Attachment 5)

d. Continuously staff the ENS telephone. If a backup phone is required because the ENS line (Red Phone) is inoperable, the NRC shall be notified (via commercial telephone) within 1 hour that the ENS line is inoperable.

3.4.3 For each emergency reclassification, The TDC shall complete the NRC Event Notification Worksheet (Attachment 6)

NOTE: NRC shall be notified as soon as practical, but in all cases, within 1 hour of event declaration.

3.4.4 The TDC shall direct the ENS Communicator to:

a. Read NRC Event Notification Worksheet (Attachment 6) information to NRC Headquarters.

b. Fax NRC Event Notification Worksheet (Attachment 6) to NRC Headquarters per Attachment 4, F.

3.4.5 The TDC shall ensure the Radiological Assessment Manager continuously staffs the Health Physics Network (HPN) telephone, as required.

3.5 RECS Line Notifications to the Control Room (incoming call)

3.5.1 Upon receipt of a notification on the RECS line (incoming call), the CSO (or designee) should:

a. Complete a Part 1 Notification Fact Sheet (Attachment 1A) using the information provided.

b. Inform the SSS/ED of the notification and provide the completed Part 1 Notification Fact Sheet (Attachment 1A).

3.5.2 The SSS/ED should:

a. Review the information contained in the completed Part 1 Notification Fact Sheet (Attachment 1A).

b. Evaluate any events or conditions against EPIP-EPP-01/02 and, if necessary, declare the emergency.

c. If JAFNPP declares a General Emergency or initiates a site evacuation, implement EPIP-EPP-05C, "Exclusion Area Evacuation. (Unit 1 SSS/ED takes the lead.)

d. If necessary, implement appropriate Emergency Plan Implementing Procedures.

NOTE: It is not necessary to declare an emergency in order to request precautionary or partial staffing of the ERFs.

3.6 Precautionary or Partial Staffing of the Emergency Response Facilities (ERF)

3.6.1 If it is determined that a precautionary or partial staffing of the ERFs is desired and an emergency has NOT been declared, the SSS shall:

a. Complete the Community Alert Network (CAN) Attachment in accordance with Step 3.1.3.b, indicating the desired level of staffing as appropriate.

3.6.2 If an Unusual Event has been declared AND precautionary or partial staffing of the ERFs is desired the SSS/ED shall:

a. Complete the Part 1 Notification Fact Sheet in accordance with Step 3.1.3.a.

b. Complete the Community Alert Network (CAN) Attachment in accordance with Step 3.1.3.b, indicating the desired level of staffing as appropriate.

c. Complete the NRC Event Notification Fact Sheet in accordance with Step 3.1.3.c.

4.0 DEFINITIONS

4.1 Community Alert Network (CAN) - An automated computer callout system used to assist with notification of NMPNS emergency response personnel.

4.2 NRC Emergency Telecommunication System (ETS) - A dedicated telephone system to communicate important plant information to the NRC during an emergency. This includes the Emergency Notification System (ENS) known as the "red phone", the Health Physics Network (HPN), and other lines for NRC use.

4.3 Normal Hours - Normal work hours between 0700 and 1530 Monday through Friday excluding holidays.

4.4 Off-Hours - All hours not considered normal hours.

4.5 Oswego County Warning Point - (Oswego County 911 Center). The communications center at the Oswego County 911 Center in Oswego, New York serves as a notification point for messages from the utilities to appropriate officials in the county. The center can communicate directly to the State Warning Point and also has a radio to communicate directly with the Nine Mile Point and James A. Fitzpatrick Nuclear Stations.

4.6 Radiological Emergency Communication System (RECS) - A dedicated telephone system used to provide initial notification of an emergency, and continuing emergency information to New York State, Oswego County, JAFNPP, and the unaffected unit Control Room.

4.7 State Warning Point (SWP) - New York State's center for receipt and dissemination of warnings of an attack upon the United States as well as actual or impending natural or man-made disasters. The SWP is located in Albany, New York.

5.0 REFERENCES AND COMMITMENTS

5.1 Technical Specifications

None

5.2 Licensee Documentation

Nine Mile Point Site Emergency Plan

5.3 Standards, Regulations, and Codes

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

5.3.2 10CFR50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors

5.3.3 10CFR50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities

5.4 Policies, Programs, and Procedures

5.4.1	EPIP-EPP-01,	Classification of Emergency Conditions at Unit 1
5.4.2	EPIP-EPP-02,	Classification of Emergency Conditions at Unit 2
5.4.3	EPIP-EPP-05B,	Protected Area Evacuation
5.4.4	EPIP-EPP-05C,	Exclusion Area Evacuation
5.4.4	EPIP-EPP-18,	Activation and Direction of Emergency Plans
5.4.5	EPIP-EPP-23,	Emergency Personnel Action Procedures

5.5 Commitments

Sequence Number	NCTS Number	Description
1	DER NM-2001-4708	To allow determination of % tech specs by any means available.
2	DER NM-2001-4714	To specify Part III is to be sent.
3	504473	NRC Order dated 2-25-2002

6.0 RECORD REVIEW AND DISPOSITION

6.1 The following records generated by this procedure shall be maintained by Records Management for the Permanent Plant File in accordance with NIP-RMG-01, Records Management:

NOTE: This only applies if records are generated as the result of an actual declared emergency at the Nine Mile Point Nuclear Station.

Attachment 1A NINE MILE POINT NUCLEAR STATION NOTIFICATION FACT SHEET - PART 1
Attachment 1B NINE MILE POINT NUCLEAR STATION NOTIFICATION FACT SHEET - PART 2
Attachment 1C PART III - UNIT 1 PLANT STATUS BOARD
Attachment 1D PART III - UNIT 2 PLANT STATUS BOARD
Attachment 2 CONTROL ROOM COMMUNICATIONS AIDE FLOWCHART
Attachment 3 COMMUNICATIONS COORDINATOR CHECKLIST (EOF)
Attachment 4 EMERGENCY CONTACT FORM
Attachment 5 EMERGENCY RESPONSE DATA SYSTEM (ERDS) ACTIVATION
Attachment 6 NRC EVENT NOTIFICATION WORKSHEET

6.2 The following records generated by this procedure are not required for retention in the Permanent Plant File:

NOTE: This only applies when records are not the result of an actual declared emergency. (Such as for training or drills)

Attachment 1B NINE MILE POINT NUCLEAR STATION NOTIFICATION FACT SHEET - PART 2
Attachment 1C PART III - UNIT 1 PLANT STATUS BOARD
Attachment 1D PART III - UNIT 2 PLANT STATUS BOARD
Attachment 2 CONTROL ROOM COMMUNICATIONS AIDE FLOWCHART
Attachment 3 COMMUNICATIONS COORDINATOR CHECKLIST (EOF)
Attachment 4 EMERGENCY CONTACT FORM
Attachment 5 EMERGENCY RESPONSE DATA SYSTEM (ERDS) ACTIVATION

LAST PAGE

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ATTACHMENT 1A: NINE MILE POINT NUCLEAR STATION
NOTIFICATION FACT SHEET - PART 1

(Do not say items in italics)

Pick up phone, press A, wait about 10 seconds, then say,*
"THIS IS / IS NOT *(as appropriate)* A DRILL . THIS IS TO REPORT AN INCIDENT AT NINE MILE POINT NUCLEAR STATION, STAND BY FOR ROLL CALL."

Conduct roll call to include the following:

Notification No.	☐ New York State Warning Point	☐ Oswego County Warning Point	☐ JA Fitzpatrick Power Plant	☐ Unaffected 9MP Unit

PART 1 - GENERAL INFORMATION *(Read step number, and information, example: "number 1, This message...)*

1. This message is being transmitted on: *(Date)*_____ at *(Time)*_____ VIA: A. RECS B. Other_____

2. This is: A. NOT an Exercise B. An Exercise

3. The facility providing this information is: D. Nine Mile Point Unit 1 E. Nine Mile Point Unit 2 F. J.A. Fitzpatrick

4. The Emergency Classification is: A. Unusual Event B. Alert C. Site Area Emergency D. General Emergency E. Emergency Terminated F. Recovery G. Transportation Incident

5. This Emergency Classification declared on: *(Date)*_____ at *(Time)* _____

6. Release of Radioactive Materials due to the classified event.
   A. No Release
   B. Release below federally approved operating limits *(Technical Specifications)*
      ☐ To Atmosphere ☐ To Water
   C. Release above federally approved operating limits *(Technical Specifications)*
      ☐ To Atmosphere ☐ To Water
   D. Unmonitored release requiring evaluation

7. Protective Action Recommendations:
   A. No need for Protective Actions outside the site boundary.
   B. EVACUATE the following ERPAs:
   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
   AND C. SHELTER all remaining ERPAs

8. EAL #: Additional Information _____

9. The Plant status is: A. Stable B. Improving C. Degrading

10. Reactor Shutdown: A. Not Applicable B. *(Date)* _____ at: *(Time)* _____

11. Wind Speed: _____ Miles/hr at elevation _____ feet

12. Wind Direction: *(From)* _____ Degrees at elevation _____ feet

13. Stability Class: A B C D E F G

14. Reported By: (Communicator Name) _____ at Tel. No. (315)_____

Ask: "DOES OSWEGO COUNTY OR NEW YORK STATE NEED CLARIFICATION ON ANY INFORMATION?
(Provide as appropriate)
THIS IS THE END OF THE MESSAGE. STANDBY FOR VERIFICATION ROLL CALL."

Check those involved in termination roll call.	☐ New York State Warning Point	☐ Oswego County Warning Point	☐ JA Fitzpatrick Power Plant	☐ Unaffected 9MP Unit

Then say, "NINE MILE POINT UNIT 1 OR 2 *(as appropriate)* OUT" AT TIME *(24 hr clock)*: _____

Approved By (SSS/ED or ED/RM) _____

ATTACHMENT 1A INSTRUCTIONS
COMPLETING THE NOTIFICATION FACT SHEET - PART 1

NOTE: Complete all applicable sections.

BLOCK # INSTRUCTIONS

1. Communications Aide completes this block using date and time that number was dialed (A then *).
2. Indicate not an exercise(real event) or exercise(drill) by circling as appropriate.
3. Indicate facility providing information by circling as appropriate.
4. Indicate by circling as appropriate the:
   - Classification Level, or
   - If event is terminated, or
   - If recovery is entered, or
   - If this is for a transportation accident
5. Indicate the date and time the event was classified.
6. Indicate the status of any releases of radioactive materials by circling as appropriate, request Chemistry Technician provide release information then indicate:

   NOTE: (This section applies to release of radioactive materials that took place DUE to the classified event. IF a radioactive material release is taking place and it is unknown if it is related to the event, THEN assume the release is the result of the event)

   a. No Release: Circle this selection if there is no release related to the declared event.

(C1) b. Release below federally approved operating limits (*Technical Specifications*): Circle this selection if a release is in progress due to the event AND the release rate has been determined (by any means available) to NOT exceed Technical Specifications.

(C1) c. Release above federally approved operating limits (*Technical Specifications*): Circle this selection if a release is in progress due to the event AND the release rate has been determined (by any means available) to exceed Technical Specifications.

   d. Unmonitored release requiring evaluation: Circle this selection if evidence exists of a release from a pathway from which a release cannot be readily determined (examples: Emergency Condenser vents, blowout panels)
7. Indicate Protective Action Recommendations by circling as appropriate:
   - No need for protective actions
   - Evacuate the following ERPAs (indicate appropriate ERPAs as recommended by Dose assessment Advisor/ODAM)
   - If PARs are recommended, then circle SHELTER ALL REMAINING ERPAs.
8. Write the EAL # that the event was classified as in the box provided for Item #8. Under Additional Information examples information that should be provided include:
   - Do not repeat the EAL description here.
   - Other conditions if present that could have an effect on future classifications.
   - Other EALs that are applicable to present conditions, ie... if in more than one EAL has been met, indicate additional EAL numbers here.
   - If the EAL requires no additional explanation, the Additional Information section may be left blank.
9. Indicate the following by circling as appropriate:
   - Stable: No escalation in emergency classification expected. Plant conditions are not degrading.
   - Improving Plant conditions are such that mitigative actions have been successful and termination is likely.
   - Degrading: Plant conditions are such that mitigative actions have been unsuccessful, escalation of emergency classification is likely. If already at a General Emergency, release may be anticipated or is ongoing.

10. Indicate not applicable by circling as appropriate or indicate the time the reactor is shutdown (per EOP Definition).

    NOTES:
    1. Meteorological Data to be recorded on the Part I Notification Fact Sheet is the 15 minute average data in accordance with EPIP-EPP-08.
    2. Meteorological Data need not be completed for initial notification if the data is not readily available.

11. Obtain 15 minute average meteorological data from the Dose Assessment Advisor and record.
12. Obtain 15 minute average meteorological data from the Dose Assessment Advisor and record.
13. Obtain 15 minute average meteorological data from the Dose Assessment Advisor and record
14. Communications Aide completes this block listing name and the commercial telephone they use.

THEN: Sign the Part 1 Notification Fact Sheet.
AND: Provide to Communications Aide.

For termination of Unusual Events only,

1. Complete Part I - Notification Fact Sheet (Attachment 1A) through Line 5 and:
   a. Sign where appropriate
   b. Provide to the Communications Aide

RADIOLOGICAL ASSESSMENT DATA THIS IS / IS NOT A DRILL (circle appropriate)

15. Message transmitted at:

Date _____ Time _____ Location/Facility Transmitted From: _____

16. General Release Information

A. Release > Tech Specs started: Date _____ Time _____
B. Release > Tech Specs expected to end: Date _____ Time _____ OR ☐ Unknown ☐ Intermittent
C. Release > Tech Specs ended: Date _____ Time _____
D. Reactor Shutdown: N/A OR Date _____ Time _____
E. Wind Speed: _____ miles/hour OR _____ meters/second at elevation _____ feet or meters (Circle one)
F. Wind Direction from: _____ degrees at elevation _____ feet or meters (Circle one)
G. Stability Class: PASQUIL A B C D E F G OR Other _____

17. Atmospheric Release Information

A. Release from: ☐ Ground ☐ Elevated
B. Iodine/Noble Gas Ratio _____
C. Total Release Rate _____ Ci/sec
D. Noble Gas Release Rate _____ Ci/sec
E. Iodine Release Rate _____ Ci/sec
F. Particulate Release Rate _____ Ci/sec

18. Waterborne Release Information

A. Volume of Release _____ gal or liters
B. Total Concentration _____ μCi/ml
C. Radionuclides in Release _____
D. Total Activity Released _____

19. Dose Calculations (based on a release duration of ____ hours)

Calculation is based on (circle one) A. Inplant Measurements B. Field Measurements C. Assumed Source Term

Table below applies to (circle one) A. Atmospheric Release B. Waterborne Release

Distance	Dose	
	TEDE (rem)	CDE - Child Thyroid (rem)
Site Boundary		
2 Miles		
5 Miles		
10 Miles		
___ Miles		

20. Field Measurements of Dose Rates or Surface Contamination/Deposition

Mile/Sector OR Mile/Degrees	Location OR Sampling Point	Time of Reading	Dose Rate OR Contamination (Include Units)

Approved By: (SSS/ED or ED/RM) _____

ATTACHMENT 1C
PART III - UNIT 1 PLANT STATUS BOARD

THIS IS / IS NOT A DRILL	Date (MM/DD/YY)	Time (24 Hour)

Parameter Description	*Current Value*	*Units*	*Pint ID*
Main Steam Line Radiation Monitor 111		mR/Hr.	E469
Main Steam Line Radiation Monitor 121		mR/Hr.	E470
Main Steam Line Radiation Monitor 112		mR/Hr.	E471
Main Steam Line Radiation Monitor 122		mR/Hr.	E472
Reactor Feedwater Total Flow		K#/Hr.	G315
SPDS-APRM		%	H441
SPDS-IRM		%	H442
SPDS-SRM		CPS	H443
SPDS Wide Water Level		Feet	H446
SPDS Acurex FZWLM Level		Inches	H447
SPDS RPV Pressure		PSIG	H448
SPDS Drywell Pressure		PSIG	H449
SPDS Containment Oxygen Concentration		%	H452
SPDS Drywell Temperature		Degrees F	H453
SPDS Torus Water Temperature		Degrees F	H454
SPDS Torus Water Level		Feet	H455
SPDS Offgas Dose Rate		mR/Hr.	H457
SPDS Main Stack		μCi/Sec.	H458
SPDS Containment High Radiation Monitor		R/Hr.	H460
HPCI (No=FW not in HPCI mode; YES=FW in HPCI mode		-------	W087

THIS IS / IS NOT A DRILL	Date (MM/DD/YY)	Time (24 Hour)

Parameter Description	*Current Value*	*Units*	*Pint ID*
Condensate Storage Tank 1A - Level		KGAL	CNSLA100
Condensate Storage Tank 1B - Level		KGAL	CNSLA101
Reactor Feedwater Flow - Line A		KLBH	FWSFU100
Reactor Feedwater Flow - Line B		KLBH	FWSFU101
Reactor Core Isolation Cooling System Flow		GPM	ICSFA100
APRM - Reactor Power		%	SPDSA101
Drywell Temperature		Degrees F	SPDSA103
SRM Output		CPS	SPDSA105
Reactor Water Level		Inches	SPDSA107
Reactor Pressure		PSIG	SPDSA109
Drywell Pressure		PSIG	SPDSA111
Containment Oxygen Concentration		%	SPDSA113
Containment Hydrogen Concentration		%	SPDSA114
Suppression Pool Temperature		Degrees F	SPDSA115
Suppression Pool Water Level		Feet	SPDSA117
Main Stack Activity		μCi/S	SPDSA124
Reactor Building Vent Activity		μCi/S	SPDSA125
Off Gas Activity		μCi/cc	SPDSA126
Drywell High Radiation		R/Hr	SPDSA127
LPCI - A Flow		GPM	SPDSA136
LPCI - B Flow		GPM	SPDSA137
LPCI - C Flow		GPM	SPDSA138
LPCS Flow		GPM	SPDSA139
HPCS Flow		GPM	SPDSA140
Main Steam Radiation Monitor		mR/Hr	SPDSA141
Generator Power		MWE	SPGQA02
Drywell Loop A Pressure Elevation 293 Ft.		PSIG	CMSPA01
Drywell Loop A Pressure Elevation 261 Ft.		PSIG	CMSPA02
Drywell Area Temperature Elevation 307 Ft.		Degrees F	CMSTA01
Drywell Area Temperature Elevation 310 Ft.		Degrees F	CMSTA10

ATTACHMENT 2: CONTROL ROOM COMMUNICATIONS AIDE FLOWCHART

HOW TO USE THE RECS LINE

1 Ensure the Notification Fact Sheet - Part 1 is completed and the Emergency Director signature line is signed

2. Obtain Emergency Contact Forms Packet (Attachment 4).

3 Provide the Part 1 data to agencies via the RECS line.

a Lift the handset of RECS telephone (with yellow face plate) and press A then *
(example like you dial a regular telephone, if you make a mistake, hang-up and re-dial correctly)

b Wait about 10 seconds for all responders to answer (if no answer, or are informed no light and/or ring was received, hang-up momentarily and re-dial)

c Push button in the handset to talk.

d State the following

"THIS IS / IS NOT (as appropriate) A DRILL ,THIS IS TO REPORT AN INCIDENT AT THE NINE MILE POINT NUCLEAR STATION. STANDBY FOR ROLL CALL....".

NOTE When each organization answers, they should identify themselves and wait for the Roll Call to begin (they often do not so don t wait)

e Pause to permit individuals to obtain their copies of forms on which they will record the information you will read to them

4 Conduct a roll call by stating "Roll Call" New York State Warning Point" (wait to obtain an answer) then continue to include Oswego County Warning Point (pause) and James A Fitzpatrick Nuclear Power Plant (pause), and unaffected Nine Mile Point Plant

5 For parties that do not respond to call state the following "recalling (Party) _____". If the party still does not respond, then call them using the backup method specified, after completion of RECS call. If a backup method is not specified, continue notifications and inform SSS/ED, ED/RM as soon as possible

6 Upon completion of roll call, read the Notification Fact Sheet - Part

Do so by reading each line item number, and the associated information

7 Upon completion of message state "This is the end of the message Standby For Verification Roll Call"

8 Conduct roll call (step 4)

9 Then ask if N Y State and Oswego County have received the message, provide corrected message information if necessary

10 After all information is provided state "Nine Mile Point (Unit 1, Unit 2 or EOF) out at time _____ "

11 Record the time that the notification is completed

FAXING DOCUMENTS

NOTE If performing this portion of the procedure during a DRILL or EXERCISE, ensure the word "DRILL" is written across the form

1 Insert document in FAX machine face down.

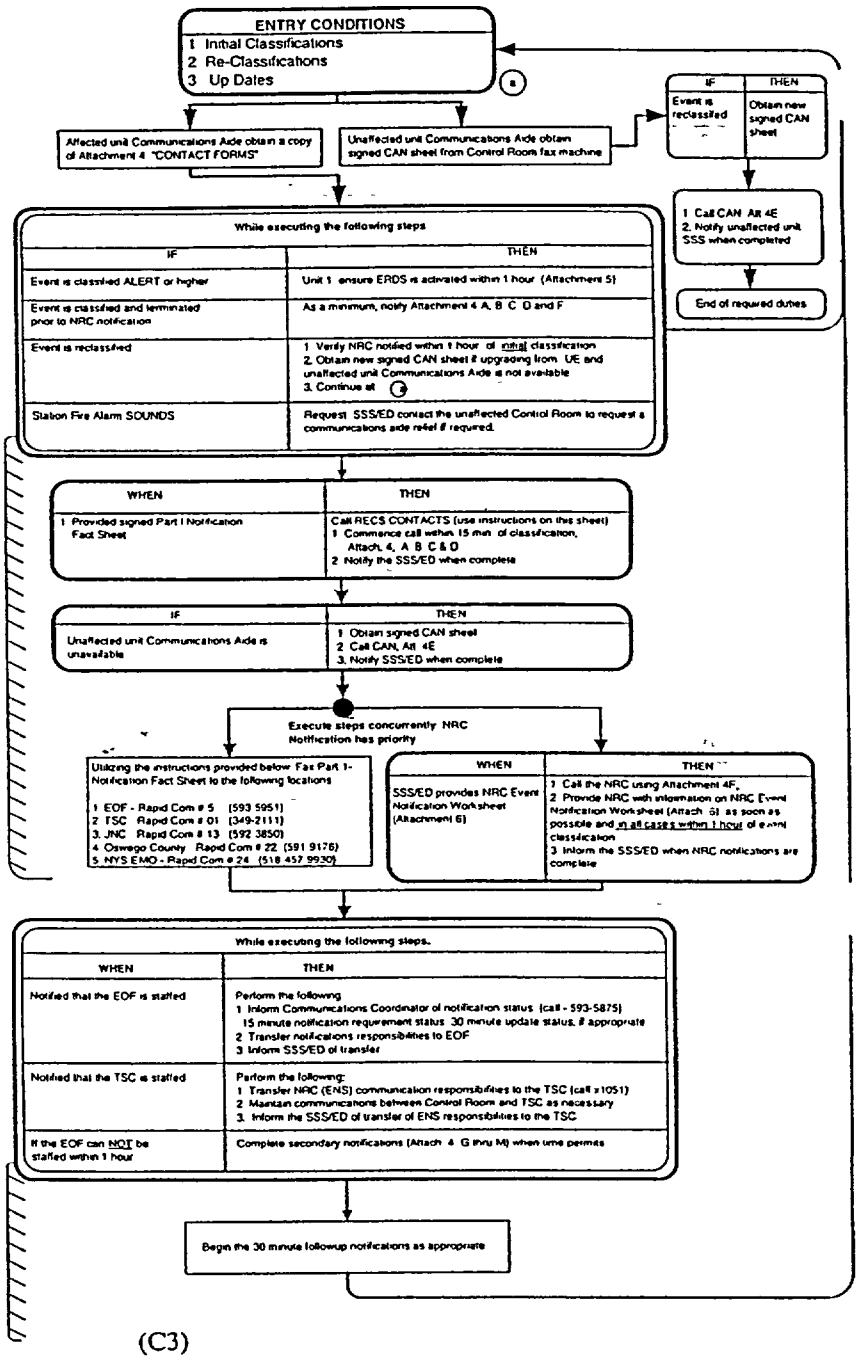
2. Flip over plastic cover to expose Rapid Com numbers 33-48

3 Press button number 48

4 This is equivalent to dialing the rapid com numbers below

05	EOF	(593-5951)
01	TSC	(349-2111)
13	JNC	(592-3850)
22	Oswego County	(591-9176)
24	NYS EMO	(518 457 9930)

5 When the FAX machine provides printout
a Verify FAX was sent to all agencies listed in step 4 above
b If not sent to all re-send FAX to those missed



(C3)

Loss of Communications Capability from the Control Room

IF

- All communications systems have been disrupted,

THEN

- Obtain the emergency communications equipment kit.
- Perform required notifications using the instructions contained on Attachment 7.

ATTACHMENT 3: COMMUNICATIONS COORDINATOR CHECKLIST (EOF)

NAME:	DATE:	☐ UNIT 1 ☐ UNIT 2

NOTE: A Log should be maintained detailing times notifications made, problems encountered, etc.

	Check Complete	N/A
1. Sign in on the Staffing Board	☐	☐
2. Obtain the Emergency Contact Forms (Attachment 4).	☐	☐
3. Verify EOF Plant Information Coordinator position is filled and ready to assume responsibilities	☐	☐
4. Verify Off-site Dose Assessment Manager (ODAM) position is filled and ready to assume responsibilities	☐	☐
5. Verify communications equipment/telephone lines operational	☐	☐
6. Inform EOF Administrator or ED/RM you are staffed and ready to assume communications duties	☐	☐
7. Contact Control Room Communications Aide: U-1: 349-2841, 2842, 2843 U-2: 349-2173		
a. Determine which required initial and follow-up notifications have been made	☐	☐
b. Request a copy of latest Part I Notification from the Control Room	☐	☐
c. Advise Control Room Communications Aide you are assuming emergency notification duties	☐	☐
d. Document status of initial and follow-up notifications (complete as required)	☐	☐
8. Inform ED/RM when communications turn over is complete	☐	☐
9. Process Notification Fact Sheets (NFS) as follows:		
a. Obtain approved NFS as follows:		
• Part 1 NFS: Emergency Director or EOF Administrator	☐	☐
• Part 2 NFS: Emergency Director or ODAM	☐	☐
• Part 3 NFS: Fax in Tech Assessment Room	☐	☐
b. Transmit Part 1 NFS using the RECS line. (See CommAide flow chart for RECS instructions)	☐	☐
c. IF		
• All communications systems have been disrupted	☐	☐
THEN		
• Obtain the emergency communications equipment located in the NMP Plant Assessment Room	☐	☐
• Perform required notifications using the instructions contained on Attachment 7	☐	☐
FAX NFS as follows:		
• Part 1 NFS: Speed dial #10 (Oswego County EOC, New York State EOC, Joint News Center, TSC, JAFNPP Control Room)	☐	☐
• Part 2 NFS: Speed dial #10 (Oswego County EOC, New York State EOC, Joint News Center, TSC, JAFNPP Control Room)	☐	☐
d. Request EOF clerical staff distribute copy of each new NFS to each EOF "in Basket"	☐	☐
e. Provide copies of all transmitted NFS to Plant Information Coordinator for posting in the EOF	☐	☐
f. Maintain a legible copy of each NFS in a master file	☐	☐

		Check Complete	N/A
(C2)	10. When requested by other EOF staff to distribute data to the State and/or county (e.g. Part III):		
	• Fax to speed dial #20 (Oswego County EOC, New York State EOC, Joint News Center, TSC)	☐	☐
	• Maintain a legible copy of each fax in a master file	☐	☐
	11. Perform initial and follow-up notifications as required based on emergency classifications and previous notifications status using Attachment 4 (except NRC)	☐	☐
	12. Upon completion of initial and/or follow-up notifications, continue to make follow-up notifications at approximately 30 minute intervals as specified in Att 4 A, B, C, D	☐	☐
	13. Keep the ED/RM and EOF Administrator apprised of notification status, problems, and questions	☐	☐
	14. If the emergency is reclassified, recommence notification activities steps 10 through 14	☐	☐
	15. When the emergency is terminated: communicate the Part I Notification Fact Sheet for termination to notify all other parties (Attachment 4) that the event is terminated by:		
	a. Obtaining Part I from EOF Administrator	☐	☐
	b. Performing cursory review for completeness to Line 5 and ED/RM signature	☐	☐
	c. Performing notifications per Attachment 4	☐	☐

ATTACHMENT 4: EMERGENCY CONTACT FORM

NOTE: For items A-D, use the RECS Line Instructions of Attachment 2.

A. New York State: Department of Health/State Warning Point/EOC

REQUIREMENT	1. Notify at all emergency classifications and reclassifications 2. Notification shall be made within 15 minutes of event classification/reclassification 3. Provide follow-up information as required by checklist
PRIMARY CONTACT METHOD	RECS Hot Line - Yellow Face Plate
BACKUP CONTACT METHOD	1. (518) 457-2200 (Warning Point)(24-hour) 2. (518) 457-9930 for Fax (Call (518) 457-2200 before using this fax number.)
MESSAGE	Read Part I Notification Fact Sheet.
COMMENTS	

B. Oswego County 911 Center/EOC

REQUIREMENT	1. Notify at all emergency classifications and reclassifications 2. Notification shall be made within 15 minutes of event classification/reclassification 3. Provide follow-up information as required by checklist
PRIMARY CONTACT METHOD	RECS Hot Line - Yellow Face Plate
BACKUP CONTACT METHOD	1. 911 (Warning Point) 2. 343-1313 (Warning Point) 3. 591-9189 (EOC) 4. Radio (Osw. Fire) (KED-569) 5. 349-8500
MESSAGE	Read Part I Notification Fact Sheet.

C. JAFNPP Control Room

REQUIREMENT	1. Notify at all emergency classifications and reclassifications 2. Provide follow-up information as required by checklist
PRIMARY CONTACT METHOD	RECS Hot Line - Yellow Face Plate
BACKUP CONTACT METHOD	1. Dedicated CR Line (CSO Desk) 2. 349-6665 3. 349-6666 4. 342-3840 (Switchboard) 5. 349-6323 Fax
MESSAGE	Read Part I Notification Fact Sheet.

D. Unaffected Nine Mile Control Room: ☐ Unit 1/ ☐ Unit 2 SSS

REQUIREMENT	1. Notify at all emergency classifications and reclassifications 2. Provide follow-up information as required by checklist		
PRIMARY CONTACT METHOD	RECS Hot Line - Yellow Face Plate		
BACKUP CONTACT METHOD	Unit 1 SSS 1. 349-2480 2. 342-3462 3. 349-2478 (CSO)	Unit 2 SSS 1. 349-2170 2. 342-1929 3. 342-3059	4. 349-2168 (CSO)
MESSAGE	Read Part I Notification Fact Sheet.		

E. Community Alert Network (CAN)

REQUIREMENTS FOR CAN NOTIFICATION

Notification to CAN and Pager Activation System should occur only when:

1. Directed by SSS/ED/ or ED/RM for event notification
2. It is the first notification required for any Emergency Classification, OR
3. The Emergency Classification is upgraded from an Unusual Event Classification.
4. Per EOF Communications Coordinator Checklist.

STEP 1 CONTACT THE CAN SYSTEM

A. Call CAN System using one of the numbers listed below: (Remember to dial 9-1, then the number below)
1. (800)552-4226 2. (877)786-8478 3. (800)992-2331

B. Provide Message: *"THIS IS TO REPORT AN INCIDENT AT NINE MILE POINT NUCLEAR STATION"*

C. Note time, date and person contacted:
Time: _____ Date: _____ Person Contacted:_____

D. When requested provide password **(ONTARIO)**.

STEP 2 PROVIDE MESSAGE AS COMPLETED BY SSS/ED

This should be read as (example: A, This # 1, " is a drill")

A. This:
1. ☐ is a drill
2. ☐ is an actual emergency

Copy # checked here: _____ **A** (used for step 4)

B. Involving:
1. ☐ Nine Mile Point Unit 1
2. ☐ Nine Mile Point Unit 2
3. ☐ Both Units

Copy # checked here: _____ **B** (used for step 4)

C. Responders: report to
1. ☐ No response is required
2. ☐ Response required to all ERFs
3. ☐ Response required to Alternate Emergency Duty Location
6. ☐ Staff TSC/OSC only
8. ☐ Precautionary staff ERFs

Copy # checked here: _____ **C** (used for step 4)

STEP 3 VERIFY CORRECT CODE

A. Ask the CAN System Operator to repeat the numerical code (as listed above):
B. When asked, provide the number you called CAN from as listed below and check the box.
EOF: ☐ (315) 593-5875 **Unit 1:** ☐ (315) 349-2841 ☐ (315) 349-2842
Unit 2: ☐ (315) 349-2172 ☐ (315) 349-2173 **Other:** ☐ _____ (write in number)
C. Hangup the phone.

STEP 4 MANUALLY ACTIVATE THE PAGER SYSTEM

Caution: *Performing the following steps will result in the notification of the ERO.*

A. Call Pager Activation System at 1-877-472-7874.
B. When asked to enter the pager number, enter 0017.
C. When asked to enter your numeric message, and using the three number code indicated in step 2 above, enter: **(Be sure to include the 0s) 0 0 0 (___) (___) (___) THEN PRESS #**
A B C
D. Hangup the phone
E. Inform the SSS/ED that CAN has been notified.

Message Approval: (SSS/ED)(ED/RM)_____Time_____

F. Nuclear Regulatory Commission: Emergency Operations Center

REQUIREMENT	(Normally performed from the Control Room or T.S.C.) Notify at all emergency classifications and reclassifications; provide follow-up information. NOTE: If a backup phone is required to be used because ENS line (Red Phone) is inoperable, the NRC shall be notified (via commercial telephone) within 1 hour that the ENS line is inoperable.		
CONTACT METHOD	ENS Line (Red Phone) using telephone numbers listed: 1. (301)816-5100 (Main) 2. (301)951-0550 (Backup) 3. (301)415-0550 (Second Backup) 4. (301)816-5151 (Fax)		
	Start Time	Date	Person Contacted
MESSAGE	Read Event Notification Worksheet (Attachment 6). **State that this notification is being performed under 10CFR50.72.**		

G. Energy Center

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested.		
CONTACT METHOD	1. 349-2637 2. 342-4117		
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. This is Nine Mile Point Nuclear Station Unit *(1/2)*. A _____ *(state emergency class)* has been declared. Notify the Energy Center Director or designee, and make a PA announcement for Emergency Response personnel to report to their emergency facilities." At an Alert or SAE add: "Inform the Energy Center Director (or designee) to direct all visitors at the Energy Center and surrounding park area to leave the site property". At a GE add: "Inform the Energy Center Director (or designee) to direct all visitors to go to the Reception Center at the NYS Fairgrounds". Provide further guidance as directed by the SSS/ED or ED/RM.		

H. General Electric BWR Emergency Support Program

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested. (ref. GE SIL 324)		
CONTACT METHOD	(408)971-1038		
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. This is Nine Mile Point Nuclear Station *(1/2)*. This is to notify you that we are in a *(state emergency class)*." Provide your name, telephone number, and an alternate number they may use. NOTE: Once communication is established with the TLAM, no further notification is necessary. (exception is when you are tasked with event termination notifications)		

I. INPO Emergency Response Center

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested.		
CONTACT METHOD	1. (800) 321-0614 2. (770) 644-8000 (switchboard) 3. (770) 644-8549 for FAX 4. (770) 644-8732 for FAX Confirmation		
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill; This is Nine Mile Point Nuclear Station *(1/2)*. This is to notify you that we are in a *(state emergency class)*. When INPO Liaison responding to the emergency arrives in local area, they should contact the Technical Liaison and Advisory Manager located in the EOF at (315) 593-5884 or (315) 593-5818." NOTE: Once communication is established with the TLAM, no further notification is necessary. (exception is when you are tasked with event termination notifications)		

J. Oswego County Sheriff's Department

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested.		
CONTACT METHOD	1. 911 2. 343-5490	3. 349-3409	
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. This is Nine Mile Point Nuclear Station *(1/2)*. This is to notify you that we are in a *(state emergency class)*. (For Initial notification only) Please assign deputies to Lake Road at the east and west site boundaries to establish traffic control points."		

K. DOE Federal Radiological Monitoring and Assessment Plan (FRMAP)

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested.		
CONTACT METHOD	1. (631) 344-2200		
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. This is Nine Mile Point Nuclear Station *(1/2)*. This is to notify you that we are in a *(state emergency class)*.		

L. American Nuclear Insurers

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency; provide follow-up information as requested.		
CONTACT METHOD	(860) 561-3433 extension 304		
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. This is Nine Mile Point Nuclear Station *(1/2)*. This is to notify you that we are in a *(state emergency class)*. NOTE: Once communication is established with the TLAM, no further notification is necessary. (exception is when you are tasked with event termination notifications)		

M. Oswego River Hydro Stations

REQUIREMENT	Notify at Alert, Site Area Emergency or General Emergency. Initial Notification only, no followup required.		
CONTACT METHOD	1. (315) 413-2832 2. (315) 413-2839 3. (315) 413-2841	4. (315) 461-8671 (Fax)	
	Start Time	Date	Person Contacted
MESSAGE	"This *(is/is not)* a drill. Nine Mile Point Nuclear Station has declared a _____ (state emergency class). Please tune in to your emergency alert system radio station for important information and updates."		

ATTACHMENT 5: EMERGENCY RESPONSE DATA SYSTEM (ERDS) ACTIVATION

NOTES: The ERDS shall be activated within one hour of the declaration of an alert or higher.

Unit 1 ERDS console is located in the Aux Control Room, Process Computer Room.

Unit 2 ERDS Console is located in the Tech Assessment Room of the TSC.

Step 7 is required only if ERDS System is powered down.

1. Turn on / verify on the following:

   - Codex 2235 Modem
   - Codex 2171 Modem
   - ERDS PC (computer)
   - VAX to ERDS PC Modem

   Once turned on, after a short delay, the computer screen should display a screen similar to the following:

   ```
   Nine Mile Point Unit 1 (2)
   Emergency Response Data System (ERDS)
   Authorized Access is Prohibited
   System name: erds 1 (2)
   Console Login:
   ```

2. Log on the ERDS computer by entering the following keystrokes:

   - Type "erds"
   - Depress the "Enter" key

3. When the password prompt appears:

   - Type "erdsu1 for Unit 1, and erdsu2 for Unit 2, as appropriate
   - Depress the "Enter" key

4. When the system prompt appears ($), enter the following keystrokes

   - Type "erds"

   If performing a reconnection, enter the following keystrokes:

   - Type "erds -r"

5. Verify the ERDS link is established by observing the following on the screen:

   "Handshake complete. Beginning transmission"
   "Press DEL to "terminate program manually"

6. Every 60 minutes after initial connection, verify that ERDS is still connected by time, date and sequence as displayed at the bottom center of the screen.

   - This information is contained at the end of the data packet, and should update every 60 seconds.
   - If reconnection is necessary, go to Step 4.

7. When it is necessary to terminate the ERDS program, press the "DEL" key. Do not turn any equipment off. Unit 1 ERDS must be always "on".

TROUBLESHOOTING

Problem	Solution
Loss of communications (after successful connection)	• Reconnect using Steps 4, 5, 6
NRC host computer busy	• Contact NRC Duty Officer (NRC red phone) for instructions
NRC request you use a different phone number to call ERDS	• At Step 4 enter "erdst ##########" (where the # represent the area code and telephone number given to you by the NRC).
Following message appears "Timeout, remote host failed to respond within 1 minute" or "Remote host sent refused"	• Wait about 5 minutes after one of these messages first appears (this will give ERDS time to establish a link on its own). • If no connection is made, contact the NRC Duty Officer (NRC red phone) for instructions.
Loss of source data, or any NMPC ERDS hardware problems.	• Inform NRC Duty Officer (NRC red phone) of problems. • Inform SSS/ED or ED/RM of problem. • Have SSS contact computer on call supervisor.
Computer console locks up.	• Reboot and restart. May be accomplished by turning power Off and then back On, or by depressing "Control", "Alt", and "Delete" keys simultaneously.

Start all NRC notifications with: *"This is to report an Incident at Nine Mile Point Unit 1 / 2(as appropriate)".*

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U.S. NUCLEAR REGULATORY COMMISSION
OPERATIONS CENTER

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

EN #

NRC OPERATION TELEPHONE NUMBER: PRIMARY – 301-816-5100 or 800-532-3469*, BACKUPS – [1st] 301-951-0550 or 800-449-3694*, [2nd] 301-415-0550 and [3rd] 301-415-0553

*Licensees who maintain their own ETS are provided these telephone numbers

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #

EVENT TIME & ZONE	EVENT DATE	POWER/MODE BEFORE	POWER/MODE AFTER

EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)			4-Hr. Non-Emergency 10 CFR 50.72(b)(2)			8-Hr. Non-Emergency 10 CFR 50.72(b)(3)		
GENERAL EMERGENCY	GEN/AAEC	TS Deviation	ADEV	(i)	TS Required S/D	ASHU	(ii)(A)	Degraded Condition	ADEG	
SITE AREA EMERGENCY	SIT/AAEC			(iv)(A)	ECCS Discharge to RCS	ACCS	(ii)(B)	Unanalyzed Condition	ALNA	
ALERT	ALE/AAEC			(iv)(B)	RPS Actuation (scram)	ARPS	(iv)(A)	Specified System Actuation	AESF	
UNUSUAL EVENT	UNU/AAEC			(xi)	Offsite Notification	APRE				
50.72 NON-EMERGENCY	(see next columns)									
PHYSICAL SECURITY (73.71)	DDDD									
MATERIAL/EXPOSURE	8???									
FITNESS FOR DUTY	HFIT									
OTHER UNSPECIFIED REQMT.	(see last column)									
INFORMATION ONLY	NNF									

(v)(A)	Safe S/D Capability	ANA	
(v)(B)	RHR Capability	ANB	
(v)(C)	Control of Rad Release	ANC	
(v)(D)	Accident Mitigation	AND	
(xii)	Offsite Medical	AMED	
(xiii)	Loss Comm/Asmt/Resp	ACOM	
60-Day Optional 10 CFR 50.73(a)(1)			
	Invalid Specified System Actuation	ANV	
Other Unspecified Requirement (Identify)			
		NOHR	
		NOHR	

DESCRIPTION

Include: Systems affected, actuations and their initiating signals, causes effect of event on plant, actions taken or planned, etc. *(Continue on back)*

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT			
STATE(s)			
LOCAL			
OTHER GOV AGENCIES			
MEDIA/PRESS RELEASE			

ANYTHING UNUSUAL OR NOT UNDERSTOOD? ☐ YES (Explain above) ☐ NO

DID ALL SYSTEMS FUNCTION AS REQUIRED? ☐ YES ☐ NO (Explain above)

MODE OF OPERATION UNTIL CORRECTED:

ESTIMATED RESTART DATE:

ADDITIONAL INFO ON BACK ☐ YES ☐ NO

PRINTED ON RECYCLED PAPER

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ADDITIONAL INFORMATION PAGE 2 OF 2

RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

LIQUID RELEASE	GASEOUS RELEASE	UNPLANNED RELEASE	PLANNED RELEASE	ONGOING	TERMINATED
MONITORED	UNMONITORED	OFFSITE RELEASE	T. S. EXCEEDED	RM ALARMS	AREAS EVACUATED
PERSONNEL EXPOSED OR CONTAMINATED		OFFSITE PROTECTIVE ACTIONS RECOMMENDED		*State release path in description	

	Release Rate (Ci/sec)	% T. S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T. S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid *(excluding tritium and dissolved noble gases)*			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T. S. LIMIT *(if applicable)*					

RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS. *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc.)*

LEAK RATE	UNITS gpm/gpd	T. S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT
LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS. PRIMARY	SECONDARY

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

EVENT DESCRIPTION *(Continued from front)*

ATTACHMENT 7: LOSS OF COMMUNICATIONS CAPABILITY FROM THE CONTROL ROOM

OSWEGO COUNTY 800 MHZ RADIO

IF: You are using this radio due to a complete loss of communications from the control rooms,
THEN:

1. Move to an outdoors location.
2. Select System 7 (S button), Group 1 (G button).
3. Hold the talk button until you receive a beep; you are now clear to talk.
4. State "Nine Mile Point Unit ____ Control Room to Dispatch".
5. State that normal communications systems have been disrupted.
6. Provide information as directed.

SATELLITE PHONE

IF: You are using this satellite phone due to a loss of communications from the control rooms,
THEN:

1. Move to an outdoors location.
2. Turn on the power using the RED button on the bottom left of the keypad.
3. Turn the antenna toward the sky and extend it.
4. Enter the PIN...1111 and press the OK button.
5. The screen will now indicate, Searching.
6. If it says Check Signal, turn off the phone and move to a different location and start over.
7. If it says Blocked (because the PIN was entered incorrectly 3 times) then,
   A. Press the following key sequence: (*),(*),(0+),(5),(*)
   B. Enter the Unblocking code
      1. for Unit 1 - 9599 9661
      2. for Unit 2 - 1375 4571
      3. for EOF - 3428 9412
   C. Enter the correct PIN code and press OK.
   D. Re-enter the PIN code to verify
8. If it says Registered, wait for Iridium screen and dial out as follows:
   A. To make all calls, hold 0 for approx. 2 seconds to get a plus sign (+), then 1, the area code, and the phone number, then press OK (there are no local call capabilities).
      - State that you are calling from Nine Mile Point Unit ____.
      - State that normal communications systems have been disrupted.
      - Provide information as directed.
   B. To call other satellite phones, dial the satellite phone number, and then press OK.
      - Unit 1 Sat phone: 8816 3143 3584
      - Unit 2 Sat phone: 8816 3143 3583
      - EOF Sat phone: 8816 3143 3582

Note: ***There will be a small delay from the time you speak to the time the other party will hear you.***

NINE MILE POINT RADIO

IF: You are using this radio due to a loss of normal communications from the control rooms,
THEN:

1. Move to an outdoors location.
2. Select Channel 16, (County Admin Channel)
3. Hold the talk button and state "Nine Mile Point Unit ____ Control Room to 911 Center".
4. State that normal communications systems have been disrupted.
5. Provide information as directed.