

EMERGENCY IMPLEMENTING PROCEDURES/VOLUME 2
UPDATE LIST

27

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NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 2

PROCEDURE NO.: IAP-1

TITLE: EMERGENCY PLAN IMPLEMENTATION CHECKLIST

PORC REVIEW: Meeting No. N/A Date 12/85

APPROVED BY: *R. Carman*
Resident Manager

APPROVED BY: *Alan M. Ross for SAM*
Radiological and Environmental
Services Superintendent

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Rev. No. 3

Date: 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

IAP-1

EMERGENCY PLAN IMPLEMENTATION CHECKLIST

1.0 PURPOSE

The purpose of this procedure is to provide a checklist for implementing actions and direction in the use of additional procedures for implementing the emergency plan.

2.0 REFERENCES

2.1 JAFNPP Emergency Plan, Volumes 2 & 3, Implementing Procedures.

3.0 INITIATING EVENTS

3.1 Either an Unusual Event, Alert, Site Area Emergency or General Emergency has been declared in accordance with IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS.

4.0 PROCEDURE

Emergency Director, Shift Supervisor or designee: (The Emergency Director is responsible for implementation of the actions prescribed in this procedure. The Emergency Director should delegate authority for performance of the prescribed tasks to available personnel, as applicable). (Please Note: This procedure will serve as a checklist for implementing additional Emergency Plan Procedures. Please note time of each action in individual check spaces.)

4.1 If an Unusual Event has been declared:

4.1.1 For all Initiating Events:

A. Implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the JAFNPP Operating Procedures while simultaneously implementing this procedure. Perform this section and any of the following sections as applicable:

time

. Airborne Release	Step 4.1.2
. Waterborne Release	Step 4.1.3
. Fire/Explosion	Step 4.1.4
. Injury	Step 4.1.5
. Natural Event	Step 4.1.6

time _____
B. Implement EAP-1.1 OFFSITE NOTIFICATIONS in order to notify offsite agencies, the JAF emergency response organization and additional plant personnel, as needed.

NOTE: TSC, OSC and/or EOF may be activated if desired by the Emergency Director.

time _____
C. If plant conditions deteriorate, reclassify the emergency in accordance with IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS.

4.1.2 For Airborne Radioactivity Release

time _____
A. Implement EAP-4, Section 4.2, Initial Dose Assessment Calculation as a primary means of initiating and continuing offsite dose projection activities from the Control Room.

time _____
B. Implement EAP-4, Section 4.3, Class A Model as a primary means of initiating and continuing offsite dose projection activities from the TSC and/or EOF.

time _____
C. Implement EAP-4, Section 4.4 Dose Estimates From Dose Assessment Calculator as a third means of initiating and continuing offsite dose projection activities in either the Control Room, TSC and/or EOF, as necessary.

time _____
D. Implement EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY in order to initiate plant radiation surveys and entries, as necessary.

time _____
E. Implement EAP-7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS in order to initiate out-of-plant radiation surveys as necessary.

time _____
F. Implement EAP-5.1 ENVIRONMENTAL MONITORING in order to augment the information gathered using EAP-7.1.

time _____
G. Implement EAP-18 PROTECTIVE ACTION RECOMMENDATIONS in order to determine recommendations to be given to the general population.

4.1.3 For Liquid Radioactivity Release

- _____ time
- A. Determine the activity of the release by effluent monitor reading, or by estimate in accordance with normal plant procedures.
- _____ time
- B. Implement EAP-12 DOSE ESTIMATED FROM AN ACCIDENTAL RELEASE OF RADIOACTIVE MATERIAL TO LAKE ONTARIO in order to determine dose projections in Lake Ontario.
- _____ time
- C. Implement EAP-18 PROTECTIVE ACTION RECOMMENDATIONS in order to determine recommendations to be given to the general population.

4.1.4 For Fire/Explosion

_____ Implement EAP-3 FIRE and conduct fire fighting efforts.

4.1.5 For Personnel Injury

_____ time

Implement EAP-2 PERSONNEL INJURY to perform emergency measures for personnel injuries requiring medical treatment.

4.1.6 For Tornado/Earthquake/Storms/Flooding

_____ time

Conduct emergency measures in accordance with JAFNPP Abnormal Operating Procedures.

4.2 If an ALERT has been declared

4.2.1 For all Initiating Events:

- _____ time
- A. Implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the JAFNPP Operating Procedures while simultaneously implementing this procedure. Perform this section and any of the following sections as applicable:

. Airborne Release	Step 4.2.2
. Waterborne Release	Step 4.2.3
. Fire/Explosion	Step 4.2.4
. Injury	Step 4.2.5
. Natural Event	Step 4.2.6

- time
- B. Implement EAP-1.1 OFFSITE NOTIFICATIONS in order to notify offsite agencies, the JAF emergency response organization and additional plant personnel, as needed.
- time
- C. Implement the following Emergency Response Facility procedures:
- EAP-14.1 TECHNICAL SUPPORT CENTER ACTIVATION
- EAP-14.2 EMERGENCY OPERATIONS FACILITY ACTIVATION
- EAP-14.5 OPERATIONAL SUPPORT CENTER ACTIVATION AND OPERATION
- EAP-14.6 HABITABILITY OF THE EMERGENCY FACILITIES
- time
- 4.2.2 For Airborne Radioactivity Release
- time
- A. Implement EAP-4, Section 4.2, Initial Dose Assessment Calculation as a primary means of initiating and continuing offsite dose projection activities from the Control Room.
- time
- B. Implement EAP-4, Section 4.3, Class A Model as a primary means of initiating and continuing offsite dose projection activities from the TSC and/or EOF.
- time
- C. Implement EAP-4, Section 4.4 Dose Estimates From Dose Assessment Calculator as a third means of initiating and continuing offsite dose projection activities in either the Control Room, TSC and/or EOF, as necessary.
- time
- D. Implement EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY in order to initiate plant radiation surveys, as necessary.
- time
- E. Implement EAP-7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS in order to initiate out-of-plant radiation surveys as necessary.

- time
- F. Implement EAP-5.1 ENVIRONMENTAL MONITORING in order to augment the information gathered using EAP-7.1.
- time
- G. Implement EAP-18 PROTECTIVE ACTION RECOMMENDATIONS in order to determine recommendations to be given to the general population.
- time
- H. Implement the following procedures as applicable if the results of the radiation surveys or area monitors indicate the need:
- EAP-10 RESTRICTED AREA EVACUATION
- EAP-11 SITE EVACUATION
- time
- I. Implement the following procedures as applicable if an evacuation is conducted:
- EAP-8 PERSONNEL ACCOUNTABILITY
- EAP-9 SEARCH AND RESCUE OPERATIONS

4.2.3 For Liquid Radioactivity Release

- time
- A. Determine the activity of the release by effluent monitor reading, or by estimate in accordance with normal plant procedures.
- time
- B. Implement EAP-12 DOSE ESTIMATED FROM AN ACCIDENTAL RELEASE OF RADIOACTIVE MATERIAL TO LAKE ONTARIO in order to determine dose projections in Lake Ontario.
- time
- C. Implement EAP-18 PROTECTIVE ACTION RECOMMENDATIONS in order to determine recommendations to be given to the general population.

4.2.4 For Fire/Explosion

- time
- Implement EAP-3 FIRE and conduct fire fighting efforts.

4.2.5 For Personnel Injury

- time
- Implement EAP-2 PERSONNEL INJURY to perform emergency measures for personnel injuries requiring medical treatment.

4.2.6 For Tornado/Earthquake/Storms/Flooding

_____ time
Conduct emergency measures in accordance with JAFNPP Abnormal Operating Procedures.

4.3 If a SITE AREA EMERGENCY has been declared:

4.3.1 For all Initiating Events:

_____ time
A. Implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the JAFNPP Operating Procedures while simultaneously implementing this procedure. Perform this section and any of the following sections as applicable:

- . Airborne Release Step 4.3.2
- . Waterborne Release Step 4.3.3
- . Fire/Explosion Step 4.3.4
- . Injury Step 4.3.5
- . Natural Event Step 4.3.6

_____ time
B. Implement EAP-1.1 OFFSITE NOTIFICATIONS in order to notify offsite agencies, the JAF emergency response organization and additional plant personnel, as needed.

_____ time
C. Implement the following Emergency Response Facility procedures:

EAP-14.1 TECHNICAL SUPPORT CENTER ACTIVATION

EAP-14.2 EMERGENCY OPERATIONS FACILITY ACTIVATION

EAP-14.5 OPERATIONAL SUPPORT CENTER ACTIVATION AND OPERATION

EAP-14.6 HABITABILITY OF THE EMERGENCY FACILITIES

_____ time
D. If plant conditions deteriorate, reclassify the emergency in accordance with IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS.

4.3.2 For Airborne Radioactivity Release

- time
- A. Implement EAP-4, Section 4.2, Initial Dose Assessment Calculation as a primary means of initiating and continuing offsite dose projection activities from the Control Room.
- time
- B. Implement EAP-4, Section 4.3, Class A Model as a primary means of initiating and continuing offsite dose projection activities from the TSC and/or EOF.
- time
- C. Implement EAP-4, Section 4.4 Dose Estimates From Dose Assessment Calculator as a third means of initiating and continuing offsite dose projection activities in either the Control Room, TSC and/or EOF, as necessary.
- time
- D. Implement EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY in order to initiate plant radiation surveys and entries, as necessary.
- time
- E. Implement EAP-7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS in order to initiate out-of-plant radiation surveys as necessary.
- time
- F. Implement EAP-5.1 ENVIRONMENTAL MONITORING in order to augment the information gathered using EAP-7.1.
- time
- G. Implement EAP-18 PROTECTIVE ACTION RECOMMENDATIONS in order to determine recommendations to be given to the general population.
- time
- H. Implement the following procedures as applicable if the results of the radiation surveys or area monitors indicate the need:
- EAP-10 RESTRICTED AREA EVACUATION
- EAP-11 SITE EVACUATION
- I. Implement the following procedures as applicable if an evacuation is conducted:
- time
- EAP-8 PERSONNEL ACCOUNTABILITY
- EAP-9 SEARCH AND RESCUE OPERATIONS

4.3.3 For Liquid Radioactivity Release

time

Liquid releases are not identified as initiating events for a Site Area Emergency since it is unlikely to have excessive offsite doses (any organ) due to the release. If a liquid release occurs concurrent with the events which initiated the Site Area Emergency refer to Step 4.2.3 of this procedure.

4.3.4 For Fire/Explosion

time

Implement EAP-3 FIRE and conduct fire fighting efforts.

4.3.5 For Personnel Injury

time

Implement EAP-2 PERSONNEL INJURY to perform emergency measures for personnel injuries requiring medical treatment.

4.3.6 For Tornado/Earthquake/Storms/Flooding

time

Conduct emergency measures in accordance with JAFNPP Abnormal Operating Procedures.

4.4 If a GENERAL EMERGENCY has been declared:

4.4.1 For all Initiating Events:

time

A. Implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the JAFNPP Operating Procedures while simultaneously implementing this procedure. Perform this section and any of the following as necessary:

. Airborne Release	Step 4.4.2
. Waterborne Release	Step 4.4.3
. Fire/Explosion	Step 4.4.4
. Injury	Step 4.4.5
. Natural Event	Step 4.4.6

time

B. Implement EAP-1.1 OFFSITE NOTIFICATIONS in order to notify offsite agencies, the JAF emergency response organization and additional plant personnel, as needed.

	C.	Implement the following Emergency Response Facility procedures:
time	EAP-14.1	<u>TECHNICAL SUPPORT CENTER ACTIVATION</u>
	EAP-14.2	<u>EMERGENCY OPERATIONS FACILITY ACTIVATION</u>
	EAP-14.5	<u>OPERATIONAL SUPPORT CENTER ACTIVATION AND OPERATION</u>
	EAP-14.6	<u>HABITABILITY OF THE EMERGENCY FACILITIES</u>
	D.	If plant conditions deteriorate, reclassify the emergency in accordance with <u>IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS</u> .
time	4.4.2	For Airborne Radioactivity Release
	A.	Implement EAP-4, Section 4.2, <u>Initial Dose Assessment Calculation</u> as a primary means of initiating and continuing offsite dose projection activities from the Control Room.
time	B.	Implement EAP-4, Section 4.3, <u>Class A Model</u> as a primary means of initiating and continuing offsite dose projection activities from the TSC and/or EOF.
time	C.	Implement EAP-4, Section 4.4 <u>Dose Estimates From Dose Assessment Calculator</u> as a third means of initiating and continuing offsite dose projection activities in either the Control Room, TSC and/or EOF, as necessary.
time	D.	Implement EAP-6 <u>IN-PLANT EMERGENCY SURVEY/ENTRY</u> in order to initiate plant radiation surveys, as necessary.
time	E.	Implement EAP-7.1 <u>EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS</u> in order to initiate out-of-plant radiation surveys as necessary.
time	F.	Implement EAP-5.1 <u>ENVIRONMENTAL MONITORING</u> in order to augment the information gathered using EAP-7.1.

<u>time</u>	G.	Implement EAP-18 <u>PROTECTIVE ACTION RECOMMENDATIONS</u> in order to determine recommendations to be given to the general population.
<u>time</u>	H.	Implement the following procedures as applicable if the results of the radiation surveys or area monitors indicate the need: EAP-10 <u>RESTRICTED AREA EVACUATION</u> EAP-11 <u>SITE EVACUATION</u>
<u>time</u>	I.	Implement the following procedures as applicable if an evacuation is conducted: EAP-8 <u>PERSONNEL ACCOUNTABILITY</u> EAP-9 <u>SEARCH AND RESCUE OPERATIONS</u>
4.4.3	For Liquid Radioactivity Release	
<u>time</u>	Liquid releases are not identified as initiating events for a Site Area Emergency since it is unlikely to have excessive offsite doses (any organ) due to the release. If a liquid release occurs concurrent with the events which initiated the Site Area Emergency refer to Step 4.2.3 of this procedure.	
4.4.4	For Fire/Explosion	
<u>time</u>	Implement EAP-3 <u>FIRE</u> and conduct fire fighting efforts.	
4.4.5	For Personnel Injury	
<u>time</u>	Implement EAP-2 <u>PERSONNEL INJURY</u> to perform emergency measures for personnel injuries requiring medical treatment.	
4.4.6	For Tornado/Earthquake/Storms/Flooding	
<u>time</u>	Conduct emergency measures in accordance with JAFNPP Emergency Operating Procedures.	
5.0	<u>FIGURES, FORMS AND ATTACHMENTS</u>	
	None	

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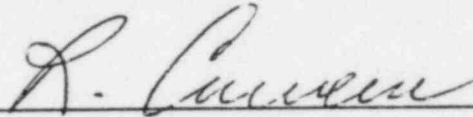
NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURES
VOLUME 2

PROCEDURE NO.: IAP-2

TITLE: CLASSIFICATION OF EMERGENCY CONDITIONS*

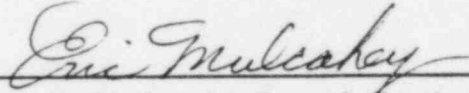
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APPROVED BY:



Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

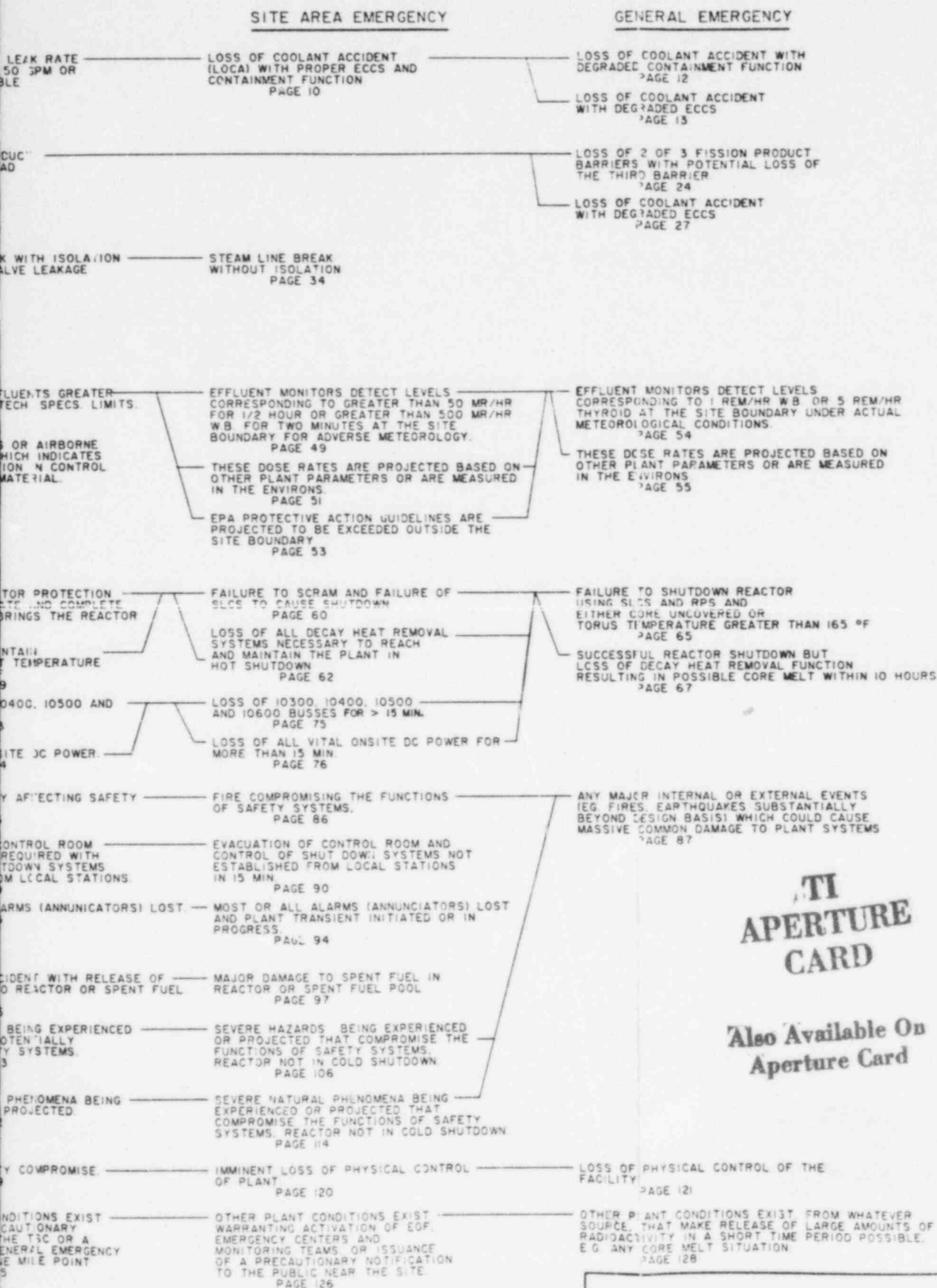
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Rev. No. 4

Date 02/86

EVENT CATEGORY	UNUSUAL EVENT	ALERT
1) REACTOR COOLANT BOUNDARY DEGRADATION	EXCEEDING REACTOR COOLANT LEAK RATE TECHNICAL SPECIFICATION OR REACTOR PRESSURE SAFETY LIMIT PAGE 7	REACTOR COOLANT IS GREATER THAN IS NOT MEASURED PAGE 9
2) ABNORMAL CORE CONDITIONS AND FUEL DAMAGE	MODERATE FISSION PRODUCT RELEASE FROM CLAD PAGE 17 EXCEEDING MCPR LIMITS OR LOW VESSEL LEVEL WHILE SHUTDOWN PAGE 19	HIGH FISSION PRO RELEASE FROM CLAD PAGE 22
3) MAIN STEAM RELEASES	INADVERTANT SRV OPENING OR RELIEF VALVE REMAINING OPEN PAGE 30	STEAM LINE BREAK AND ISOLATION VALVE PAGE 31
4) OTHER LCO'S	DEGRADATION OF SAFETY SYSTEMS REQUIRING SHUTDOWN TO COLD CONDITION WITHIN 24 HOURS PAGE 38	
5) ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS	RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATION LIMITS EXCEEDED PAGE 40	RADIOLOGICAL EFFLUENT THAN 10 TIMES PAGE 43 RADIATION LEVEL CONTAMINATION WITHIN SEVERE DEGRADATION OF RADIOACTIVE MATERIAL PAGE 46
6) LOSS OF SHUTDOWN FUNCTIONS DECAY HEAT OR REACTIVITY		FAILURE OF REACTOR SYSTEM TO INITIATE A SCRAM WHICH SUBCRITICAL PAGE 58 INABILITY TO MAINTAIN REACTOR COOLANT LESS THAN 212 °F PAGE 59
7) ELECTRICAL OR POWER FAILURES	LOSS OF 10300 AND 10400 BUSES OR LOSS OF 3 OF 4 EMERGENCY DIESEL GENERATORS PAGE 71	LOSS OF 10300, 10400 AND 10600 BUSES PAGE 72 LOSS OF ALL ON PAGE 73
8) FIRE	FIRE OUT OF CONTROL FOR MORE THAN 10 MINUTES PAGE 83	FIRE POTENTIAL SYSTEMS PAGE 85
9) CONTROL ROOM EVACUATION		EVACUATION OF ANTICIPATED OR CONTROL OF SHUTDOWN ESTABLISHED FROM PAGE 81
10) LOSS OF MONITORS, ALARMS, ETC.	INDICATIONS OR ALARMS ON PROCESS OR EFFLUENT PARAMETERS NOT FUNCTIONAL IN CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN OR OTHER SIGNIFICANT LOSS OF ASSESSMENT OF COMMUNICATION CAPABILITY PAGE 92	MOST OR ALL ALARMS PAGE 93
11) FUEL HANDLING ACCIDENT		FUEL DAMAGE AND RADIOACTIVITY IN POOL AREA PAGE 94
12) HAZARDS TO PLANT OPERATIONS	HAZARDS BEING EXPERIENCED OR PROJECTED THAT AFFECT PLANT OPERATIONS PAGE 100	SEVERE HAZARDS OR PROJECTED AFFECTING SAFETY PAGE 101
13) NATURAL EVENTS	NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED BEYOND USUAL LEVELS PAGE 111	SEVERE NATURAL EXPERIENCED OR PAGE 112
14) SECURITY THREATS	SECURITY THREAT, ATTEMPTED ENTRY OR ATTEMPTED SABOTAGE PAGE 118	ONGOING SECURITY PAGE 119
15) OTHERS	OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF A PLANT OPERATING STAFF OR STATE AND/OR LOCAL OFFSITE AUTHORITIES OR REQUIRE PLANT SHUTDOWN UNDER TECHNICAL SPECIFICATION REQUIREMENTS OR INVOLVE OTHER THAN NORMAL CONTROLLED SHUTDOWN PAGE 123 TRANSPORTATION OF CONTAMINATED INJURED INDIVIDUAL FROM SITE TO OFFSITE HOSPITAL PAGE 124	OTHER PLANT CONDITIONS WARRANTING PRE ACTIVATION OF SITE AREA OR DECLARED AT NIGHT PAGE 125

TRICK NUCLEAR POWER PLANT SIFICATION GUIDE FLOWCHART



**TI
APERTURE
CARD**

**Also Available On
Aperture Card**

EMERGENCY CLASSIFICATION GUIDE
FLOWCHART
FIGURE IAP-2.1

86032000 53-01

EVENT CATEGORY NO. 5

ABNORMAL RADIOLOGICAL EFFLUENT OR
RADIATION LEVELS

Consisting of:

UNUSUAL EVENT NO. 5

ALERT NO. 5a

ALERT NO. 5b

SITE AREA EMERGENCY NO. 5a

SITE AREA EMERGENCY NO. 5b

SITE AREA EMERGENCY NO. 5c

GENERAL EMERGENCY NO. 5a

GENERAL EMERGENCY NO. 5b

UNUSUAL EVENT NO. 5

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg 1-5)

Radiological effluent Technical Specification limits exceeded.

Emergency Action Levels

1. Gaseous release exceeds Technical Specifications (limit based on ODCM Noble Gas instantaneous rates of $2.1E6 \mu\text{Ci/sec}$ for elevated release and $9.2E4 \mu\text{Ci/sec}$ for ground release) as indicated by:

- A. 1) Low Range Stack Radiation Monitor High-High Trip (either channel or both):

<u>Monitor/Panel</u>	<u>Annunciator</u>	<u>Set Point (cps)</u>
17-RM-50A/09-10	9.3.2-39	3×10^5
17-RM-50B/09-10	9.3.2-39	3×10^5

AND

- 2) Reading on 17-RM-050A or B exceeds 8×10^5 cps,

OR

- B. 1) Offgas Radiation Monitor (17-RM-150A and/or 17-RM-150B on Panel 09-10) High-High Trip annunciated on 9.3.2-38 at set point of 2000 mR/hr.

AND

- 2) Failure of 15 minute Offgas Delay Timer (17-157 on 09-10) to initiate and/or complete isolation.

AND

- 3) Reading increased to ≥ 6000 mR/hr.

OR

- C. 1) One of the following Building Ventilation Exhaust Radiation Monitors High-High Trip:

<u>Building</u>	<u>Monitor/Panel</u>	<u>Annunciator</u>	<u>Set Point</u>
Reactor	17-RIS-452AorB/09-12	9-3-2-40	10^4 cpm
Refuel	17-RIS-456A&B/Local	09-75-VA1-15	10^4 cpm
Radwaste	17-RIS-458A&B/Local	HV-12	10^4 cpm
Turbine	17-RIS-431 & 432/Local	HV-1	2.5×10^4 cpm

AND

2) Failure to isolate.

AND

3) Reading increased to $>900,000$ cpm.

OR

2. A. Liquid Radwaste Effluent Discharge Radiation Monitor (17RM-350 on Panel 09-10) High-High Trip annunciated on 9.3.2-30.

AND

B. Failure to isolate.

OR

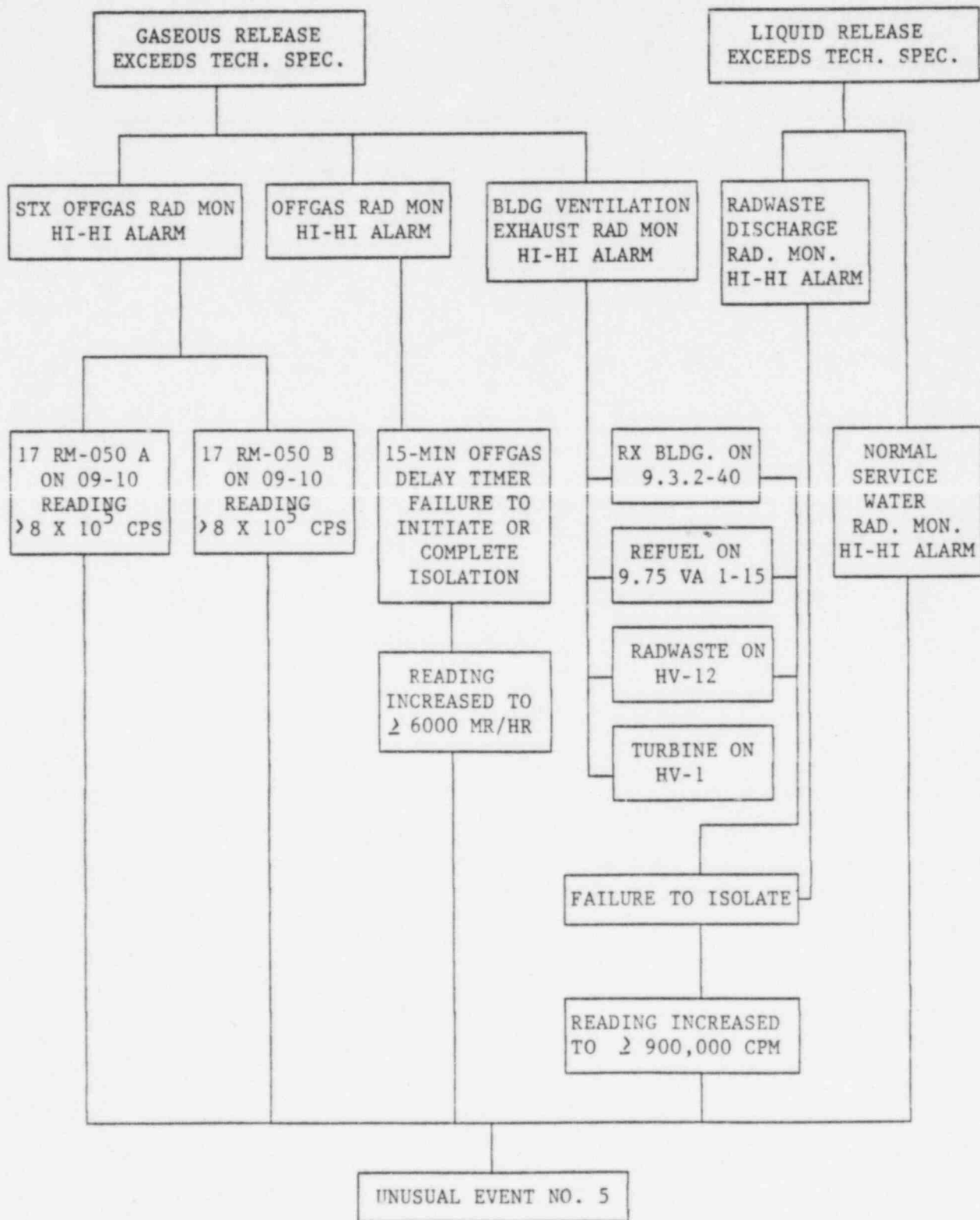
3. Service Water Effluent Radiation Monitor (17-RM-351 on Panel 09-10) High-High Trip (200 cps) annunciated on 09.3.2-30.

Emergency Classification Flowchart

See next page

UNUSUAL EVENT NO. 5

EMERGENCY CLASSIFICATION FLOWCHART



ALERT NO. 5a

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg. 1-9)

Radiological effluent release exceeds 10 times Technical Specification Limit.

Emergency Action Levels

1. Gaseous release exceeds 10 times Technical Specification (limit based on ODCM Noble Gas instantaneous rates of $2.1E6 \mu\text{Ci/sec}$ for elevated release and $9.2E4 \mu\text{Ci/sec}$ for ground release) as indicated by:

- A. 1) Low Range Stack Radiation Monitor High-High Trip (either channel or both):

<u>Monitor/Panel</u>	<u>Annunciator</u>	<u>Set Point (cps)</u>
17-RM-50A/09-10	9.3.2-39	3×10^5
17-RM-50B/09-10	9.3.2-39	3×10^5

AND

- 2) Reading on 17-RM-050A or B goes offscale high ($>10^6$ cps).

OR

- B. 1) Offgas Radiation Monitor (17-RM-150A & B on Panel 09-10) High-High Alarm annunciated at 2000 mR/hr on 9.3.2-38.

AND

- 2) Failure to isolate 15 minutes afterwards.

AND

- 3) Reading increased to $\geq 70,000$ mR/hr.

OR

- C. 1) One of the following Building Ventilation Exhaust Radiation Monitors goes offscale high ($>10^6$ cpm):

<u>Building</u>	<u>Monitor</u>
Reactor	17-RM-452A 17-RM-452B
Refuel	17-RM-456A 17-RM-456B
Radwaste	17-RM-458A 17-RM-458B
Turbine	17-RM-431 17-RM-432

AND

- 2) Failure to isolate the Building Vent Exhaust System involved.

OR

2. A. 1) Liquid Radwaste Effluent Discharge Radiation Monitor 17-RM-350 on Panel 09-10 exceeds 10 times set point value then in effect for the batch processing.

AND

- 2) Failure to isolate.

OR

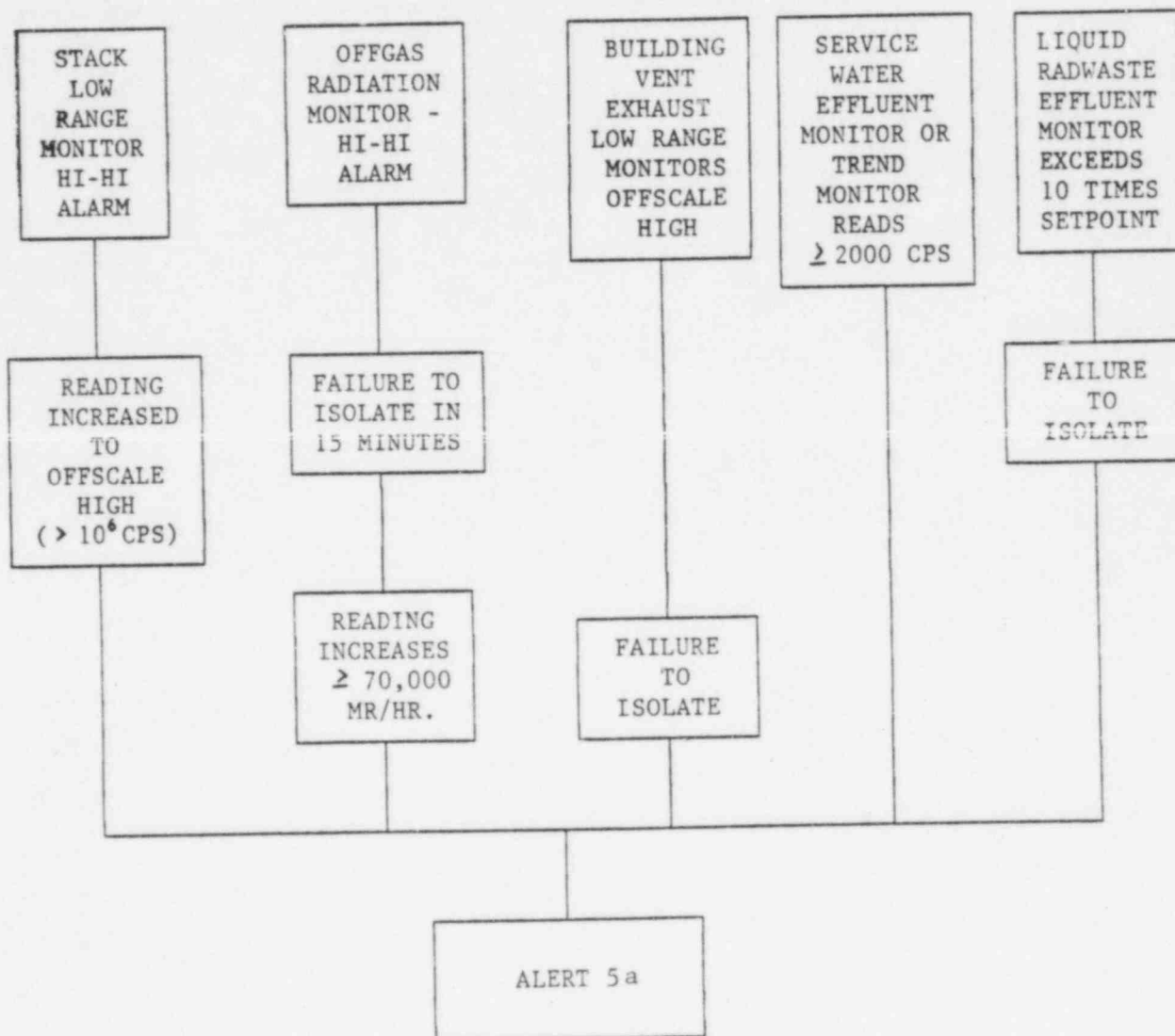
3. A. Service Water Effluent Radiation Monitor 17-RM-351 on Panel 09-10 or Trend Recorder 17-RR-353 on Panel 09-2, indicates a reading of 2000 cps (10 times over Hi-Hi Trip of 200 cps).

Emergency Classification Flowchart

See next page

ALERT NO. 5a

EMERGENCY CLASSIFICATION FLOWCHART



ALERT NO. 5b

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg 1-9)

Radiation levels or airborne contamination which indicate a severe degradation in the control of radioactive materials (e.g., increase of factor of 1000 in direct radiation readings within facility).

Emergency Action Levels

1. In-plant radiation levels exceed 1,000 times the normal background values as indicated by:

- A. Upscale High Trip Alarms on ARMs on Panel 09-11 and annunciated on:

<u>Annunciator</u>	<u>ARMS Covered</u>	<u>ARM Location</u>	<u>Trip Pt. (mR/hr)</u>	<u>Normal Bkgd* (100% power)</u>
9.3.1-20	18-RIA-051-30	Refuel Floor South	10 ²	200
9.3.1-29	18-RIA-051-12	Spent Fuel Pool	25	1
	18-RIA-051-14	New Fuel Vault	20	6
	18-RIA-051-17	Fuel Pool Pumps	300	90
9.3.1-30	18-RIA-051-8	Radw. Ctrl. Rm	15	5
	18-RIA-051-9	Radw.Filter/Valv.Op.Area	50	20
	18-RIA-051-10	Radw.Drum Store Area	125	40
	18-RIA-051-11	Radw. Pump Rm.	130	30
9.3.1-39	18-RIA-051-4	Turbine Fl. HP End	10	6
	18-RIA-051-5	Turbine Fl. LP End	5	1
	18-RIA-051-6	Turb.Bldg.Hogging Pump	5	1
	18-RIA-051-7	Reactor Feed Pump	10	1
	18-RIA-051-22	Conds.Demin. Valve Area	20	2
9.3.1-40	18-RIA-051-1	Adm. Bldg. Chem Lab	1.0	0.2
	18-RIA-051-2	Adm. Bldg. Cloth Change	1.0	0.5
	18-RIA-051-3	Adm. Bldg. Ctrl. Rm.	1.0	0.05
	18-RIA-051-13	R.Bldg. 344' So.Skim TK	20	6
	18-RIA-051-15	Cleanup Precoat TK/Pp(2A)	80	10
	18-RIA-051-16	Cleanup H.Ex.Ent/Pump(2B)	30	5
	18-RIA-051-18	Contam.Equip.Storage	50	15
	18-RIA-051-19	Rx Cleanup Pump (1A)	20	10
	18-RIA-051-20	Rx Cleanup Pump (1B)	30	10
	18-RIA-051-21	CCL Heat Exch.	5	1
	18-RIA-051-23	R. Bldg. Access	40	6
	18-RIA-051-24	R. Bldg. TIP Cubicle	125	20

<u>Annunciator</u>	<u>ARMS' Covered</u>	<u>ARM Location</u>	<u>Trip Pt. (mR/hr)</u>	<u>Normal Bkgd* (100% power)</u>
9.3.1-40	18-RIA-051-25	East CRD HCU	30	6
	18-RIA-051-26	West CRD HCU	35	10
	18-RIA-051-27	Equip Drn Sump 227' East	100	25
	18-RIA-051-28	Torus/Rx Crd Remval Hatch	25	8
	18-RIA-051-29	Flr Drn Sump 227' West	200	30

*These values were taken on 4/28/82 at 100% power for reference only.

AND

- B. Area radiation level confirmed by local readout or survey to be 1000 times higher than normal values.

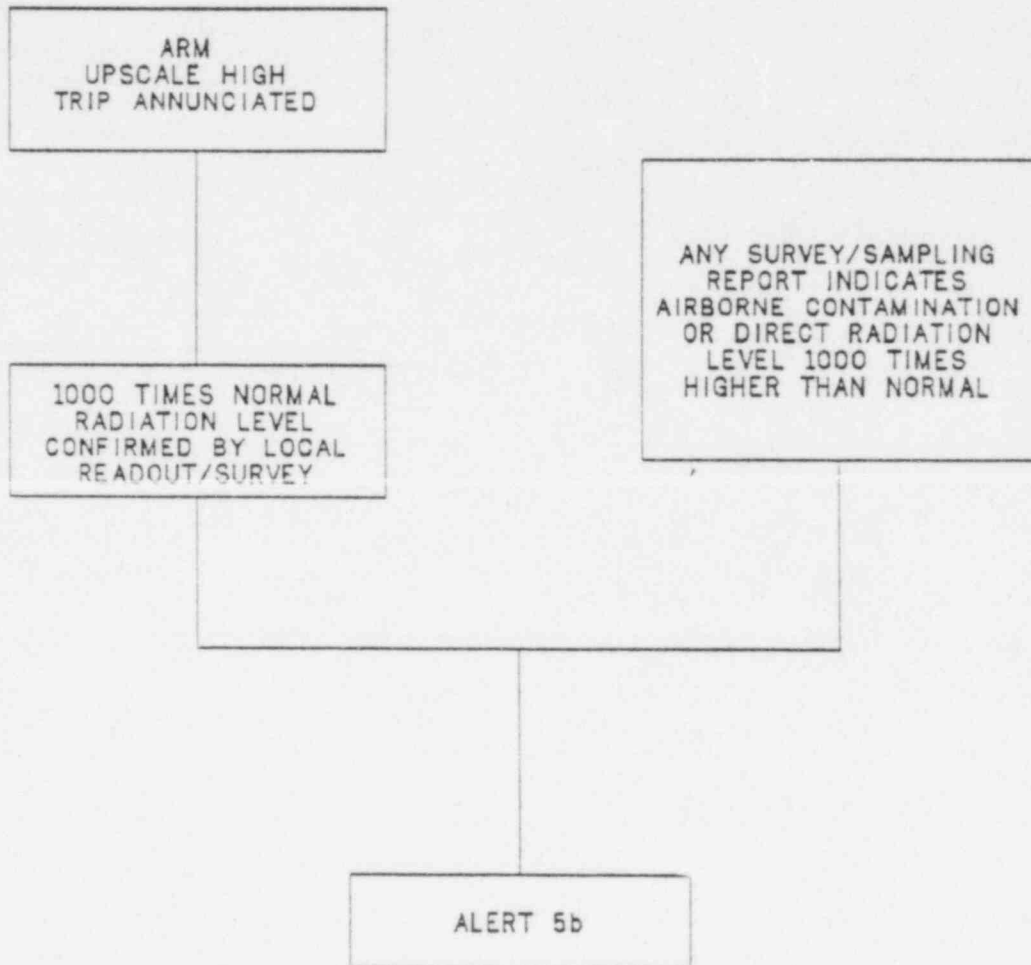
OR

2. Any in-plant radiation survey/sampling result that indicates a direct radiation level or airborne contamination that is 1,000 times higher than the normal expected value.

Emergency Classification Flowchart

See next page

ALERT NO. 5b
EMERGENCY CLASSIFICATION FLOWCHART



SITE AREA EMERGENCY NO. 5a

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg 1-13)

Effluent monitors detect levels corresponding to greater than 50 mR/hr for 1/2 hour or greater than 500 mR/hr whole body for two minutes (or five times these levels to the thyroid) at the site boundary for assumed adverse meteorology.

Emergency Action Levels

1. Stack High Range Effluent Monitor (17-RM-053A or 17-RM-053B on Panel 09-2) High Alarm (set point 550 mR/hr) annunciated on 09.4.0-26.

OR

2. A. Turbine Building High Range Effluent Monitor (17-RM-434A or B) Alert Alarm (setpoint 10 mR/hr) annunciated on 09-4-0-09.

AND

- B. Failure to isolate building exhaust.

OR

3. A. Radwaste Building High Range Effluent Monitor (17-RM-463A or B) Alert Alarm (setpoint 25 mR/hr) annunciated on 09-4-0-17.

AND

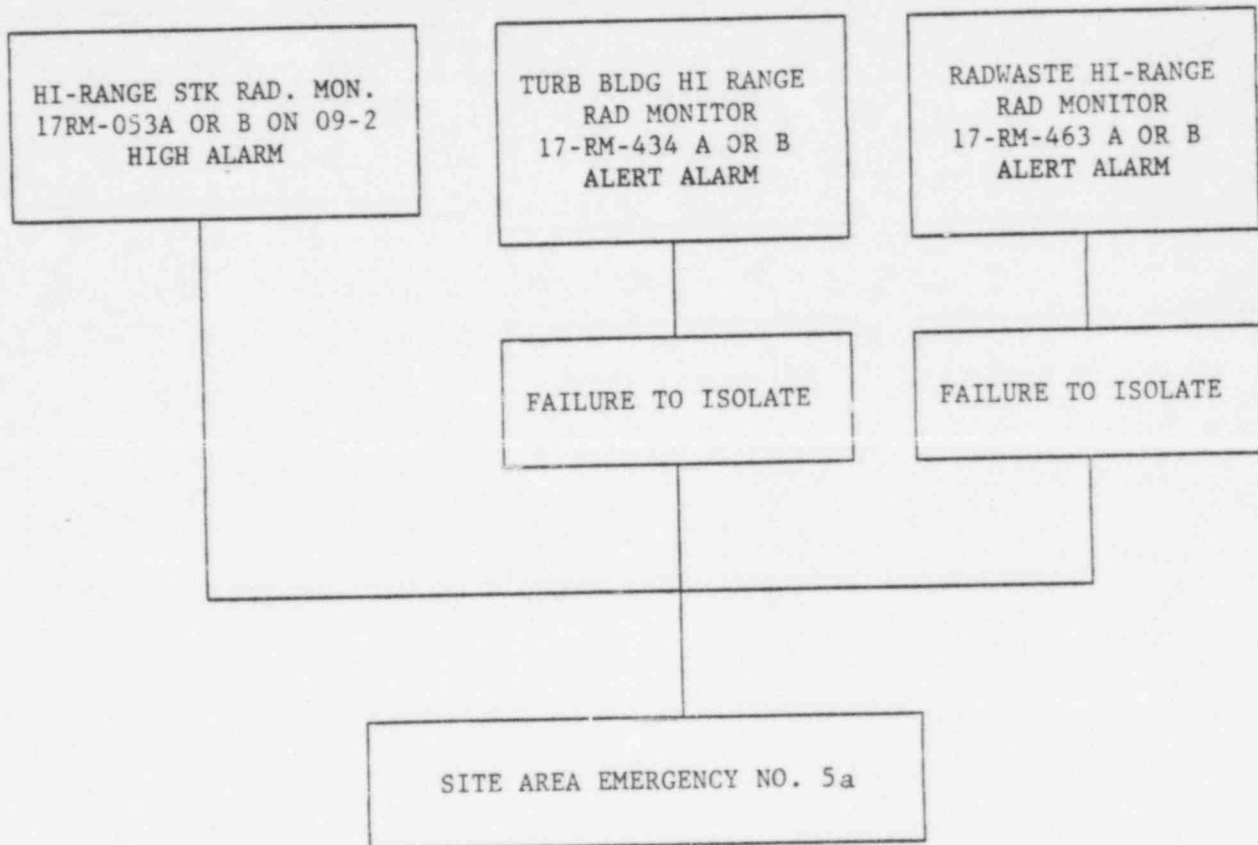
- B. Failure to isolate radwaste building exhaust.

Emergency Classification Flowchart

See next page

SITE AREA EMERGENCY NO. 5a

EMERGENCY CLASSIFICATION FLOWCHART



SITE AREA EMERGENCY NO. 5b

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg. 1-13)

Site Boundary dose rates, as projected from other plant parameters (e.g., radiation level in containment with leak rate appropriate for existing containment pressure) or as measured in the environs, exceed the following limits:

Whole Body greater than: 50 mr/hr for 30 minutes or,
500 mr/hr for 2 minutes,

OR

Child Thyroid Dose Commitment per hour of exposure at the site boundary greater than:

250 mrem for 30 minutes or,
2500 mrem for 2 minutes.

Adverse meteorology is to be assumed when making the projection.

Emergency Action Levels

1. Hi-Hi Alarm from High Range Containment Radiation Monitor 27-RM-104 A or B on panel 09-10 annunciated on 9.4.0-3 or 9.4.0-6

AND

2. Reading(s) on 27-RM-104 A or B exceeds limits given by either one of the two curves in Fig. SAE 5b-1,

AND

3. Site Boundary dose rates in the downwind sector confirmed by survey and/or sampling exceeding:

Whole body: 50 mr/hr or,

Thyroid: 250 mr/hr

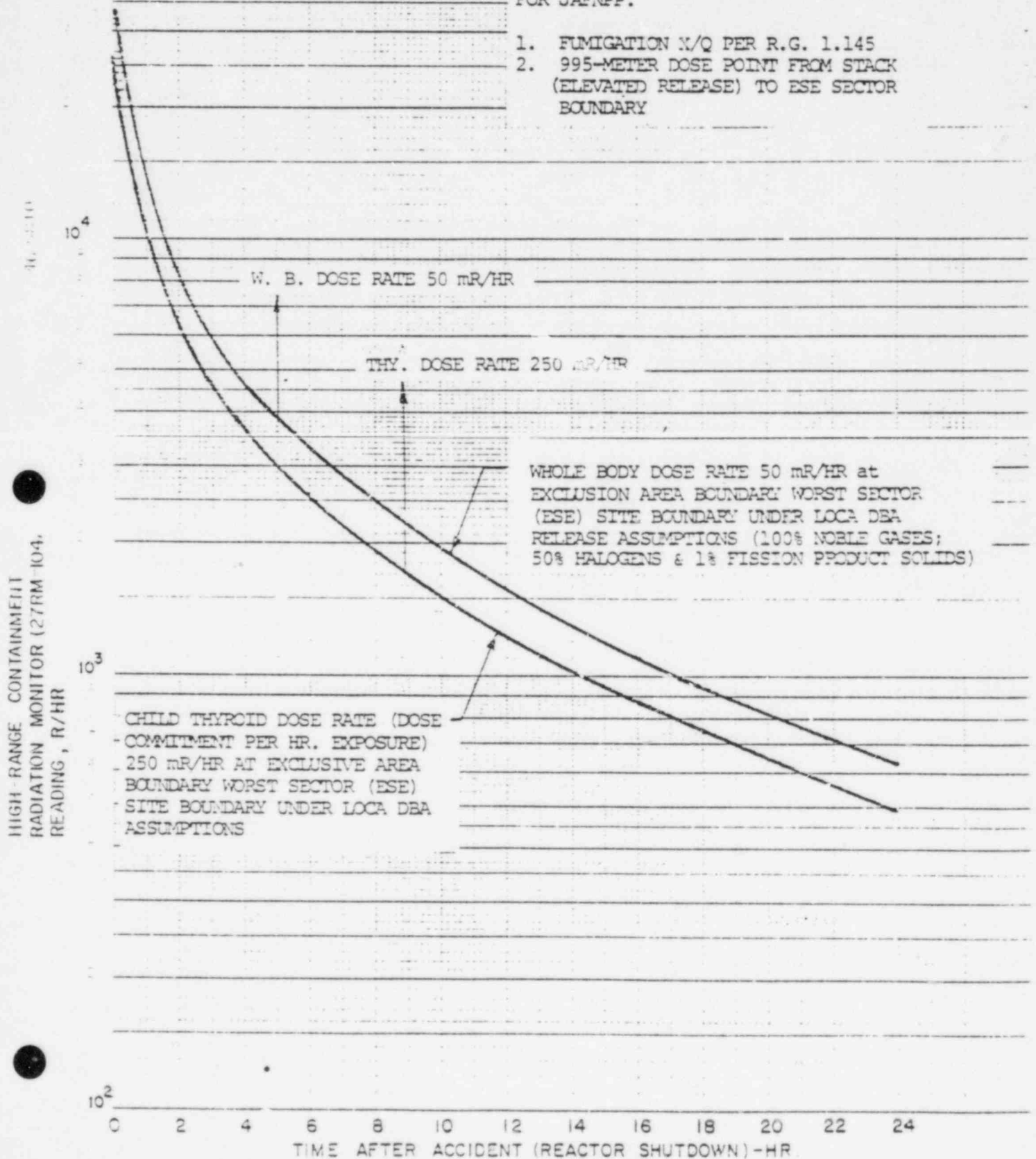
Emergency Classification Flowchart

Not required.

SITE AREA EMERGENCY EAL NO. 5b

Fig. SAE 5b.-1: APPROXIMATE CORRELATION CURVE OF IN-CONTAINMENT HIGH RANGE POST-ACCIDENT RADIATION MONITOR READING VS. SITE BOUNDARY DOSE RATE UNDER ADVERSE METEOROLOGY & LOCA DBA RELEASE ASSUMPTIONS FOR JAFNPP.

1. FUMIGATION X/Q PER R.G. 1.145
2. 995-METER DOSE POINT FROM STACK (ELEVATED RELEASE) TO ESE SECTOR BOUNDARY



SITE AREA EMERGENCY NO. 5c

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg 1-13)

EPA Protective Action Guidelines are projected to be exceeded outside the site boundary.

Emergency Action Levels

1. When off-site whole body dose is projected to exceed 1 rem

OR

2. When off-site child thyroid dose commitment is projected to exceed 5 rem.

Emergency Classification Flowchart

Not required

GENERAL EMERGENCY NO. 5a

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg 1-17)

Effluent monitor detect levels corresponding to 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary under actual meteorological conditions.

Emergency Action Levels

1. The stack high range radiation monitor (17-RM-053A or B on Panel 09-2) High-High Alarm (setpoint 11 R/hr) annunciated on 09.4.0-25.

OR

2. A. The Turbine Building High Range Radiation Monitor (17-RM-434A or B) High Alarm (setpoint 160 mR/hr) annunciated on 09-4-0-10 or 11.

AND

- B. Failure to isolate Turbine Building ventilation.

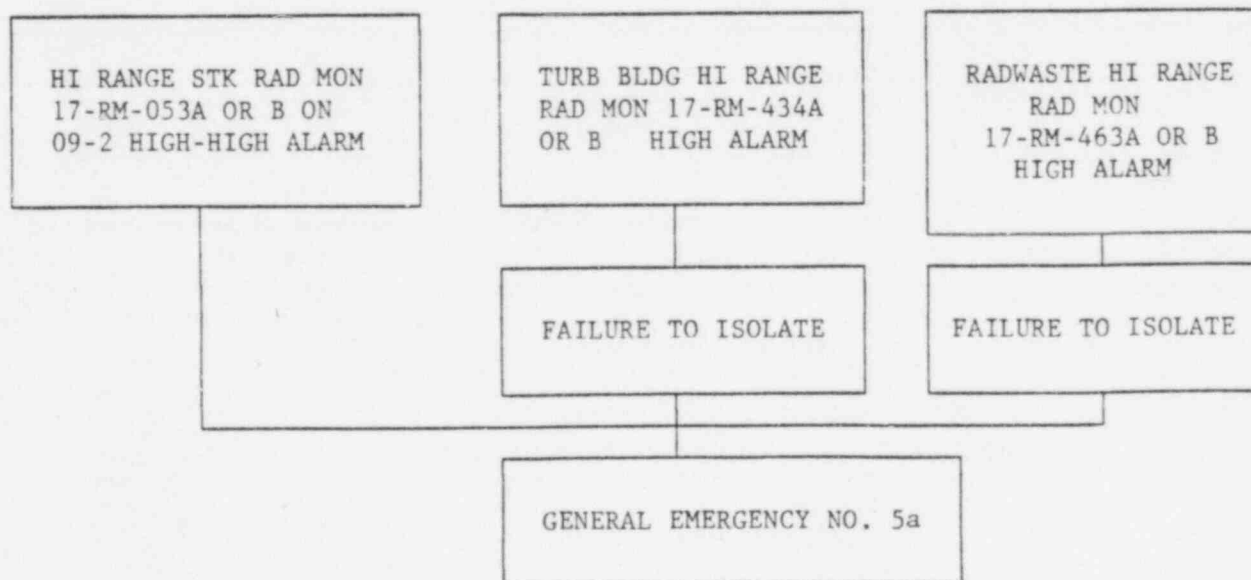
OR

3. A. The Radwaste Building High Range radiation monitor (17-RM-463A or B) High Alarm (setpoint 525 mR/hr) annunciated on 09-4-0-18 or 19.

AND

- B. Failure to isolate Radwaste Building ventilation.

Emergency Classification Flowchart



GENERAL EMERGENCY NO. 5b

ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS

Initiating Conditions (NUREG-0654, Rev. 1; App. 1, pg. 1-17)

Site Boundary dose rates, as projected from other plant parameters (e.g., radiation level in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs, exceed either one of the following limits:

Whole Body: greater than 1 rem/hr

OR

Child Thyroid Dose Commitment per hour of exposure at the site boundary greater than 5 rem.

Emergency Action Levels

1. Hi-Hi Alarm from High Range Containment Radiation Monitor 27-RM-104 A or B on panel 09-10 annunciated on 9.4.0-3 or 9.4.0-6

AND

2. Reading(s) on 27-RM-104 A or B exceeds the product of $\frac{x}{Q}$ and the 5×10^{-5} limit given by either one of the two curves in Fig. GE 5b-1,

AND

3. Site Boundary dose rates in the downwind sector confirmed by survey and/or sampling exceeding:

Whole body: 1 R/HR or,

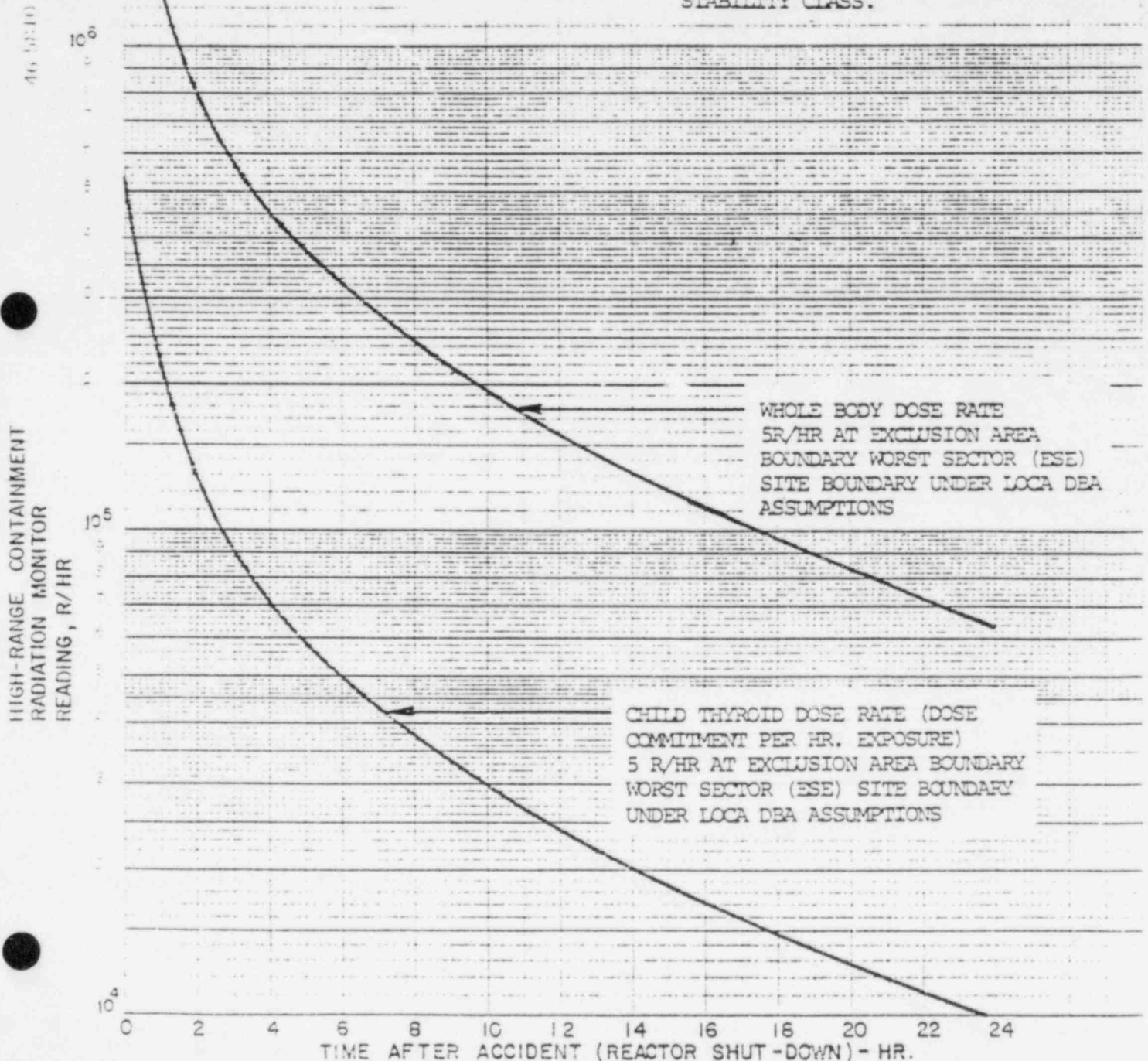
Thyroid: 5 R/HR

Emergency Classification Flowchart

Not required.

GENERAL EMERGENCY EAL NO. 5b

- Fig. GE 5b-1: (1) APPROXIMATE CORRELATION CURVE OF IN-CONTAINMENT HIGH-RANGE POST-ACCIDENT RADIATION MONITOR READING VS. SITE BOUNDARY DOSE RATE UNDER LOCA DBA RELEASE ASSUMPTIONS AND ADVERSE METEOROLOGY
- (2) TO APPLY THIS CURVE, MULTIPLY THE ORDINATE READING IN R/HR BY $(\frac{2/Q}{5 \times 10^{-5}})$ TO OBTAIN THE EAL; X/Q IS THE ACTUAL VALUE IN $\frac{\text{SEC}}{\text{M}^3}$ AT THE DOWNWIND SECTOR SITE BOUNDARY FOR THE PREVAILING STABILITY CLASS.



CONTROLLED 27

NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

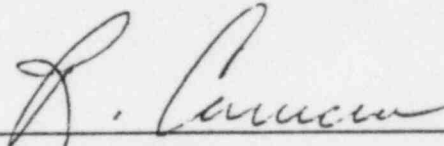
EMERGENCY PLAN VOLUME 2

PROCEDURE NO.: EAP-1.1

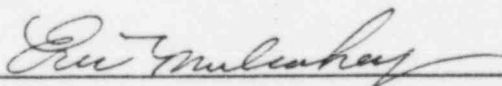
TITLE: OFFSITE NOTIFICATIONS*

PORC REVIEW: MEETING NO. 86-003 DATE 1-8-86

APPROVED BY:


Resident Manager

APPROVED BY:


Radiological and Environmental
Services Superintendent

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Rev. No. 8

Date 01/86

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-1.1

OFFSITE NOTIFICATIONS*

1.0 PURPOSE

The purpose of this procedure is to provide detailed instructions for the prompt notification of offsite authorities, offsite emergency response agencies and onsite personnel.

2.0 REFERENCES

2.1 IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS

2.2 IE. Information Notice No. 85-78: "Event Notification"

3.0 INITIATING EVENT

The Emergency Director has declared an emergency condition at the JAFNPP in accordance with IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS.

4.0 PROCEDURE

The Emergency Director or his designee shall implement this procedure.

4.1 The Shift Supervisor/Emergency Director is the only individual authorized to declare an emergency or recommend protective actions to offsite authorities. A designated individual may, however, relay this information.

4.2 Responsibilities

In order to ensure the complete and appropriate handling of emergency notifications, the following position listing provides associated assignment responsibilities:

4.2.1 Shift Supervisor

- a. Assumes the role of Site Emergency Director, until properly relieved.
- b. Initiates the classification and reclassification of emergency conditions based on available information (IAP-2).

- c. Designates a Control Room Communications Aide to initiate and maintain communications with offsite authorities until the TSC or EOF is staffed.
- d. Designates an individual to contact Plant Personnel in accordance with EAP-17, EMERGENCY ORGANIZATION STAFFING.

4.2.2 Control Room Communications Aide (as assigned by Shift Supervisor)

- a. As directed by SS, initiates and maintains communications with offsite authorities until responsibility is transferred to TSC or EOF.
- b. Continues to maintain communications with TSC following its activation.
- c. Makes plant announcement as directed by the Shift Supervisor.

4.2.3 Emergency Director

- a. Relieves Shift Supervisor of overall responsibility for station emergencies.
- b. Initiates or verifies classification and reclassification of emergency conditions.
- c. Initiates or continues communications with offsite authorities, through Communications Records Coordinator or designee, until EOF and EOF Manager assumes this responsibility.
- d. Makes announcements as necessary.
- e. Recommends protective actions to offsite agencies. Prior to the issuance of protective action recommendations, the Emergency Director should discuss these actions with state and local liaisons.

4.2.4 Communications and Records Coordinator or EOF Manager

- a. As directed by the Emergency Director, initiates or maintains communications with offsite activities.
- b. Acts as prime interface with Emergency Director for information dissemination to and from offsite authorities, NYPA Emergency Organization and other groups.

4.3 Control Room Procedure

4.3.1 The Shift Supervisor/Emergency Director

- a. The Shift Supervisor/Emergency Director shall designate one person to serve as a Control Room Communication Aide (until the TSC and/or EOF are activated).
- b. The Shift Supervisor/Emergency Director shall designate one person to contact plant Emergency Response Plan personnel using EAP-17.
- c. The Shift Supervisor/Emergency Director shall make or designate an individual to make the following announcement. (twice)

"Attention, Attention, A _____ (specify class of emergency) has been declared at the James A. FitzPatrick Nuclear Power Plant please activate the _____ (specify the facilities to be activated) _____."

As emergency classifications change, repeat the previous announcement.

NOTE: The TSC, OSC and EOF will be activated at the UNUSUAL EVENT classification during off shift working hours (i.e., 1600 to 0700 the next day, weekends and holidays) unless the Emergency Director is confident that the emergency will not escalate. During normal working hours (i.e., 0700 to 1600 weekdays), the TSC, OSC and EOF will be activated at the ALERT classification.

- d. The Shift Supervisor/Emergency Director shall assure that proper notifications are being conducted to offsite agencies and NYPA personnel.

4.4 Control Room Communicator Aide

The Communicator Aide, until the activation of the TSC or EOF, shall:

- 4.4.1 Prepare Form EAP-1.1.1 (Part I General Information)

- 4.4.2 Initiate notification to offsite agencies using the Radiological Emergency Communications System (RECS) within 15 minutes of a declaration of an emergency and using the prepared Form EAP-1.1.1.

The RECS telephone is activated by picking up the handset and pressing the small, white button. All parties are activated simultaneously on the same line. After the ringing stops, announce:

"This is to report an incident at the James A. FitzPatrick Nuclear Power Plant. Stand by for roll call."

Roll call should include all parties listed at the top of Form EAP-1.1.1. The verification procedure shall be a roll call taken again at the end of the message by saying:

"(Name of Agency), did you copy?"

Then sign off by saying:

"JAFNPP Control Room out at (local time) and (date)."

This notification must be done as soon as possible.

If the RECS phone is not working, contact the agencies using a regular telephone, (refer to EAP-1.1.5 for commercial phone numbers) or backup radio.

- 4.4.3 Contact each organization on Form EAP-1.1.4 relaying information on Form EAP-1.1.1 via telephone.
- 4.4.4 Complete the NRC "Event Notification Information Worksheet", Form EAP-1.1.6.
- 4.4.5 Contact the NRC via the Emergency Notification System (ENS). If the ENS is not working contact, the NRC via regular telephone.
- 4.4.6 If the Emergency is reclassified (higher or lower), repeat procedure steps 4.4.1 through 4.4.5.

- 4.4.7 Upon activation of the TSC, the offsite notifications functions shall be transferred to the Communications and Records Coordinator. (Upon activation of the EOF, the offsite notifications shall be transferred to the EOF Manager.) The communicator shall detail a summary of notification made and is responsible for transferring copies of forms and checklists completed when transferring responsibility of offsite notifications to the TSC or the EOF.
- 4.4.8 Activation of TSC or EOF signals the end of Control Room offsite notifications.
- 4.4.9 Activation of the TSC signals the end of Control Room plant personnel callouts and inplant Emergency Classification announcements.
- 4.5 Technical Support Center Procedure
- 4.5.1 The Shift Supervisor/Emergency Director after directing activation of the Technical Support Center shall formally turn over the role of Emergency Director to a designated individual in the Technical Support Center. A designated individual is one who has been trained as an Emergency Director or alternate. This can be done verbally with an explanation of plant conditions.
- 4.5.2 The Emergency Director in the Technical Support Center shall complete notifications at this point. The Emergency Director shall direct the Communications and Records Coordinator or his alternate to prepare Forms EAP-1.1.1, EAP-1.1.2, and EAP-1.1.3 to the extent possible.
- 4.5.3 The Communications and Records Coordinator shall prepare Forms EAP-1.1.1, EAP-1.1.2, and EAP-1.1.3 and transmit the status of changes at least every 30 minutes via telecopier to the county, state, EOF and WPO.
- 4.5.4 Designate a communicator who shall notify offsite agencies using the Radiological Emergency Communications System (RECS) within 15 minutes of a declaration of an emergency and using the prepared Form EAP-1.1.1. (Notify immediately if a major plant evolution occurs or an emergency plan reclassification.)

The RECS telephone is activated by picking up the handset and pressing the white button. All parties are activated simultaneously on the same line. After the ringing stops, announce:

"This is to report an incident at the James A. FitzPatrick Nuclear Power Plant. Stand by for roll call."

Roll call should include all parties on Form EAP-1.1.1.

The verification procedure shall be a roll call taken again at the end of the message by saying:

"(Name of Agency), did you copy?"

Then sign off by saying:

"JAFNPP TSC out at (local time) and (date)."

NOTE: If the RECS is not working or a party cannot be contacted after a reasonable amount of rings (6 rings), contact that party via a regular telephone or radio. If RECS is inoperative, refer to Form EAP-1.1.5 for commercial phone number

Notifications shall be made by telephone, with a radio used only as a backup to the Oswego County Sheriff if the telephone systems are inoperative. This will reduce the chances that messages are intercepted by persons who may misunderstand or misinterpret the information and will thus help to minimize the spread of rumors and undue public anxiety.

4.5.5 Designate another communicator who shall assist in notification. Using a copy of the prepared Form EAP-1.1.1, the communicator shall contact all (applicable) parties on Form EAP-1.1.4 (Emergency Notification Checklist). Contact each organization or individual using the primary telephone number or method as listed on Form EAP-1.1.4. If the party cannot be contacted by the primary number listed, try the alternate telephone number or method listed. If a party cannot be contacted in

a reasonable period of time (such as 10 rings), bypass that party and proceed to the next one on the list. After several other notifications have been completed, attempt to contact any bypassed parties. If a party still cannot be contacted, consider other methods such as relay through another party. This communicator should use the automatic dialer phone located in the TSC.

If the individual requests information not listed on the form, make reasonable efforts to obtain and relay the information after notifications have been completed. Do not allow such requests to delay the overall notification process.

4.5.6 Insure that TSC data boards are updated to reflect most current information.

4.5.7 No press releases shall be made prior to completion of initial notifications. Such press releases shall be made only by the plant Information Officer or other authorized public relations representative of the Authority.

No information shall be provided to outside individuals or organizations not listed. Any such callers shall be referred to the plant Information Officer at 342-3840, Extension 218, or the Joint News Center, if activated.

4.5.8 Designate another Communicator who shall assist in notification to the Nuclear Regulatory Commission. Using copies of the prepared Forms EAP-1.1.1, 1.1.2, and 1.1.3, prepare Form EAP-1.1.6 "NRC Event Form". Any additional information needed to complete Form EAP-1.1.6 may be obtained from the Technical Coordinator, the Rad Support Coordinator and the Security Coordinator. Call the NRC using the (ENS) Emergency Notification System. If the party cannot be contacted by the primary number listed, try the alternate telephone numbers listed.

4.5.9 Every time Form EAP-1.1.1 is issued, an announcement over the Plant Public Address System should be made reflecting that information. The announcement should consist of reading items 5, 6, 8, 10 and 12 of Form EAP-1.1.1.

4.5.10 All notifications made to individuals and organizations listed require verification except where noted on the forms.

- 4.5.11 The Emergency Director Aid shall explain and discuss Forms EAP-1.1.1 through 1.1.3 with the New York State representative in the EOF. This information should be available from the TSC or EOF status boards. (The Emergency Director Aide will provide this information through all phases of an emergency.)
- 4.5.12 The Radiological Support Coordinator shall complete Form EAP-1.1.2 (Part II, Radiological Assessment Data) at least every half hour and forward it to the Communications and Records Coordinator for telecopy to offsite agencies. This information should be available from the TSC status boards. (When the EOF is activated this item will be completed by the EOF Radiological Support Coordinator.)
- 4.5.13 Transfer the offsite agency contacts to the EOF, when the EOF is manned. Continue to transfer original data to the EOF.
- 4.5.14 Notify authorities of a reduction or escalation in the Emergency Classification. Close out emergency to offsite authorities.

4.6 Emergency Operations Facility Procedure

- 4.6.1 The Shift Supervisor/Emergency Director or the TSC Communications and Records Coordinator, after directing activation of the EOF, shall formally turn over notification functions to a designated EOF Manager in the EOF. A designated individual is one who has been trained as an EOF Manager or alternate. This can be done verbally with an explanation of plant conditions.
- 4.6.2 The EOF Manager in the EOF shall insure completion of notifications at this point. The EOF Manager shall direct a communicator or alternate to prepare Forms EAP-1.1.1 and EAP-1.1.2 and receive and retransmit Form EAP-1.1.3 to the county and state.
- 4.6.3 The Communicator shall prepare Form EAP-1.1.1 and transmit every 30 minutes via telecopier. Notify offsite agencies using the Radiological Emergency Communications System (RECS) within 15 minutes of a declaration of an emergency and using the prepared Form EAP-1.1.1. (Notify immediately if major plant evolution or reclassification occurs.)

The RECS telephone is activated by picking up the handset and pressing the white button. All parties are activated simultaneously on the same line. After the ringing stops, announce:

"This is to report an incident at the James A. FitzPatrick Nuclear Power Plant. Stand by for roll call."

Roll call should include all parties on Form EAP-1.1.1.

The verification procedure shall be a roll call taken again at the end of the message by saying:

"(Name of Agency), did you copy?"

Then sign off by saying:

"JAFNPP EOF out at (local time) and (date)."

NOTE: If the RECS is not working or a party cannot be contacted after a reasonable amount of rings (6 rings), contact the party via a regular telephone or radio. If RECS is inoperative, refer to Form EAP-1.1.5 for commercial phone numbers.

Notifications shall be made by telephone, with a radio used only as a backup to the Oswego County Sheriff if the telephone systems are inoperative. This will reduce the chances that messages are intercepted by persons who may misunderstand or misinterpret the information and will thus help to minimize the spread of rumors and undue public anxiety.

4.6.4

The EOF Manager shall designate another communicator who shall assist in notification. Using a copy of the prepared Form EAP-1.1.1 the communicator shall contact all parties on Form EAP-1.1.4 (Emergency Notification Checklist). Contact each organization or individual using the primary telephone number or method as listed on Form EAP-1.1.4. If the party cannot be contacted by the primary number listed, try the alternate telephone number or method listed. If a party cannot

be contacted in a reasonable period of time (such as 10 rings), bypass that party and proceed to the next one on the list. After several other notifications have been completed, attempt to contact any bypassed parties. If a party still cannot be contacted, consider other methods such as relay through another party. If the individual requests information not listed on the form, make reasonable efforts to obtain a relay the information after notifications have been completed. Do not allow such requests to delay the overall notification process.

4.6.5 Insure that EOF data boards are updated to reflect most current information.

4.6.6 Designate another Communicator who shall assist in notification to the Nuclear Regulatory Commission. Using copies of the prepared Forms EAP-1.1.1, EAP-1.1.2, and EAP-1.1.3, prepare Form EAP-1.1.6 "NRC Event Form". Call the NRC using the ENS (Emergency Notification System). If the party cannot be contacted by the primary number listed, try the alternate telephone number listed.

4.6.7 No press releases shall be made prior to completion of initial notifications. Such press releases shall be made only by the plant Information Officer or other authorized public relations representative of the Authority.

No information shall be provided to outside individuals or organizations not listed. Any such callers shall be referred to the Joint News Center (315-342-5900).

4.6.8 The Emergency Director Aide shall explain and discuss Forms EAP-1.1.1 through EAP-1.1.3 with the New York State representative in the EOF. This information should also be available from the TSC and EOF status boards. (The Emergency Director Aide will provide this information through all phases of an emergency.)

4.6.9 The EOF Radiological Support Coordinator shall complete Form EAP-1.1.2 (Part II, Radiological Assessment Data) at least every half hour and forward it to the EOF Manager for telecopy to offsite agencies. This information should be available from the EOF status boards.

- 4.6.10 All notifications made to individuals and organizations listed require verification except where noted on the forms.
- 4.6.11 The EOF Manager shall notify authorities of a reduction or escalation in the Emergency Classification.
- 4.6.12 Every time Form EAP-1.1.1 is issued, an announcement over the EOF Public Address System should be made reflecting that information. The announcement should consist of reading items 5, 6, 8, 10 and 12 of Form EAP-1.1.1.

5.0 FIGURES, FORMS AND ATTACHMENTS

- 5.1 Form EAP-1.1.1 Part I Notification Fact Sheet.
- 5.2 Form EAP-1.1.2 Part II Radiological Assessment Data.
- 5.3 Form EAP-1.1.3 Part III Plant Parameters.
- 5.4 Form EAP-1.1.4 Emergency Notification Checklist.
- 5.5 Form EAP-1.1.5 RECS Checklist Alternate Telephone Numbers.
- 5.6 Form EAP-1.1.6 NRC Event Notification Worksheet.
- 5.7 Attachment EAP-1.1.7 Additional Telephone Numbers Which May Be Of Use.



JAMES A. FITZPATRICK
NUCLEAR POWER PLANT

PART I GENERAL INFORMATION

"This is to report an incident at the James A. Fitzpatrick Nuclear Power Plant.
Standby for roll call." Conduct roll call to include the following stations:

Sequence
Number

☐ New York State Warning Point ☐ Oswego County Warning Point ☐ Nine Mile Point Nuclear Site

Upon completion of roll call, give information as outlined below:

1. Message Transmitted At: Date: _____ Time: _____ Via: _____
2. Facility Providing Information: ☐ NMP # 1 ☐ NMP # 2 ☐ FitzPatrick
3. Reported By: Name/Title: _____ Phone: _____
4. Reported From: ☐ Control Room ☐ TSC ☐ EOF ☐ Other _____
5. This . . . ☐ Is An Exercise ☐ Is NOT An Exercise.
6. Event Classification:
 - ☐ Unusual Event ☐ General Emergency ☐ Emergency Terminated
 - ☐ Alert ☐ Transportation Inc'dt. ☐ Other _____
 - ☐ Site Area Emergency
7. ☐ This Emergency Classification Declared At: Date: _____ Time: _____
☐ This Is An Informational Notification Only. This Event Does Not Constitute One of The Four Emergency Classifications.
8. Brief Event Description: _____

9. Plant Status/Prognosis Is: ☐ Stable ☐ Improving ☐ Degrading ☐ Unknown
10. This Event Involves: ☐ NO Abnormal Release Of Radioactivity
☐ An Atmospheric Release Of Radioactivity
☐ A Release Of Radioactivity To A Body Of Water
☐ A Ground Spill Release Of Radioactivity
11. The Release Is: ☐ Not Applicable ☐ Continuing ☐ Terminated ☐ Intermittent
12. Protective Actions:
 - ☐ There Is NO Need For Protective Actions Outside The Site Boundary.
 - ☐ Need For Protective Actions Is Under Evaluation.
 - ☐ SHELTERING Recommended In The Following ERPA'S: (Circle Appropriate ERPA'S)

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

 - ☐ EVACUATION Recommended In The Following ERPA'S: (Circle Appropriate ERPA'S)

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
13. Basis For Protective Action Recommendations: ☐ Plant Conditions ☐ Field Measurements ☐ Projected Offsite Doses
14. Wind Speed _____ Miles/Hour Or _____ Meters/Second
15. Wind Direction (From) _____ Degrees
16. Stability Class _____ (Pasquill A to G, Brookhaven I - IV or Stable, Unstable, Neutral)
17. Ambient Temperature ⁰F _____
18. General Weather Conditions: ☐ Clear ☐ Cloudy ☐ Rain ☐ Snow

Message Received By: _____

NOTE: For Follow Up Notifications Indicate If and How Part II and/or Part III of Notification to Follow (ie., Voice or Telecopy, etc.)

Emergency Director Approval: _____ Time: _____


JAMES A. FITZPATRICK
NUCLEAR POWER PLANT
PART II RADIOLOGICAL ASSESSMENT DATA

 19. Message transmitted at: Date _____ Time _____ From (circle one): Control Room TSC EOF Other _____
(M, D, Y) (24 Hour Clock)

 Based on information available at: Time _____
(24 Hour Clock)
20. GENERAL RELEASE INFORMATION

 A. Release started: Date _____ Time _____
(M, D, Y) (24 Hour Clock)

B. Projected duration of release: _____ hours

 C. Time of termination of release: _____
(24 Hour Clock)

 D. Reactor shutdown: Date _____ Time _____
(M, D, Y) (24 Hour Clock)

E. Wind speed _____ MPH or _____ m/sec

F. Wind direction (from) _____ degrees

G. Stability class: _____

Pasquill A-G or Brookhaven I-IV or Stable, Unstable, Neutral

21. ATMOSPHERIC RELEASE INFORMATION

A. Release height _____ Ft.

B. Iodine/noble gas ratio _____

C. Gross release rate _____ Ci/sec

D. Iodine release rate _____ Ci/sec

E. Noble gas release rate _____ Ci/sec

F. Particulate activity _____ Ci/sec

22. WATERBORNE RELEASE OR SURFACE SPILL INFORMATION

A. Volume of release _____ gallons

 B. Concentration (gross) _____ μ Ci/ml

 C. Radionuclides in release (in μ Ci/ml) _____

D. Total activity released _____ Ci

23. DOSE / DOSE RATE CALCULATIONS

Data 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	$\frac{2\pi}{Q}$	DOSE RATES		INTEGRATED DOSE OVER THE COURSE OF THE ACCIDENT	
		Whole Body Rem/hour	Child's Thyroid Dose Commitment (1 hr. exposure) Rem	Whole Body Rem	Child's Thyroid Dose Commitment Rem
Site boundary					
2 Miles					
5 Miles					
10 Miles					
_____ Miles					

24. FIELD MEASUREMENT OF DOSE RATES OR SURFACE CONTAMINATION (DEPOSITION)

Mile/ Sector or Miles/ Degrees	Location or Sampling Point	Time of Measurement (24 Hour Clock)	Dose Rate (mrem/hr) or Contamination (μ Ci/m ²)

Remarks: _____

 REPORTED BY: A _____ B _____ C _____
Name Date Time

EMERGENCY DIRECTOR APPROVAL: _____ Time: _____

ROUTE TO: _____

FORM EAP-1.1.4
EMERGENCY NOTIFICATION CHECKLIST

Complete with the following information:

agency
communicator's name / notification time

1)*

NUCLEAR REGULATORY COMMISSION*

-----/
Note: Use Red phone system as prescribed by
Plant Standing Order No. 6

a) Emergency Notification System (ENS)

* CONTACT ONLY IF ENS INOPERATIVE.

-----/-----

b) Alternate
301/951-0550
or
301/492-8893
301/427-4259
301/427-4056

2)*

NINE MILE POINT NUCLEAR STATION UNIT #1*

-----/
Note: Nine Mile SSS should
notify NMPC On-Call Supervisor on
non duty hours of situation.

NMPNS Control Room
Tie Line #71-1321
Outside Phone 315/343-2110

* CONTACT ONLY IF RECS INOPERATIVE.

3)*

NEW YORK STATE WARNING POINT*

-----/
Provide with Form EAP-1.1 data.

a) Normal Duty Hours Only
Office of Disaster Preparedness
518-457-2200

b) Non Duty Hours
New York State Police at Albany
518-457-6811

* CONTACT ONLY IF RECS INOPERATIVE.

4)*

OSWEGO COUNTY WARNING POINT*

-----/-----

a) Normal Duty Hours Only
Emergency Management Office
315-598-1191

b) Non Duty Hours
Oswego County Sheriff's Office
315-343-5490

* CONTACT ONLY IF RECS IS INOPERATIVE, OR YOU REQUIRE SHERIFF ASSISTANCE.

FORM EAP-1.1.4
EMERGENCY NOTIFICATION CHECKLIST
(continued)

5)

-----/-----

NYPA JAFNPP PUBLIC INFORMATION OFFICER

a) Normal Duty Hours Only
Rick Chase, Woody Berzins or Barbara
Egelston, Ext. 218 or 217 or at the
Energy Information Center
315/342-4177 or 341-3380

-----/-----

b) Non Duty Hours
Rick Chase
Home Phone 315/342-3049
or 315/343-7026
Beeper: 315/433-2031

-----/-----

Woody Berzins
Home Phone 315/963-8188
Unlisted Emergency 315/963-8869
Beeper: 315/433-2093

-----/-----

Barbara Egelston
Home Phone 315/343-0059

6)

-----/-----

Note: The dedicated hot line rings in:

- i) The Office of the Senior Vice
President, Nuclear Generation
(the designated Recovery Manager)
- ii) The Office of Vice President
BWR Support
- iii) The Nuclear Operations Duty
Officer will verify the
notification

-----/-----

Note: The number dialed above will activate
a beeper on the Nuclear Operations
Duty Officer. After dialing the
above number, the connection must be
maintained for at least thirty (30)
seconds after the call is completed
in order to activate the transmitter.
The Duty Officer should then call
JAFNPP at Extension 310. After the
notification message is given, the
Duty Officer will call again to verify.
A Nuclear Generation Duty Officer Roster
is posted in the Control Room and the TSC
at the RECS Communicator Station.

NYPA NEW YORK HEADQUARTERS OFFICE

a) Normal Duty Hours Only
Use dedicated hot line in TSC
Circuit # (63 10793)

b) Non Duty Hours
Nuclear Operations Duty Officer
Beeper
212/396-7007

FORM EAP-1.1.4
EMERGENCY NOTIFICATION CHECKLIST
(continued)

-----/-----
Note: This number will only be used if the
Duty Officer does not respond to the
beeper call. Give ECC Marcy the
notification. ECC Marcy will then
contact the New York Office. No
verification call will be forthcoming.

c) No response from Nuclear Operations
Duty Officer ((ONLY))
ECC MARCY
315/797-8271

7)

US NRC RESIDENT INSPECTOR

-----/-----
a) Normal Duty Hours Only
Alan Luptak
Plant Ext. 365
Outside Lines 315/342-4907
315/342-4908

-----/-----
b) Non Duty Hours
Alan Luptak
Home Phone 315/598-1583

8)

INPO (Institute of Nuclear
Power Operations) EMERGENCY
RESPONSE

-----/-----
Note: Do not notify for an Unusual Event.
Notification should be in accordance
with the Coordination Plan established
between INPO, AIF and EPRI. This
Coordination Plan is attached to the
INPO Letter of Agreement in Section C
of the JAF Emergency Plan.

Duty Officer
404/953-0904
or
404/953-0922

9)*

UNITED STATES COAST GUARD STATION*

-----/-----
Message: "This is the JAFNPP:
we are in a _____
(state class of emergency). Please
ensure that boats are cleared from
the lakefront within a one-mile ra-
dius of the plant."

315/343-1551 (Oswego)
716/846-4152 (Buffalo)

NOTE: Please call Oswego
station first.

*NOTIFY ONLY WHEN ASSISTANCE IS REQUIRED ON LAKE OR ALERT OR HIGHER.

FORM EAP-1.1.4
EMERGENCY NOTIFICATION CHECKLIST
(continued)

- 10) -----
Do not notify unless directed to do so by
the Emergency Director.
Message: Give details as presented
on initial and follow-up notification
forms. Request assistance if needed
and directed by Emergency Director.
- 11)* -----
Message: This is the JAFNPP. We are
in a ----- (state class of
emergency). Please assign deputies
to block off the site at the east and
west boundaries on Lake Road to keep
all unauthorized personnel out.
- 12) -----
Do not notify unless directed to do so by
the Emergency Director.
Message: This is the JAFNPP. We are
in a ----- (state class of
emergency). This is -----
(name), at phone number 315/342-3840,
Extension ----- (one being used).
Give a summary of the situation and
request assistance, if necessary.
- 13) -----
Do not notify unless directed to do so by
the Emergency Director.
Message: This is the JAFNPP. We are
in a ----- (state class of
emergency). This is -----
(name), at phone number 315/342-3840,
Extension ----- (one being used).
Give a summary of the situation and
request assistance, if necessary.
- 14) -----
DO not notify unless directed to do so by
the Emergency Director.
Message: This is the JAFNPP. We are
in a ----- (state class of
emergency). This is -----
(name), at phone number 315/342-3840,
Extension ----- (one being used).
Give a summary of the situation and
request assistance, if necessary.
- Department of Energy
Radiological Assistance Program
516/282-2200
- Oswego County Sheriff*
315/343-5490
or radio
or RECS
- *NOTIFY AT ALERT
- General Electric
BWR Emergency Support Program
408/971-1038
- American Nuclear Insurers
203/677-7305
203/677-6989
- Radiation Management Corporation
215/243-2950
215/243-2990

RADIOLOGICAL EMERGENCY COMMUNICATIONS SYSTEM CHECKLIST
TELEPHONE CIRCUIT # 63 PLNT 14222
BACK UP TELEPHONE NUMBERS

Contact Only * Agencies

agency
communicator's name / notification time

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1)* -----/-----
 <u>Note:</u> NYSWP is only agency that <u>must</u> be on the
 line before the message begins. NYSWP
 will reconvey message to absent parties.</p> | <p><u>New York State Warning Point*</u>
 NYSWP
 518-457-2200</p> |
| <p>2) -----/-----
 <u>Note:</u> Manned just during normal working hours.</p> | <p><u>New York State Department</u>
 <u>of Health, Radiological Division</u>
 NYSDOH
 518-454-3321</p> |
| <p>3) -----/-----
 <u>Note:</u> Manned just during normal working hours.</p> | <p><u>New York State Emergency Operations</u>
 <u>Center</u> NYEOC
 518-454-3337</p> |
| <p>4) -----/-----
 <u>Note:</u> Manned just during normal working hours.</p> | <p><u>New York State Office of Disaster</u>
 <u>Preparedness, Central District</u>
 NYSODPCD
 315-363-8524</p> |
| <p>5) -----/-----
 <u>Note:</u> Manned just during normal working hours.</p> | <p><u>Oswego County Emergency Operations</u>
 <u>Center</u> OCEOC
 315-598-1191</p> |
| <p>6)* -----/-----
 <u>Note:</u> This is sheriff's office and is manned
 24 hours a day.</p> | <p><u>Oswego County Warning Point</u>
 315-343-5490</p> |
| <p>7)* -----/-----
 <u>Note:</u> Manned 24 hours a day.</p> | <p><u>Nine Mile Point Nuclear Power</u>
 <u>Station, Unit #1, Control Room</u>
 NMPNPS#1CR
 71-1321 (tie-line)
 315-343-2110</p> |
| <p>8) -----/-----</p> | <p><u>Emergency Operations Facility</u>
 EOF
 315-593-5795</p> |

Time _____

Communicator Signature _____

Date _____

U.S. NUCLEAR REGULATORY COMMISSION

EVENT NOTIFICATION WORKSHEET

OPERATIONS CENTER
September 23, 1985
Page 1 of 2

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLER'S NAME		TELEPHONE NUMBER (for call back)					
EVENT CLASSIFICATION		Y	N	EVENT CATEGORY	INITIATION SIGNAL	CAUSE OF FAILURE				
GENERAL EMERGENCY				REACTOR TRIP/SCRAM		MECHANICAL				
SITE AREA EMERGENCY				ESF ACTUATION		ELECTRICAL				
ALERT				ECCS ACTUATION		PERSONNEL ERROR				
UNUSUAL EVENT				SAFETY INJECTION FLOW		PROCEDURE INADEQUACY				
50.72 NON-EMERGENCY				LCO ACTION STATEMENT		OTHER				
SECURITY/SAFEGUARDS				OTHER						
TRANSPORTATION EVENT		SYSTEM:				EVENT TIME	ZONE	EVENT DATE	MONTH	DAY
OTHER:		COMPONENT:								

EVENT DESCRIPTION

POWER PRIOR TO EVENT (1):		Did all systems function as required ?		YES	IF NO, Explain above
CURRENT POWER, OR MODE		Anything "unusual" or not understood ?		NO	IF YES, Explain above
OUTSIDE AGENCY OR PERSONNEL NOTIFIED BY LICENSEE		CORRECTIVE ACTION(S)			
STATE(S):					
LOCAL					
PRESENT	YES	NO	WILL BE		
OTHER		MODE OF OPERATION TILL CORRECTION:		ESTIMATE TIME TO RESTART	
PRESS RELEASE		ADDITIONAL INFORMATION ON BACK			

ADDITIONAL INFORMATION FOR RADIOLOGICAL RELEASES

LIQUID RELEASE	PLANNED	SOURCE(S) :	
GASEOUS RELEASE	UNPLANNED		
RELEASE RATE (Ci/sec) :		EST TOTAL ACTIVITY (Ci) :	
RELEASE DURATION :		EST TOTAL IODINE (Ci) :	
T.S. LIMITS :			GRAB SAMPLE
			MONITOR READING
Areas evacuated ?	Y	N	List below
Personnel exposed/contaminated		Y	N
Describe below			
Plant Health Physics backup requested ?	Y	N	Note: Only if T.S. exceeded or actual contamination
ADDITIONAL INFORMATION			

ADDITIONAL INFORMATION FOR REACTOR COOLANT or STEAM GENERATOR TUBE LEAKS

SUDDEN OR LONG TERM DEVELOPMENT ?	START DATE :	START TIME :
LEAK RATE :	PRIMARY COOLANT ACTIVITY :	MONITOR READINGS
LEAK VOLUME :	SECONDARY COOLANT ACTIVITY :	CONDENSER
T.S. LIMITS :		MAIN STEAM LINE
		SC BLOWDOWN
LIST OF SAFETY RELATED EQUIPMENT <u>NOT</u> OPERATIONAL :		
SPECIAL ACTIONS TAKEN BY LICENSEE (If any) :		

ATTACHMENT EAP-1.1.7

ADDITIONAL TELEPHONE NUMBERS WHICH MAY BE OF USE

<u>Agency/Individual</u>	<u>Phone Number</u>	<u>Agency/Individual</u>	<u>Phone Number</u>
American Nuclear Insurance	800/243-3172	Oswego Hospital Administrator	
....	203/677-7305	Corte J. Spencer	315/349-5520
....	203/677-6989		
Ecological Analysts, Inc.		NYPA Nuclear Generation	
Paul H. Muessig	914/692-6706	Duty Officer	212/396-7007
Emergency Planning Coordinator		NYPA Public Relations	
Nicholas Avrakotos		Cliff Spieler	
Home	315/342-5257	Office	212/397-6225
Emergency/Unlisted	315/342-5429	Home	914/739-0357
Energy Information Center.....	315/342-4117	Carl Patrick	
Emergency	315/342-3380	Office	914/681-6247
		Home	914/528-7835
INPO Emergency Response		Public Information	Ext. 218
Duty Officer	404/953-0904	Rick Chase/Home	315/342-7049
		or	315/343-7026
New York State Bureau of Radiation Control		Assistant Information Officer	
Co-directors		Woody Berzins	
Mr. West/Mr. Heald	518/474-2846	Home	315/963-8188
		Emergency/Unlisted	315/963-8869
New York State Bureau of Radiation Health		Radiation Management Corporation	
Bruce McQueen	518/473-3393	Tom Linneman	215/243-2950
Department of Energy		Emergency 24 hours Primary	215/243-2990
David Schwallier	518/282-2200		
New York State Warning Point ..	518/457-2200	Radiation Safety Officer	
Alternate		Dr. C. C. Chamberlain	315/473-6510
24 hr. (NY State Police).	518/457-6811	Resident Inspector	
Niagara Mohawk Customer Service	315/343-0162	Alan Luptak	315/598-1583
NMP-1 Control Room	315/342-3046		
Extension	71-1321	Rochester Gas and Electric Co..	716/546-2700
NMP-2 Safety	315/342-4740	Resident Manager	
Extension	71-319	Bruce Snow	Ext. 291,250
Dr. David O'Brien		State University Hospital	315/473-5611
Office	315/343-4348	VP Hospital Affairs	
Home	315/343-2484	Thomas J. Campbell	315/473-4240
Summer	315/343-6889		
Oswego County Fire Control	315/343-8571	U.S. Coast Guard - Buffalo	
		Commander A. D. Rosebrook .	716/846-4151
Oswego County Emergency		U.S. Coast Guard - Oswego	
Management Office	315/598-1191	BMC J. M. Dusch, OIC	315/343-1551
Oswego County Sheriff		U.S. NRC Resident Inspector	
Charles Nellis	315/343-5490	Office	315/342-4907
		315/342-4908
		Extension	365

CONTROLLED 27

NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 2

PROCEDURE NO.: EAP-2

TITLE: PERSONNEL INJURY*

PORC REVIEW: Meeting No. 86-003 Date 1-8-86

APPROVED BY:

R. Curran
Resident Manager

APPROVED BY:

Alan M. Kow for ERM
Radiological and Environmental
Services Superintendent

PAGE NO.	1	2	3	4	5	6	7	8	9	10
REV NO.	3	3	6	5	3	3	4	3	5	5
PAGE NO.	11	12	13	14	15	16	17	18	19	20
REV NO.	5	5	5	5	5	5	5	5	5	5
PAGE NO.	21	22	23							
REV. NO.	5	5	3							

Rev. No. 6

Date 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-2

PERSONNEL INJURY*

1.0 PURPOSE

This procedure provides instructions necessary to assure that medical attention is promptly administered to individuals injured or stricken at the JAFNPP while limiting the unnecessary spread of contamination, limiting personnel exposure, and providing for appropriate off-site notifications. (Please Note: The JAFNPP First Aid Team is made up of members of the JAFNPP Fire Brigade and a RES Technician.)

2.0 REFERENCES

- 2.1 EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL
- 2.2 Oswego Hospital Emergency Plan for Radiation Accidents
- 2.3 Upstate Medical Center Emergency Plan for Radiation Accidents
- 2.4 ITP-15 FIRST AID AND EMERGENCY CARE TRAINING
- 2.5 RPOP-2 PERSONNEL DECONTAMINATION
- 2.6 RADIATION PROTECTION PROCEDURES
- 2.7 JSAFE-83-039.

3.0 INITIATING EVENT

A person has been injured or has become ill and is possibly contaminated.

4.0 PROCEDURE

MINOR INJURIES - IMPLEMENT SECTION 4.1
INJURIES THAT REQUIRE IMMEDIATE ATTENTION - IMPLEMENT SECTION 4.2

4.1 Minor Injuries

- 4.1.1 The injured individual reports to First Aid or contacts the Shift Supervisor for assistance.

4.1.2 The nurse or person qualified to administer first aid in accordance with ITP-15 FIRST AID AND EMERGENCY CARE TRAINING shall evaluate the injury to assure that it can be treated on-site.

a. The injury shall be treated using standard first aid techniques and if contaminated taking additional care to assure that any contamination on the individual is not spread to medical equipment or other individuals.

b. Monitor and decontaminate the individual, equipment used, the surroundings, and yourself in accordance with RPOP-2 PERSONNEL DECONTAMINATION and RADIATION PROTECTION PROCEDURES.

4.2 Injuries That Require Immediate Attention

4.2.1 Person who discovers the injured individual, or the individual, immediately contacts the Control Room for first aid assistance.

4.2.2 Emergency Director/Shift Supervisor shall

(Actions are performed with 4.2.3):

4.2.2.1 Instruct the Control Room Operator to sound the Station alarm for about 10 seconds and then make the following announcement twice over the PA system.

ATTENTION, ATTENTION: AN INJURY HAS OCCURRED (location of injured). THE FIRST AID TEAM SHALL REPORT TO (location of injured) IMMEDIATELY. ALL OTHER PERSONNEL REMAIN CLEAR OF THAT AREA.

4.2.2.2 If diagnostic information from the first aid team, step 4.2.3.6 indicates that the individual is contaminated and will not be decontaminated prior to treatment and requires off-site medical assistance, implement procedure IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS. If the individual is not contaminated or has been decontaminated proceed to step 4.2.2.14.

4.2.2.3

Call the Oswego County Fire Control and complete Form EAP-2.2.

315/343-8571

or

315/343-4555

or

315/343-1313

and give the following message:

THIS IS THE JAMES A. FITZPATRICK NUCLEAR POWER PLANT. WE HAVE AN INJURED INDIVIDUAL WHO REQUIRES TRANSPORTATION TO THE HOSPITAL (describe injuries or nature of illness). HE/SHE IS CONTAMINATED. PLEASE REQUEST THAT THE HOSPITAL IMPLEMENT ITS RADIATION EMERGENCY PLAN.

NOTE:

It is not necessary to call the hospital. The Fire Coordinator will notify the hospital. Ambulance and hospital personnel will make the determination as to whether or not the individual should be taken to Oswego Hospital or to Upstate Medical Center based on the extent of injuries.

4.2.2.4

Provide information from the form EAP-2.2 to the Oswego County Fire Control Dispatcher. Request that the dispatcher relay this information to the receiving hospital (Oswego or Upstate Medical Center).

4.2.2.5

Call Security and deliver the following message:

AN AMBULANCE IS ENROUTE TO THE PLANT. WHEN IT ARRIVES, PERMIT IMMEDIATE ENTRY OF THE AMBULANCE AND ATTENDANTS AND ESCORT TO (building entry closest to location of injured). PROVIDE AMBULANCE ATTENDANTS WITH TLD's.

4.2.2.6

Assign a RES Technician to accompany the ambulance to the hospital.

4.2.2.7 Obtain and provide the first aid team member accompanying the ambulance with the personnel medical history information if available at the JAFNPP First Aid Office (Ext. 289). (Located within the medical office is a roledex on the nurse's desk that contains the following information.

- a. Allergies, if any,
- b. Pre-existing medical problems,
- c. Medications being currently taken by an employee,
- d. The person to contact in the event of an emergency.

If additional information is requested by the hospital, attempt to contact the plant nurse for more complete information).

4.2.2.8 Contact the radiological emergency physician Dr. David O'Brien for medical assistance.

Office 315/343-4348
Home 315/343-2484
Summer 315/343-6889

Inform him of the situation and ask him to report to the receiving hospital.

4.2.2.9 Complete plant staff notifications as required or necessary. As a minimum, contact the on call supervisor and the Public Information Officer, per Plant Standing Order #6. Provide these individuals with as much information as available.

4.2.2.10 Obtain the name of the victim and request the Public Information Officer to contact the individual designated in the victim's medical file for emergency information.

4.2.2.11 Assign a RES Technician with survey equipment and a vehicle to go to the receiving hospital to assist in clean up and monitoring of the ambulance and hospital. Survey kits as listed in SAP-2 should be utilized.

4.2.2.12

Contact the receiving hospital. After the arrival of patient and assist in providing personnel information as requested. Hospital Emergency Room Phone Numbers:

Oswego Hospital 315/349-5592
Upstate Medical Center 315/473-5611

4.2.2.13

Prior to the arrival of the ambulance if the individual is successfully decontaminated, notify the Oswego County Fire Control of the change in status.

4.2.2.14

If the individual is found not to be contaminated or is decontaminated, call the Oswego County Fire Control

315/343-8571

or

315/343-4555

or

315/343-1313

and give the following message:

THIS IS THE JAMES A. FITZPATRICK NUCLEAR POWER PLANT. WE HAVE AN INJURED INDIVIDUAL WHO REQUIRES TRANSPORTATION TO THE HOSPITAL. (describe injuries or nature of illness) HE/SHE IS NOT CONTAMINATED, I REPEAT NOT CONTAMINATED. (State specifically that the individual is NOT CONTAMINATED.)

4.2.3 First Aid Team shall

4.2.3.1

Upon hearing the announcement of injury over the PA system, the first aid team (the Senior Nuclear Operator and/or Auxiliary Operator, a Security Guard and an RES Technician,) if available, shall report to the specified location with a first aid kit. First aid kits are located in the following areas:

- a. First Aid Office
- b. Reactor Control Room
- c. Radwaste Control Room

(As available, in addition to first aid team at JAFNPP plant, Nurse and/or Safety Supervisor shall report to the specified location. The plant Nurse and/or Safety Supervisor may direct the First Aid Team upon reporting to the accident scene.)

4.2.3.2 Upon reaching the injured individual, assess the injury and take radiological precautions in accordance with EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL if necessary.

4.2.3.3 If necessary, administer lifesaving measures requiring immediate action such as CPR.

NOTE: When making decisions concerning the disposition of the injured, the injured's well-being and need for medical attention shall always take precedence over decontamination efforts.

4.2.3.4 If the injured is located in a radiological control area, move the injured to a control point (if possible) to minimize radiation exposure and contamination of the injured or first aid team members.

4.2.3.5 Survey the injured for contamination and, if necessary, concurrently administer lifesaving measures. (If the injured is wearing protective clothing and condition permits, remove the clothing prior to performing this survey).

4.2.3.6 Complete form RPOP-2.1 "Personnel Decontamination Record" from RPOP-2 which is an attachment to this procedure. Report the contamination levels to the Emergency Director/Shift Supervisor or his designee. The Emergency Director/Shift Supervisor shall take the steps necessary to obtain an ambulance and get it to the location of the injured in accordance with 4.2.2.3.

4.2.3.7 Administer first aid as necessary.

4.2.3.8 If the injured individual is contaminated, perform as much decontamination as possible in accordance with RPOP-2 PERSONNEL DECONTAMINATION. As the injuries permit attempt to:

- a. Remove any protective clothing.
 - b. Place the injured on a stretcher.
 - c. Wrap the injured and the stretcher in a clean blanket.
- 4.2.3.9 If the individual has been successfully decontaminated, notify the Emergency Director immediately.
- 4.2.3.10 If the injured is not contaminated or has been successfully decontaminated, inform the ambulance attendants that no special hospital procedures need to be implemented.
- 4.2.3.11 Have a first aid team member accompany the ambulance and patient to the hospital. This team member should preferably be a RES Technician. This team member should be provided with the completed form RPOP-2.1 and any available medical history information to be utilized at the hospital.
- 4.2.3.12 The first aid team members not assigned to accompany the injured to the hospital shall monitor themselves and be decontaminated as necessary.
- 4.2.4 First Aid Team Member (RES Technician) assigned to accompany the contaminated individual shall:
- 4.2.4.1 Obtain the ambulance kit, stored in a locker on the 272'el of the Administration Building, near the elevator, and take to the ambulance. Obtain completed Form RPOP-2.1 and available medical history information.
- 4.2.4.2 When the ambulance arrives, issue each attendant a TLD and any necessary protective clothing from the ambulance kit if this has not already been done by the security force. Cover the floor of the ambulance with protective material (such as Herculite if available).
- 4.2.4.3 Assist in placing the contaminated injured person into the ambulance.

- 4.2.4.4 Notify the Emergency Director when the contaminated injured person is leaving the site, and have the ambulance attendants notify the hospital when they are leaving the site.
- 4.2.4.5 Continue to monitor the patient in the ambulance and note changes in status on form RPOP 2.1 "Personnel Decontamination Record". Proceed to the Oswego Hospital in the ambulance and have another plant person (if not done so already by the Emergency Director) drive a separate vehicle to the hospital to help with any contamination problems and for the purpose of returning personnel and radwaste to the plant. If the patient is directed to Upstate Medical Center, instruct the ambulance driver to request the Oswego County Fire Control to contact the JAFNPP Emergency Director.
- 4.2.4.6 Further disposition of the contaminated injured shall proceed in accordance with the Hospital Emergency Plan for Radiation Accidents. Provide information obtained to hospital staff.
- 4.2.4.7 The first aid team member shall act in accordance with hospital procedures, assist the hospital staff as requested and, if necessary, contact the plant for additional assistance.
- 4.2.4.8 When it is determined that the ambulance is no longer needed, survey the attendants and the ambulance interior for contamination and decontaminate as necessary in accordance with RADIATION PROTECTION PROCEDURES or with the Hospital's procedures.
- 4.2.4.9 When no longer needed at the hospital, report back to the plant with any radwaste generated. Report to plant supervisory personnel for debriefing.

5.0 ATTACHMENTS/FORMS

- 5.1 Attachment EAP-2.1, RPOP-2, PERSONNEL DECONTAMINATION (14 pages)
- 5.2 Form EAP-2.2, Checklist for Oswego Fire Control Ambulance Dispatcher.

ATTACHMENT EAP-2.1

CONTROLLED COPY

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

RADIOLOGICAL AND ENVIRONMENTAL SERVICES DEPARTMENT

PROCEDURE NO.: RPOP-2

TITLE: PERSONNEL DECONTAMINATION

PORC Review No./Date

Meeting No.: N/A Date: 9/30/85

Approved By:

R. L. ...
Resident Manager

Approved By:

Eric M. ...
Radiological and Environmental
Services Superintendent

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ATTACHMENT EAP-2.1 (cont.)

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PERSONNEL DECONTAMINATION

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ATTACHMENT EAP-2.1 (cont.)

RPOP-2 PERSONNEL DECONTAMINATION

1.0 PURPOSE

The purpose of this procedure is to provide guidelines for the decontamination of individuals who may become accidentally contaminated with radioactive material while working at the JAFNPP.

2.0 REQUIREMENTS AND ACCEPTANCE CRITERIA

2.1 10 CFR 20 Limits

- 2.1.1 Section 20.1 (c) states that every reasonable effort be made to maintain radiation exposures and exposure to radioactive material as low as reasonably achievable.

2.2 Plant Limits

- 2.2.1 Contamination levels of personnel leaving the Restricted Areas of the plant should not exceed 100 cpm above background as measured by a frisker or GM count ratemeter. Personnel should attempt to remove any contamination detectable above background.
- 2.2.2 The use of absolute numerical values for acceptable levels of decontamination may not always be practical. In some cases, even after repeated decontamination efforts, the acceptable levels of contamination specified in this procedure may not be attained. In these cases, it may be necessary to release an individual with higher levels of contamination after an evaluation of the potential dose to the individual and risk to others. An RES Supervisor shall make this determination as well as the need for medical advice or assistance. (This may also be necessary in cases where decontamination would have an adverse or highly undesirable effect or upon the individual's objection to further treatment.)
- 2.2.3 Facial or nasal contamination in excess of 10,000 Dpm as determined by a smear, swab or frisk requires notification of RES department supervision. Such cases shall be investigated in accordance with procedure RPOP-7, Radiological Incident Investigation. A whole body count shall be performed when contamination is indicated in outlined area of facial picture on figure RPOP 2.1 (from chin to bridge of nose and cheek to cheek) one to three days following the incident in order to evaluate internal contamination.

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ATTACHMENT EAP-2.1 (cont.)

3.0 SPECIAL EQUIPMENT

3.1 Decontamination Shower and Sink

- 3.1.1 This shower is located in the Administration Building 272' elevation near the Radiation Protection Office. The drains from this shower and the adjacent decontamination sink are routed to the radioactive waste treatment system.

3.2 Decontamination Equipment

- 3.2.1 Decontamination supplies are maintained in the personnel decontamination locker located outside the Radiation Protection Office. The following supplies are available for use:

- a. Bar soap
- b. Shampoo
- c. Paper towels
- d. Razor
- e. Shaving cream
- f. Scissors (hair cutting)
- g. Liquid hair remover (e.g., Nair)
- h. Cotton gauze pads
- i. Titanium dioxide powder
- j. Potassium permanganate solution
- k. Sodium bisulfite solution
- l. Surgical scrub brushes
- m. Surgical gloves
- n. Glove liners
- o. Surgical tape
- p. Cotton-tipped swabs
- q. Plastic food wrap
- r. Plastic rain suits
- s. Towels

4.0 PREREQUISITES AND CAUTIONS

- 4.1 All personnel exiting the Restricted Area are required to monitor themselves for contamination. In addition, personnel should monitor themselves as soon as possible following an incident in which contamination of the body or clothing may have occurred (e.g., spills, failure of protective clothing, etc.).
- 4.2 Personnel using respiratory protection devices may be required to perform nasal smears for the detection of inhaled radioactive material as a condition of the Radiation Work Permit.
- 4.3 In the event contamination of the hands is detected, personnel may wash and resurvey. If the survey results indicate less than 100 cpm above background, the individual may leave the Restricted Area.

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ATTACHMENT EAP-2.1 (cont.)

- 4.4 In the event that contamination is more extensive and involves portions of the body other than the hands or if clothing is involved, an RES Technician shall be requested to supervise/perform the decontamination effort.
- 4.5 All personnel decontamination shall be performed in the personnel decontamination area adjacent to the Radiation Protection Office. Sinks and showers in the locker room are not drained to the radioactive waste system and shall not be used for personnel decontamination.
- 4.6 Inspect the individual for wounds such as cuts and abrasions. If wounds are found, refer to section for the decontamination of injured personnel.
- 4.7 Removal of localized contamination should be performed carefully to prevent the spread of contamination. Higher activity areas should be decontaminated first.
- 4.8 Any decontamination agent or method which appears to cause skin reddening or irritation should be discontinued immediately.

NOTE: It should be noted that signs of excessive skin decontamination efforts will be more evident 24 hours later than the time at which decontamination is being performed. Skin irritation should be avoided since it can damage one of the body's natural barriers and result in absorption of radioactive material through the skin. If milder methods of decontamination do not produce dramatic decreases in levels of skin contamination after one or two steps, chemical methods should be considered before the skin becomes irritated by excessive rubbing. Chemical methods should not be used if the skin appears to be irritated. In such cases, it may be necessary to postpone further decontamination efforts to avoid skin damage.

- 4.9 Caution should be exercised during the decontamination process to prevent liquids from entering the ears, eyes, nose and mouth.
- 4.10 The temperature of the water used with decontamination solutions for rinsing should be just slightly warm to prevent opening skin pores.
- 4.11 Personnel performing decontamination should wear protective clothing as appropriate for the degree of contamination involved.
- 4.12 Caution should be exercised any time the skin is rubbed in order to prevent imbedding the contamination in the skin.

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ATTACHMENT EAP-2.1 (cont.)

- 4.13 Contaminated areas should be surveyed frequently during the decontamination process using a frisker.
- 4.14 Decontamination efforts and survey data shall be recorded on a Personnel Decontamination Record Form (Figure RPOP-2.1). The completed form shall be forwarded to an RES Supervisor for review. A copy of the completed form shall be retained in a file in the Radiation Protection Office and the original shall be filed with the individual's dosimetry records.
- 4.15 A Radiological Incident Report shall be initiated in accordance with procedure RPOP-7, Radiological Incident Investigation.
- 4.16 Removal of radioiodine contamination shall be performed in accordance with is procedure.

5.0 PROCEDURE

5.1 Hand Contamination

- 5.1.1 Instruct the individual to wash his hands with a mild soap and warm water, using a soft bristle brush around the fingernails, if necessary.
- 5.1.2 Instruct the individual to gently dry his hands.
- 5.1.3 Survey the hands.
- 5.1.4 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, continue with step 5.1.5.
- 5.1.5 Repeat steps 5.1.1 through 5.1.4 a maximum of two additional cycles.
- 5.1.6 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, proceed to step 5.7.1.

5.2 Hair Contamination (No Skin Contamination)

- 5.2.1 Prepare the individual for hair washing by placing a towel around the shoulders and face and place cotton in the individual's ears to avoid potentially contaminated water from entering the ear canal.
- 5.2.2 Instruct the individual to bend over a sink (or shower) and wet the area to be washed.

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ATTACHMENT EAP-2.1 (cont.)

- 5.2.3 Apply shampoo and work up a heavy lather, massaging for several minutes.
- 5.2.4 Use just enough water to rinse the lather from the hair.
- 5.2.5 Dry the hair with a clean towel.
- 5.2.6 Survey the hair.
- 5.2.7 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, continue with step 5.2.8.
- 5.2.8 Repeat steps 5.2.1 through 5.2.6 a maximum of two additional cycles.
- 5.2.9 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, continue with step 5.2.10.
- 5.2.10 If hair contamination is spotty and minor, trim away the contaminated area(s) with scissors, surveying as necessary.
- 5.2.11 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, evaluate the use and potential effectiveness of other decon methods given in this procedure, as well as more extensive hair removal. If extensive hair removal or shaving is felt to be necessary, an RES Supervisor shall be contacted to evaluate the need for such actions.
- 5.2.12 In the event shaving is required, the use of a liquid hair remover may be substituted. The use of products such as Nair shall be in accordance with manufacturer's instructions.

NOTE: Certain individuals may be particularly sensitive to such a hair remover. Test the hair remover in a small area of uncontaminated skin prior to applying it to the contaminated area(s).

5.3 Eye, Ear, Nose, or Mouth Contamination

- 5.3.1 If nasal contamination is known or suspected, proceed as follows:

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ATTACHMENT EAP-2.1 (cont.)

- a. Gently rub the entire inside area of each nostril with a separate cotton swab.
- b. Have the swabs analyzed with a lab type counting instrument.
- c. If contamination levels in each nostril do not exceed 400 dpm, no further action is required. If contamination levels in either nostril exceed 400 dpm, continue with step 5.3.1.d.
- d. Have the contaminated individual blow his nose and clean his nostrils with tissues several times.
- e. Take more nasal smears in accordance with step 5.3.1.a and have the swabs analyzed with a lab type counting instrument.
- f. If contamination levels in either nostril still exceed 400 dpm, contact RES supervision for further action.
- g. Cases of facial or nasal contamination in excess of 10,000 dpm shall be reported to RES department supervision for further action. A whole body count shall be performed when contamination is indicated in outline area of facial picture on figure RPOP 2.1 (from chin to bridge of nose and cheek to cheek) one to three days following the incident in order to evaluate internal contamination.

5.3.2 Cases of eye, ear or mouth contamination shall be evaluated by medical personnel to determine decontamination methods to be used. Refer to section 5.8 of this procedure.

5.4 Spotty Skin Contamination

- 5.4.1 Slightly moisten an absorbent cotton gauze pad or cotton tip swab with water or a water/soap solution.
- 5.4.2 Gently rub the pad in a circular motion for one or two minutes over a contamination skin area.
- 5.4.3 Rinse the skin area with an absorbent pad slightly moistened with water and gently dry.
- 5.4.4 Survey the skin area and surrounding skin areas that may have become contaminated.
- 5.4.5 If contamination levels do not exceed 100 cpm above background, repeat steps 5.4.1 through 5.4.4 for any other contaminated skin areas, performing a maximum of three decontamination cycles on any one skin area.

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ATTACHMENT EAP-2.1 (cont.)

- 5.4.6 If contamination levels do not exceed 100 cpm above background after all contaminated areas have been cleaned, no further action is required. If contamination levels still exceed 100 cpm above background on any skin areas, evaluate the use and possible effectiveness of other decontamination methods given in this procedure and/or the need for medical assistance.

5.5 General Skin Contamination (Below Shoulders)

- 5.5.1 Adjust the personnel decontamination shower to a warm, moderate flow. If necessary, lay down a plastic covering on the floor for the individual to undress.
- 5.5.2 Instruct the individual to work up a good lather using a mild soap and rub the contaminated areas for several minutes taking care not to get any water or lather above the shoulders, paying particular attention to skin folds and body hair. If a surgical scrub brush is used, caution the individual to rub gently and avoid irritating the skin.
- 5.5.3 Instruct the individual to rinse off all lather and to dry gently and thoroughly.
- 5.5.4 Survey the individual's body with a frisker.
- 5.5.5 If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels exceed 100 cpm above background, repeat steps 5.5.2 through 5.5.4 up to a maximum of two additional cycles.
- 5.5.6 If contamination levels still exceed 100 cpm above background, consider placing the individual in a rain suit and have the individual stand under a warm shower for a period of 5 to 10 minutes to produce sweating. Remove the rain suit and have the individual rinse under the shower, dry and monitor. If contamination levels still exceed 100 cpm above background, evaluate the need for further decontamination efforts and/or medical assistance.

5.6 General Skin Contamination (Whole Body)

- 5.6.1 Perform applicable steps of section 5.2, 5.3 and 5.4 as appropriate.

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ATTACHMENT EAP-2.1 (cont.)

5.7 Persistent Skin Contamination

5.7.1 For persistent skin contamination, chemical decontamination may be attempted as follows:

- a. Prepare a thick paste of water and titanium dioxide.
- b. Spread the paste on the contaminated skin area with a swab, keeping the paste moist for 2 to 3 minutes. Do not allow the paste to dry. (If the paste dries, skin may be removed when the paste is removed.)
- c. Remove the paste with damp swabs or cotton gauze and wash the skin area with soap and water, and then dry.
- d. Survey the area.
- e. If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, continue with step 5.7.1,f.
- f. Prepare a solution of about one ounce of potassium permanganate per ounce of water. (Bottles of the prepared solution are in the decontamination locker.)
- g. Prepare a solution of about one ounce of sodium bisulfite per ounce of water. (Bottles of the prepared solution are in the decontamination locker.)
- h. Swab the potassium permanganate on the contaminated area and allow it to dry to a dark brownish color.
- i. Repeat step 5.7.1,h two additional times.
- j. Swab the sodium bisulfite solution over the area to remove the skin discoloration.
- k. Wash the area with soap and water, then dry.
- l. Survey the area.
- m. If contamination levels do not exceed 100 cpm above background, no further action is required. If contamination levels still exceed 100 cpm above background, evaluate the use of the technique in step 5.7.2 and the need for medical assistance (see section 5.8).

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ATTACHMENT EAP-2.1 (cont.)

5.7.2 Areas of persistent, ground-in contamination, such as elbows and knees, can be covered to cause sweating and to enhance the normal, continuing process of sloughing-off of dead skin as follows.

- a. Cover the contaminated skin area(s) with several layers of gauze.
- b. Cover the gauze with a piece of plastic slightly larger in area than the gauze.
- c. Tape the plastic to the skin around the entire piece of plastic. (If this covering is to be worn home by the individual, supervisory approval shall be obtained before doing so. The potential psychological effects of this situation on the individual and on his family must be considered and the individual must be instructed not to remove the covering at home.)

5.8 Medical Assistance

5.8.1 For cases involving the eyes, nose, mouth or a contaminated injury, medical advice and/or direct assistance may be necessary to assure safe and effective decontamination.

5.8.2 If medical assistance is requested, the Shift Supervisor and an RES Supervisor shall be notified. If off-site medical assistance is desired, the Shift Supervisor shall initiate the request. If the individual may require hospitalization, the Shift Supervisor will make a determination as to whether the Emergency Plan must be activated. For further information, refer to EAP-2, Personnel Injury.

5.8.3 If a nurse is on duty, contact the nurse for assistance and further evaluation.

5.8.4 If a physician is desired, make the following contact for medical assistance:

Dr. David O'Brien Office: 343-4348
Home: 343-2484
343-6889 (summer)

During off-hours, the physician may be contacted through his answering service by calling the office number.

ATTACHMENT EAP-2.1 (cont.)

6.0 REFERENCES

6.1 Management of Persons Accidentally Contaminated with Radionuclides NCRP Report No. 65.

7.0 ATTACHMENTS

7.1 FIGURE RPOP-2.1, Personnel Decontamination Record (2 pp)

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ATTACHMENT EAP-2.1 (cont.)

FIGURE RPOP-2.1

PERSONNEL DECONTAMINATION RECORD	
NAME OF CONTAMINATED INDIVIDUAL:	
(Last)	(First) (Middle)
SSN:	EMPLOYER/PASNY DEPT:
DATE and TIME OF CONTAMINATION OCCURRENCE:	
PLANT LOCATION WHERE CONTAMINATION OCCURRED:	
APPARENT CAUSE OF OCCURRENCE:	
RADIOLOGICAL INCIDENT REPORT INITIATED: <input type="checkbox"/> NO <input type="checkbox"/> YES	
INJURY INVOLVED: <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain):	
MEDICAL ASSISTANCE OBTAINED: <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain):	
FACIAL CONTAMINATION: <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain):	
NASAL SMEARS TAKEN: <input type="checkbox"/> NO <input type="checkbox"/> YES RT NOSTRIL: dpm LEFT NOSTRIL: dpm	
DATE and TIME DECON BEGAN:	
DATE and TIME DECON COMPLETED:	

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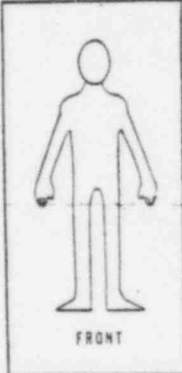
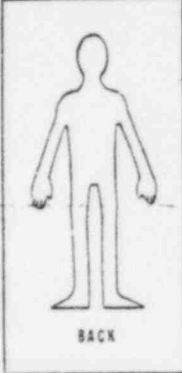


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ATTACHMENT EAP-2.1 (cont.)

FIGURE RPOP-2.1 (continued)

PERSONNEL DECONTAMINATION RECORD (CONT)			
LOCATION OF CONTAMINATION (INDICATE ON APPROPRIATE SKETCH or SKETCHES)			
 FRONT	 BACK	<input type="checkbox"/> LEFT HAND BACK <input type="checkbox"/> RT HAND PALM 	 FACE
DECONTAMINATION DATA			
CONTAMINATED SKIN LOCATION	CONTAMINATION LEVEL BEFORE BEGINNING THIS DECON CYCLE (cm)	DECON TECHNIQUE AND AGENT USED	CONTAMINATION LEVEL AFTER COMPLETING THIS DECON CYCLE (cm)
FURTHER ACTION REQUIRED: <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain): _____ _____ _____		SKIN CONDITION AFTER DECON: _____ BIOASSAY REQ'D: <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> WBC <input type="checkbox"/> OTHER	
REMARKS: _____ _____ _____			
DECON PERFORMED / SUPERVISED BY: _____		DATE: _____	
REVIEWED BY RES SUPERVISOR: _____		DATE: _____	
DIST. ORIGINAL - PERSONNEL DOSIMETER FILE		COPY - RADIATION PROTECTION OFFICE	

Rev. No. 3

Date 09/85

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Rev. No. 5

Date 10/85

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FORM EAP-2.2

CHECKLIST FOR THE OSWEGO FIRE CONTROL AMBULANCE DISPATCHER

The Oswego Fire Control Ambulance Dispatcher will receive the initial notification telephone call from the nuclear station of impending patient(s) arrival. It is their responsibility to call the Emergency Room nurse and to pass on the following information in the order listed below:

Initial Notification Data

Date/Time of Call _____

Person Calling:

Name _____

Address _____

Telephone Number _____

Accident Information:

Location _____

Date & Time _____

of Injured Patients _____

of Contaminated/Injured Patients _____

Description of Injuries _____

Expected time of arrival at hospital _____

Remarks: _____

CONTROLLED 27

NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

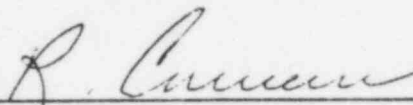
VOLUME 2

PROCEDURE NO.: EAP-4

TITLE: DOSE ASSESSMENT CALCULATIONS*

PORC REVIEW: MEETING NO. 86-003 Date 1-8-86

APPROVED BY:



Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

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Rev. No.: 6

Date: 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-4

DOSE ASSESSMENT CALCULATIONS*

1.0 PURPOSE

This procedure provides instructions for conducting dose assessment calculations using a MS-DOS based microcomputer, Class A Model or dose assessment calculator.

2.0 REFERENCES

- 2.1 EAP-7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS
- 2.2 EAP-18 PROTECTIVE ACTION RECOMMENDATIONS
- 2.3 EAP-42 OBTAINING METEOROLOGICAL DATA
- 2.4 NRC IRDAM Manual, Volumes 1, 2 and 3
- 2.5 Class A Atmospheric Dispersion and Radiological Dose Assessment Model, Vol. I, Specifications and Flowcharts
- 2.6 Class A Atmospheric Dispersion and Radiological Dose Assessment Model, Vol. II, Model Formulation
- 2.7 Operators Manual, Atmospheric Dispersion and Radiological Dose Assessment Model.

3.0 INITIATING EVENTS

- 3.1 An emergency classification has been reached as defined in IAP-2, and
- 3.2 A release of radioactivity exceeding technical specifications is imminent or in progress.

4.0 PROCEDURE

- 4.1 There are three available methods for performing dose assessment calculations at JAF:

- 4.1.1 The Initial Dose Assessment Calculation (IDAC) is a MS-DOS microcomputer program based upon the NRC's IRDAM program. IDAC should only be used as an initial means of dose assessment from the Control Room until the TSC or EOF is manned and MMRAS can be started. IDAC may also be used as an acceptable backup to MMRAS in case of failure of that system.

- 4.1.2 The Meteorological Monitoring and Radiological Assessment System (MMRAS) Class A Model is the primary means of dose assessment in the TSC and EOF. MMRAS may also be used as an acceptable backup to IDAC in case of failure of that system.
- 4.1.3 The dose assessment calculator is a manual means of performing dose assessment. The calculator obtains Xu/Q values from overlays on maps based on equations included in Appendix A of the NMP-Unit 1 FSAR. The calculator should only be used as a backup to MMRAS and IDAC in case of failure of those systems.

4.2 Control Room Dose Assessment Method Description using IDAC

- 4.2.1 The Initial Dose Assessment Calculation program is based upon the NRC's IRDAM program with certain values and assumptions fixed for the FitzPatrick facility. No specific knowledge is required to operate this program.
- 4.2.2 If a General Emergency has been declared before or during use of this procedure, always complete the flowchart listed in EAP-18 first for protective actions based upon plant conditions.
- 4.2.3 Complete form EAP-4.1. Asterisked items on the form must be completed. Meteorological data may be obtained using procedure EAP-42, "Obtaining Meteorological Data". All other data not asterisked has a default value which is listed on the form.
- 4.2.4 Obtain the Data General One Microcomputer from the TSC Emergency Equipment Storage Cabinet (located in the TSC next to the elevator; key is available in TSC key locker or in break-glass box on side of cabinet).
- 4.2.5 Set up the microcomputer by plugging in the power supply to the unit and 120V AC outlet. Open unit and turn on by pressing down on black button located above the keyboard on the left side of the unit. (Insure that 3 1/4" disk is located in the side disk drive.)
- 4.2.6 Unit will self boot and begin running the program. Using the completed EAP-4.1 form, answer the questions using the keyboard and the return (↵) key.

- 4.2.7 Successful running of the program will produce three (3) screens similar in appearance to Form EAP-4.2.
- 4.2.8 Copy data from each individual screen on to Form EAP-4.2 (sequentially).
- 4.2.9 Data obtained is the centerline dose. If the centerline doses warrant the need for protective action recommendations, then consideration shall also be given to use the contour diagrams on the JAFNPP Dose Calculator (Whiz Wheel) to determine extent of release and values associated with it.
- 4.2.10 Complete EAP-18, "Protective Action Recommendations" and Form EAP-1.1.2 "Radiological Assessment Data" found in EAP-1.1. (Maintain copies of all completed forms.)
- 4.2.11 In the event it is not possible to perform Control Room dose assessment using IDAC, refer to Section 4.3 for use of MMRAS to perform dose assessment.

4.3 TSC and/or EOF Dose Assessment Method Description using Class A Model

- 4.3.1 This section describes the use of the Meteorological Monitoring and Radiological Assessment System's (MMRAS) Class A Model to perform dose assessment.
- 4.3.2 The primary system for running the Class A Model is the JAF MV8000 Computer. It is imperative that the user assures the "Black Box" modem switches for the Hi Scan and T200 in the JAF Control Room. TSC and/or EOF are in the JAF or "A" position.

NOTE: The Class A Model may also be run from the Niagara Mohawk VAX computer. In this case, the "Black Box" modem switches would need to be in the NiMo or "B" position.

- 4.3.3 Turn power on to Hi Scan memory chassis and CRT (2 switches on back of units).

- 4.3.4 Press the "Return" key.

Response on CRT: USERNAME:

Type in Username on Terminal and hit "Return".

Response on CRT: PASSWORD:

Type in Password on Terminal and hit "Return".

Response on CRT:

NYPA/JAF MMRAS

0. Exit
1. Generate Meteorological Report
2. Generate Meteorological Plot
3. Class A Model
4. Release Reports
5. Dispersion Reports
6. Liquid Pathway Model

4.3.5 After the user has logged on, he will have to select the Class A Model from a menu - the model is choice "3".

4.3.6 The user is next asked a series of questions for model input:

4.3.6.1 Is model execution to be

1. a New Run

or

2. a Restart

Answer "1" and "Return". The "Restart" will access the last plume display and data files associated with it. It would only be used if the model failed during the emergency and you did indeed have to perform a restart to retain plume history.

Response on CRT:

"Model Initialization ----- Please Wait"

4.3.6.2 Is an emergency in progress (Y/N)?

Answer "Y" and "Return". An "N" answer would allow you to run a version of the model intended for training.

4.3.6.3 Specify class of emergency (choose one):

- 1 = Unusual Event
- 2 = Alert
- 3 = Site Area Emergency
- 4 = General Emergency

Answer "1", "2", "3" or "4" and "Return".

4.3.6.4

Which facility?

1. NMPNS Unit 1
2. PASNY JAF
3. NMPNS Unit 2

Answer "2" and "Return".

4.3.6.5

What class of accident occurred?
(choose closest applicable accident type):

- 1 = Steam line break
- 2 = Loss of coolant
- 3 = Containment design basis accident
- 4 = Refueling
- 5 = Control rod drop
- 6 = User specified isotopic distribution

Answer "1", "2", "3", "4", "5", or "6" and "Return".

If the user selects one of the first five accident classes, isotopic source strength defaults values are listed, and the user is given the opportunity to change the total source strength value. The new source value can be inputted in Ci/sec or as a count rate. After the new rates are inputted, the new total source strength is listed and the process to change it repeats. Once the total source strength has been established, a shift is made to the isotopic distribution. If the operator wishes to change the isotopic distribution, each isotope comes up on the screen and the operator inputs percentages until 100% is reached. This response will send the user back to a place where he will again be able to change the total source strength. If the user selects the sixth class, he will have to input the source term and isotopic distribution.

The user input for changing the source strength value and/or the isotopic distribution must be coordinated with the Plant Chemistry and Environmental Supervisor who is in charge of obtaining samples from the stack sampling and PASS stations. The results of the analysis of these samples will give a breakdown of isotopes present. This information must be made known to the Dose Assessment Coordinator located in the EOF. It is

the responsibility of the Dose Assessment Coordinator and Plant Chemistry and Environmental Supervisor to establish a means of relaying this information between facilities as soon as practical.

4.3.6.6

What type of release?

- 1 = Continuous
- 2 = Puff (batch)

Answer "1" and "Return". A puff release would only be appropriate if venting a known volume of gas for a known time.

4.3.6.7

Identify source of release (choose one or more):

- 1 = Reactor Building
- 2 = Stack
- 3 = Turbine Building
- 4 = Radwaste

Answer "1", "2", "3" and/or "4" and "Return". Stack is an elevated release. Choices 1, 3 and 4 are ground releases. It is possible to have multiple release points.

4.3.6.8

Is the meteorological data to be input automatically? Answer "Y" and "Return". The model will automatically obtain the most recent 15 minute meteorological data from the database for the appropriate release source (i.e., Ground release uses 30 ft. main tower data and elevated release uses 200 ft. main tower data). The user shall access the meteorological database to verify the meteorological data being used by the model is accurate and current. To access the database, the user shall refer to EAP-42 "Obtaining Meteorological Data".

An "N" answer will require the manual input of mete data by the user. To obtain this data, the user will again refer to EAP-42 "Obtaining Meteorological Data".

4.3.6.9

Continuous release from _____
release point/area is:

<u>Isotope</u>	<u>Source Strength (Ci/sec)</u>
Kr-83m	0.000E-01*
Kr-85m	1.367E+00

Press the "Return" key to continue...

Hit "Return".

4.3.6.10

H-3 0.00E-01*

Total Release 2.01E+01 Ci/sec*

Do you wish to change total source strength
value (Y/N)?

Answer "Y" or "N" and "Return".

If "Y" is answered: CRT responds:
Select units:

1. Ci/sec
2. Count rate

Answer "1" or "2" and "Return".

If "1" is selected the release rate in Ci/sec
will have to be input.

If "2" is selected, a count rate from an
effluent monitor along with a K factor and
flow rate will have to be input.

After either input or if "N" was answered,
the response on the CRT is:

*Values may be different based on accident type.

4.3.6.11

Continuous release from _____ release point/area is:

<u>Isotope</u>	<u>Source Strength (Ci/sec)</u>
Kr-83m	0.000E-01*
Kr-85m	1.367E+00*

Press the "Return" key to continue...

Hit "Return".

4.3.6.12

H-3 0.000E-01*

Total release 2.01E+01 Ci/sec*

Do you wish to change total source strength value (Y/N)?

Answer "N" if value is correct and "Return".

4.3.6.13

Do you wish to change isotope distribution (Y/N)?

Enter "Y" and "Return" if new isotopic data is available from the Plant Chemistry and Environmental Supervisor. Enter "N" and "Return" if no isotopic breakdown is available.

If "Y" is entered, the CRT responds:

Enter Isotope % distribution:

Kr-83m =

You will enter percentages totaling up to 100% and the CRT will respond:

Total release (Ci/sec)=

If "N" is entered and/or after changing the isotopic distribution, the response on the CRT is:

*Values may be different based on accident type.

4.3.6.14

Do you wish to see the source terms for NMI
(Y/N)?

Enter "N" and "Return".

A "Y" answer would reveal source term for NMI
under a similar accident type.

4.3.6.15

Is there supplemental mete station info
(Y/N)?

Answer "Y" or "N" and "Return".

If "Y", the following info is needed:

How many stations (zero if none)?

If "1", CRT responds:

Type in station 1 coordinates in polar
notation [radius, angle] (XX.X,XXX.X)

What is the height of station 1 in feet?

What is the 15 min average wind speed in MPH?

What is the 15 min average (from) wind
direction in degrees?

Choose one of these stability classes:

- 1 = Stability A
- 2 = Stability B
- 3 = Stability C
- 4 = Stability D
- 5 = Stability E
- 6 = Stability F
- 7 = Stability G

Station 1 polar coordinates are ... XX.X
XXX.X

Station 1 height in feet is ... XX.X

The wind speed in MPH is ... XX.X

The wind (from) direction is ... XXX.X

The stability class is ... X

4.3.6.16 Do you wish to change the meteorological input (Y/N)?

If data is correct, answer "N" and "Return".
If info is wrong, then answer "Y" and "Return".

If "N" and "Return", CRT responds:

4.3.6.17 Is there ambient air monitor data available (Y/N)?

Answer "Y" or "N" and "Return".

If "Y" is selected, the time, location and readings of field data will have to be input. This will enable the adaptive estimation subroutine to modify the model calculations.

If "N" is selected or after enabling the adaptive estimation subroutine:

4.3.6.18 Is the cooling tower in operation (Y/N)?

Answer "Y" or "N" and "Return". When NMP2 becomes operational, a "Y" answer will compensate for the possibility of the plume being entrained and released out the cooling tower.

4.3.6.19 At this point, all the necessary input for running the model has been completed and this message appears:

"Waiting for display data"

This indicates the model is still performing calculations and displays are not available. When the displays do become available, the 2-mile actual radiological plume display for the facility selected appears on the screen. If the operator wants to look at other displays, he types NEW, this activates the menu.

NOTE: To print displays on the Gulton Color Graphic Printer, turn power "on" (on left side), and press "Copy" button after the "Ready" light is on.

Displays available are:

- BA/Barchart - This develops a barchart of the isotopic distribution ($\mu\text{Ci/sec}$).
- CO/Contour - This contains three graphs of the whole body gamma dose contours (mRem) for the 10 mile radius.
- PL/Plume - This contains nine radiological plume displays.
- OF/Offsite - This display develops the operators choice of 24 Dose Offsite Receptors Tables.
- ON/Onsite - This display develops the operators choice of 24 Dose Onsite Receptors Tables.
- WI/Wind Field - This display graphs the ground level wind field on the 5 mile radius display.
- FA/Facility - Enables the site to be changed from FitzPatrick to Nine Mile.
- CM/On Command - Nine selections which include obtaining mete data, adding receptors, enabling actual data, enabling simulated data, terminate model, consider combined facilities, cancel combined facilities and displaying mete tower readings.
- TI/Arrival Time - Four tables providing information on the plume arrival time at various receptors and the associated relative concentrations.

4.3.6.20

At 15 minute intervals, the model allows the operator to update the source term and also updates the mete data.

This message appears:

"Type BBB to input new 15-minute data."

The operator has 60 seconds to type BBB and update the data.

If he chooses to update, the model will prompt for new source data. If the meteorological data are not automatically inputted and thereby updated, the model will also prompt for new meteorological information.

If the operator does not wish to update the input data and ignores the message, the computer will utilize the previous manually entered data base with source terms corrected for decay during the previous 15 minutes.

If BBB has been typed, this message appears:

"Decay the isotope source strength at the source (Y/N)"

If the operator responds with a "Y", the new source strengths are displayed. If the operator responds with an "N", the old source strengths are displayed. For a YES answer the decayed source strength by isotope is displayed - changes can be made as they were described in Section 4.3.6.10.

For manually inputted data, this message appears:

"Do you wish to change the 15 minute meteorological data (Y/N)?"

If the response is Y, the operator follows the same procedure as in Section 4.3.6.8. If the response is N, the previous data is used.

4.3.6.21

It will be necessary to use the results of the Class A Model calculations to project whole body and thyroid dose in locations throughout the 10 mile EPZ. The displays depicting actual and projected doses for all receptors shall be hardcopied and given to the individual who will perform EAP-18 "Projective Action Recommendations" and complete Form EAP-1.1.2 "Radiological Assessment Data" found in EAP-1.1.

4.4 CR, TSC, and/or EOF Dose Assessment Method Descriptive
using the Manual Calculator (Whiz Wheel)

4.4.1 This section of the procedure shall only be performed if it is impossible to perform section 4.2 (IDAC) and/or section 4.3 (Class A Model).

4.4.2 The dose assessment calculator is a manual means of performing dose assessment. The calculator obtains \bar{X}/Q values from overlays on maps based on equations included in Appendix A of the NMP-Unit 1 FSAR. The calculator should only be used as a backup to MMRAS and IDAC in case they fail.

4.4.3 Method Description

Projected whole body and thyroid doses are initially estimated based on control room indications of release rate, meteorology and release duration. Dose rates off-site will be estimated from cloud concentrations at ground level. Cloud concentration is determined by application of the appropriate Atmospheric Dilution Factor (\bar{X}/Q), to the release rate (Q). \bar{X}/Q values are obtained from overlays on the maps located on the Dose Estimate Calculator cabinet which are based on equations included in Appendix A of the NMP-Unit 1 FSAR. The release rate Q is determined from effluent monitors or by back calculations from dose rate measurements downwind.

4.4.3.1 Elevated Release Rates

A stack (off-gas vent pipe) release is the only release which qualifies as an elevated release. For a stack release, the stack radiation monitor reading in counts/sec is converted to Q , curies per second, by means of the posted stack monitor constant. This constant is posted adjacent to the vent pipe radiation monitors in the control room and at the Dose Estimate Calculator. The RES Department may also estimate offscale monitor release rates.

4.4.3.2 Ground Release Rates

The Building roof top vent releases are considered ground releases. Building vent monitor readings obtained from the plant

process computer or the monitors are converted to Q, curies per second, by means of constants posted at the Offsite Dose Estimate Calculator. The RES Department may also estimate off-scale monitor release rates.

4.4.3.3

Back Calculation of Release Rates

Calculation of noble gas release rate is possible by measuring the gamma dose rate at the plume centerline and back calculating the release rate. The iodine release rate may be estimated by obtaining an air sample in the plume centerline and back calculating the release rate. This method may be used in the absence of effluent monitor readings when downwind survey data are available.

Radiological Support Coordinator, Plant Operator or designees:

Perform steps 4.4.4 or 4.4.5 to determine release rate and step 4.4.6 to determine projected doses: (Record data on Calculator Projected Dose Worksheet Form EAP-4.3.)

4.4.4 Obtaining Release Rate via Effluent Monitors

4.4.4.1 Record the release point.

4.4.4.2 Record the affected monitor reading in counts/sec, for the stack, counts/min for the vents or Ci/sec, from RES Department supplied data and its conversion constant as logged at the Dose Estimate Calculator cabinet.

Process Computer Points and Typical Conversion Constants are as follows:

NOTE: These constants are only typical conversion constants and may vary based on emergency condition.

Turbine Bldg.	M005	1.0E-1	μCi/sec/cpm
	M006		
Reactor Bldg.	F207	1.0E-1	μCi/sec/cpm
	F208		
Refuel Floor	M007	2.5E-2	μCi/sec/cpm
	M008		
Radwaste Bldg.	M011	4.5E-1	μCi/sec/cpm
	M012		
Stack	B070	2.5	μCi/sec/cps
	B0071		

NOTE: If computer points are unavailable, control room monitors can be used for this data.

4.4.4.3 Multiply the count rate by the conversion constant and record the release rate in $\mu\text{Ci/sec}$.

4.4.4.4 Multiply $\mu\text{Ci/sec}$ by 1×10^{-6} to get Ci/sec and record the release rate in Ci/sec .

4.4.4.5 If the normal ventilation or stack effluent monitors are inoperative or off-scale, the appropriate high range noble gas effluent monitor (HREM) must be used. In order to evaluate Q it is necessary to convert the monitor readings which are expressed in mR/hr to Ci/sec . A conversion factor of 0.45 ($\mu\text{Ci/cc}/(\text{mR/hr})$) was applied to the normal flow rate. This value is given by General Electric and is based on the monitor response to Xe-133. Multiply the stack, turbine and/or radwaste Hi Range noble gas monitor reading in mR/hr by the following factors to obtain the release rate in Ci/sec :

HREM	K ($\text{Ci/sec}/\text{mR/hr}$)
1. STACK	
a) One SGT train operating	1.40
b) One SGT train and one stack dilution fan operating	2.54
2. TURBINE BUILDING	2.27
3. RADWASTE BUILDING	0.691

4.4.4.6 Obtain the estimated duration of release from the Emergency Director and record. If it is unknown, use 6 hours as a first estimate.

4.4.4.7 Perform Step 4.4.6.

4.4.5 Release Rate from Downwind Survey Dose Rate Data (Back Calculation)

4.4.5.1 Record the survey location and whole body gamma dose rate information transmitted from the survey team in accordance with EAP-7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS.

- 4.4.5.2 Determine and record the approximate distance of the downwind survey location from the plant. (Each numbered point on the calculator pointer is 1/4 mile).
- 4.4.5.3 Obtain the wind direction over the last 15 minute period in accordance with EAP-42.
- 4.4.5.4 Obtain the nearest turbulence class based on the stability determined in performance of EAP-42.
- 4.4.5.5 Record the average direction (degrees) from which the wind is blowing in accordance with EAP-42.
- 4.4.5.6 Record the average windspeed over the last 15 minutes obtained in accordance with EAP-42.
- 4.4.5.7 Record the type of release (ground/elevated). If both types occur, determine a Q (release rate) for each type and use the higher value and associated overlay for all projected dose calculations.
- 4.4.5.8 Adjust the four mile radius map to the affected plant.
- 4.4.5.9 Align the wind direction arrow (needle) on both the four mile and twenty mile radius map with the wind direction (degrees) marked on the map circumference of each map.
- 4.4.5.10 Select the proper overlay as follows:
- A. Type of release (ground or elevated)
 - 1. For elevated, use blue overlay
 - 2. For ground, use green overlay
 - B. Turbulence class
 - 1. For Class II, III or IV stabilities, use the appropriate overlay
 - 2. For Class I stability, use Class II overlay
- 4.4.5.11 Rotate appropriate overlay to line up with the centerline downwind direction on both maps.

- 4.4.5.12 Determine the X_u/Q value for the survey location data have been reported for using the following guidelines:
- A. If the location is along the centerline of the plume, use the appropriate table of Centerline X_u/Q Values JAF Plant.
 - B. If the location borders two isopleths, choose the higher X_u/Q value.
 - C. If the location borders an isopleth and the centerline, use judgement and pick either the isopleth value or the nearest centerline value.
- 4.4.5.13 Record the X_u/Q value from the overlay for the survey location data have been reported for.
- 4.4.5.14 Set the inner wheel index (labeled #1) of the Dose Estimate Circular Calculator to the X_u/Q value on the blue ring. (Step 1 on calculator). Use care in reading correct powers of 10.
- 4.4.5.15 Align the correct windspeed line on the fan with survey gamma dose rate previously recorded.
- 4.4.5.16 Read the Q, curies per second, where the fan index points.
- 4.4.5.17 Record the Q value (release rate).
- 4.4.5.18 Obtain the estimated duration of release from the Emergency Director and record. If it is unknown, use 4 hours as a first estimate.
- 4.4.5.19 Perform step 4.4.6.10 through step 4.4.6.18.

4.4.6 Projected Dose Determination

- 4.4.6.1 Obtain the wind direction over the last 15 minute period in accordance with EAP-42.
- 4.4.6.2 Obtain the nearest turbulence class based on the stability determined in performance of EAP-42.
- 4.4.6.3 Record the average direction (degrees) from which the wind is blowing in accordance with EAP-42.

- 4.4.6.4 Record the average windspeed over the last 15 minutes obtained in accordance with EAP-42.
- 4.4.6.5 Record the type of release (ground/elevated). If both types occur, use separate worksheets for each and add the resultant dose rates/-doses estimated together for a total projected dose estimate.
- 4.4.6.6 Adjust the four mile radius map to the affected plant.
- 4.4.6.7 Align the wind direction arrow (needle) on both the four mile and twenty mile radius map with the wind direction (degrees) marked on the map circumference of each map.
- 4.4.6.8 Select the proper overlay as follows:
- A. Type of release (ground or elevated)
 - 1. For elevated, use blue overlay
 - 2. For ground, use green overlay
 - B. Turbulence class
 - 1. For Class II, III or IV stabilities, use the appropriate overlay
 - 2. For Class I stability, use Class II overlay
- 4.4.6.9 Rotate appropriate overlay to line up with the centerline downwind direction on both maps.
- 4.4.6.10 Record a brief description of the locations for downwind calculations selected on the basis of:
- A. Intersection of plume centerline with site boundary.
 - B. Intersection of plume centerline with 2, 5 and 10 mile radii.
 - C. Locations of interest from a population exposure standpoint.

NOTE: The Radiological Support Coordinator in the Technical Support Center must be notified of the recommended downwind survey locations in order to dispatch survey teams.

4.4.6.11 Determine the X_u/Q value for each location using the following guidelines:

- A. If the location is along the centerline of the plume, use the appropriate table of Centerline X_u/Q Values JAF Plant.
- B. If the location borders two isopleths, choose the higher X_u/Q value.
- C. If the location borders an isopleth and the centerline, use judgement and pick either the isopleth value or the nearest centerline value.

4.4.6.12 Record the X_u/Q value for each location determined.

4.4.6.13 Set the inner wheel index (labeled #1) of the Dose Estimate Circular Calculator to the X_u/Q value on the blue ring. (Step 1 on calculator). Use care in reading correct powers of 10.

4.4.6.14 Set fan index to Q (release rate) value determined from Step 4.4.4.4 or Step 4.4.5.17. (Step 2 on calculator). For Q values greater than 100, use the 1 to 10 range, times the appropriate factor of 10.

4.4.6.15 Read and record the gamma dose rate, beta dose rate and two-hour adult thyroid dose (two-hour adult = one-hour child thyroid dose) for the proper windspeed on the fan, multiply times the appropriate factor of 10, if necessary.

NOTE: If the I-131 Q (release rate) is determined from downwind survey data, thyroid dose rate may be read from dose calculator. Do not attempt to read thyroid dose rate from calculator if the noble gas Q (release rate) is used with the calculator.

- 4.4.6.16 Multiply the gamma dose rate by 10^{-3} , to convert to rem, and by the estimated release duration. Record the result in the appropriate whole body projected dose box.
- 4.4.6.17 Multiply the two-hour adult thyroid dose, if applicable, by the estimated release duration and divide by 2 to obtain child thyroid projected dose. Record the result in the appropriate thyroid projected dose box.
- 4.4.6.18 Repeat Steps 4.4.6.10 through 4.4.6.18 above for each location selected.
- 4.4.6.19 Record date, time and signature on Calculator Projected Dose Worksheet Form EAP-4.1. Provide the results of the whole body and thyroid projected dose calculations to the individual who will perform EAP-18 PROTECTIVE ACTION RECOMMENDATIONS.

5.0 FIGURES, FORMS AND ATTACHMENTS

- 5.1 Form EAP-4.1, IDAC Input Data
- 5.2 Form EAP-4.2, IDAC Results
- 5.3 Form EAP-4.3, Calculator Projected Dose Worksheet

Form EAP-4.1

IDAC INPUT DATA

*Name _____ Time _____ Date _____

Release Level (Circle One) Ground Elevated
(default is Ground Level)

Wind Speed _____ MPH (either Elevated or Ground)

Wind Direction from _____°

*Wind Direction $\pm 180^\circ$ = to Direction _____°

*Pasquill Stability Class _____

Gross Release Rate _____ (CI/SEC)

*Accident Classification (circle one)

1. Steam Line Break
2. Loss of Coolant
3. Containment Design Basis
4. Refueling Accident
5. Control Rod Drop
6. Normal Release Rate

Percentage of Iodine in Release _____ (default 1.96%)

Percentage of Noble Gas in Release _____ (default 98.04%)

Iodine to Noble Gas Ratio _____ (default 2.00E-02)

Percentage of Iodine removed by Filtration _____ (default 95%)

Time interval from Reactor Shutdown to Initiation of the Release

_____ (hr) (default 0 hrs.)

Time Estimate for total duration of release _____ hr (default 8 hrs.)
(Use 6 hours if estimate is unknown.)

Form EAP-4.2
IDAC RESULTS

Screen 1

PLUME INFORMATION

DISTANCE (METERS) (MILES)		PLUME TRAVEL TIME (HOURS: MINUTES)	CHI/Q VALUE
500.0	0.3	_____	_____
960.0	0.6	_____	_____
2016.0	1.2	_____	_____
3225.0	2.0	_____	_____
8064.0	5.0	_____	_____
16129.0	10.0	_____	_____

Screen 2

*****SUMMARY*****

DISTANCE (METERS) (MILES)		CALCULATED DOSE RATES WHOLE BODY (REM/HR)	INFANT THYROID (REM/HR)
500.0	0.3	_____	_____
960.0	0.6	_____	_____
2016.0	1.2	_____	_____
3225.0	2.0	_____	_____
8064.0	5.0	_____	_____
16129.0	10.0	_____	_____

Screen 3

DISTANCE (METERS) (MILES)		CALCULATED DOSE RATES WHOLE BODY (REM)	INFANT THYROID (REM)
500.0	0.3	_____	_____
960.0	0.6	_____	_____
2016.0	1.2	_____	_____
3225.0	2.0	_____	_____
8064.0	5.0	_____	_____
16129.0	10.0	_____	_____

CALCULATOR PROJECTED DOSE WORKSHEET

DATE _____ TIME _____

RELEASE RATE CALCULATION:

EFFLUENT MONITOR

RELEASE POINT _____

COUNT RATE (UNITS) _____

CONVERSION CONSTANT _____

Q (μ Ci/sec) _____

Q (Ci/sec) _____

DURATION OF RELEASE (hrs) _____

BACK CALCULATION

LOCATION _____

DISTANCE (mi) _____

X/Q (1/ft) _____

DOSE RATE (mr/hr) _____

Q (Ci/sec) _____

METEOROLOGICAL PARAMETERS:

TURBULENCE CLASS

I (PASQUILL A) _____

II (PASQUILL B, C) _____

III (PASQUILL D) _____

IV (PASQUILL E, F, G) _____

DIRECTION FROM (deg) _____

WINDSPEED (mph) _____

TYPE OF RELEASE _____

GROUND/ELEVATED

LOCATION/SECTOR	$X_{pl}/Q(L/M^2)$	DOSE RATE (MREM/HR)	2 HR ADULT THYROID DOSE (REM)	RELEASE DURATION	PROJECTED DOSE (REM)
					WB
					THY
					WB
					THY
					WB
					THY
					WB
					THY

CONTROLLED 27

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 2

PROCEDURE NO.: EAP-5.1

TITLE: ENVIRONMENTAL MONITORING*

PORC REVIEW: Meeting No. 86-003 Date 1-8-86

APPROVED BY:

R. Brown
Resident Manager

APPROVED BY:

Alan M. Khan for SOR
Radiological and Environmental
Services Superintendent

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REV. NO.	4	1	1	1	1							

Rev. No. 6

Date: 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-5.1

ENVIRONMENTAL MONITORING*

1.0 PURPOSE

This procedure provides instructions to the Radiological Support Coordinator (RSC) and the survey teams for collecting various environmental media including air, water, soil, snow, and vegetation samples and TLD's.

2.0 REFERENCES

- 2.1 EAP-17 EMERGENCY ORGANIZATION STAFFING
- 2.2 EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL
- 2.3 EAP-24 EOF VEHICLE AND PERSONNEL DECONTAMINATION
- 2.4 ESP-4 ENVIRONMENTAL STATION INSPECTION AND SAMPLE COLLECTION

3.0 INITIATING EVENTS

- 3.1 A radioactive release to the environment has occurred or is occurring which has resulted in a declared emergency or,
- 3.2 The Radiological Support Coordinator, or designee requests environmental sample collection.

4.0 PROCEDURE

4.1 Initial Actions

The RSC or designee shall:

- 4.1.1 Authorize a request for environmental sample collection.
- 4.1.2 Designate a radio dispatcher.
- 4.1.3 Assign a team leader and team number to each survey team.
- 4.1.4 Assign radio communications frequencies to each team, as applicable.

4.1.5 Brief each team providing them with the following information:

- A. Current plant conditions, the types of samples to be collected, and sample locations. Provide replacement emergency TLD's if desired at this time.
- B. Projected dose rates and maximum allowable dose for team members during the mission.
- C. Communications requirements; such as radio channels, telephone numbers in effect, etc., emergency kit locations.
- D. Protective measures needed, if applicable.
- E. Special and/or hazardous conditions.

4.2 Survey Team Preparations

Survey team members shall:

- 4.2.1 Assemble at the Operational Support Center in accordance with EAP-17 EMERGENCY ORGANIZATION STAFFING, and
- 4.2.2 Record briefing information supplied by the RSC or designee on the Environmental Sample Information Form EAP-5.1.1.

Survey team leader(s) shall:

- 4.2.3 Map out survey locations and routes to be taken on the Onsite Nine Mile Point Environmental Map 4 Figure EAP-5.1.2, and/or the Offsite Nine Mile Point Environmental Map 6 Figure EAP-5.1.3. Descriptions of the sample locations are presented in the List of Environmental Monitoring Stations Form EAP-5.1.4, the List of Environmental TLD's Form EAP-5.1.5, and the List of Emergency TLD's Form EAP-5.1.6.

4.3 Survey Team Equipment

Survey team members shall:

- 4.3.1 Obtain emergency kit(s) at the locations indicated by the RSC or designee.

- 4.3.2 Gather necessary protective gear (dosimeters, respirators, etc.) as instructed during briefing.
- 4.3.3 Perform source checks and battery checks on equipment, as required.
- 4.3.4 Zero personal pocket dosimeters. Record "Initial Dosimeter Reading" where appropriate on the Environmental Sample Information Form EAP-5.1.1.

4.4 Transportation

Survey team members shall:

- 4.4.1 Check spare tire and gas level, as appropriate, prior to departure and act accordingly once dispatched if gas is needed.
- 4.4.2 Don protective clothing and respirator if so instructed during briefing.
- 4.4.3 Load equipment on vehicle. Place survey meter in vehicle such that its probe hangs outside car supported by using tape from the kit if this is possible. Ensure that it is turned on.

NOTE: Do not hang the probe outside the window if it means supporting it by its attached cable.

- 4.4.4 Conduct a radio check with radio dispatcher, inform that team (#___) is commencing environmental survey. Request final instructions, if any. Record mission start time on the Environmental Sample Information Form EAP-5.1.1.

- 4.4.5 Use the maps provided in this procedure and in the emergency kit and proceed to survey/sample locations.

NOTE: Drive slowly on dirt roads to avoid stirring up excessive dirt and dust.

4.5 Communications

Survey team members shall:

- 4.5.1 Maintain periodic radio contact with the dispatch center, reporting such information as team location and progress, current dosimeter readings, survey

meter readings enroute, arrival and departure times from each sample location.

- A. Use the Environmental Sample Communication Form EAP-5.1.7 to record any messages, new instructions, etc. from the dispatcher.
- B. If the radio becomes inoperative, use public telephones to communicate with the dispatch center.

The radio dispatcher shall:

- 4.5.2 Maintain radio or telephone contact with survey teams and record survey data on the Environmental Sample Communication Form EAP-5.1.7.
- 4.5.3 Transmit to the survey teams any changes in location assignments, sample types required, etc.
- 4.5.4 Based on personnel and equipment monitoring results:
 - A. Direct teams to proceed to decontamination, or,
 - B. Direct teams to deliver air samples, TLD's and data to the dispatch center for analysis.

4.6 Air Sample Collection

Survey team members shall:

- 4.6.1 Don plastic gloves. Unlock the Air Sample Monitoring Station cabinet using the P-5 key found in the emergency survey kit. Open the door using the "T" shape key located in the locking device on the right-hand cabinet door.
- 4.6.2 Connect a flow meter to the pump intake (located on the right hand side of the cabinet) with the tubing on the flow meter. (If a flow meter is not available, use the initial flow rate recorded on the envelope as the final flow rate as well.)
- 4.6.3 Record the date, time, flow rate and flow meter used in the SAMPLE OFF space on the envelope located in the cabinet.
- 4.6.4 Hold the flow meter vertically and read the flow rate.
- 4.6.5 Record the current radiation monitor reading on the envelope.

- 4.6.6 Turn the pump switch to the OFF position.
- 4.6.7 Unscrew the filter holder and remove the used particulate filter and radioiodine cartridge filters.
- 4.6.8 Indicate the direction of flow of the cartridge with an arrow and label with the sample station, and date. Place the used cartridge in the cellophane in which the new cartridge was packaged.
- 4.6.9 Remove the plastic gloves and place in a plastic bag for use at the next sample location, if appropriate.
- 4.6.10 Label a new air sample envelope with the sample station, date and time on, and date and time off.
- 4.6.11 Reset the pump run time indicator or record time indicator reading as applicable. Inspect the flow path to the filter for obstructions.
- 4.6.12 Label the discharge side of a new particulate filter with the station designation and insert the new particulate filter and the new radioiodine cartridge. Fasten the sample holder back together.
- 4.6.13 Check that the new particulate filter is placed on the inlet side of the radioiodine cartridge. Repeat 4.6.12 if the filter is placed incorrectly.
- 4.6.14 Turn the pump switch to the ON position.
- 4.6.15 Record the sample flow rate, date, time, and flow meter used in the SAMPLE ON space on the new air sample envelope.
- 4.6.16 Place the new air sample envelope in the cabinet.
- 4.6.17 Disconnect the flow meter (if a flow meter was used).
- 4.6.18 Rotate the trip check control so that the pen moves completely down-scale and then full-scale. Observe Hi and Lo trip check indicator lights. Depress reset button. If required, based on briefing information, remove strip chart.
- 4.6.19 Insert a new chart if the old one was removed and rotate trip check control. Depress reset button. Enter date, time and initial on chart paper.
- 4.6.20 Collect the emergency TLD and install a new emergency TLD utilizing procedure steps 4.7.1 through 4.7.3, if provided during briefing.

- 4.6.21 Close and lock the cabinet.
- 4.6.22 Load TLD and/or air samples in the vehicle.
- 4.6.23 Report your team number, sample location, and the information on the used air sample envelope to the radio dispatcher.
- 4.6.24 Continue to the next designated location and begin this procedure at step 4.6, 4.7, or 4.8 as applicable. If environmental sample collection has been completed, continue this procedure with step 4.9.

4.7 Emergency TLD Collection/Installation

Survey team members shall:

- 4.7.1 Prior to collecting any emergency and/or environmental TLDs, check with the Rad Support Coordinator to assure requirements of EAP-27 ESTIMATION OF POPULATION DOSE WITHIN THE 10 MILE EPZ have been fulfilled.
- 4.7.2 Collect emergency TLD from survey/sample location or emergency TLD monitoring station. Record TLD number and location on Environmental Sample TLD Form EAP-5.1.8.
- 4.7.3 Install a new TLD. Record TLD number and location on Emergency/Environmental Sample TLD Form EAP-5.1.8.
- 4.7.4 Complete steps 4.6.21 through 4.6.24 if you are at an air sampling location.
- 4.7.5 Load TLD in the vehicle.
- 4.7.6 Report your team number and sample location to the radio dispatcher at each location.
- 4.7.7 Continue to the next designated location and begin this procedure at step 4.6, 4.7, or 4.8, as applicable. If environmental sample collection has been completed, accomplish step 4.9.

NOTE: Environmental TLD's are to be collected only if replacements are available at the time of collection, unless otherwise instructed by the Radiological Support Coordinator or designee.

- 4.7.8 Collect environmental TLD's in accordance with steps 4.7.1 through 4.7.7. (Additional information concerning the collection of environmental TLD's is found in ESP-4 ENVIRONMENTAL STATION INSPECTION AND SAMPLE COLLECTION.)

- 4.8 Other Environmental Media Sample Collection (Refer to Radiological Environmental Sampling Program Form EAP-5.1.9 for guidance while collecting samples)

Survey team members shall:

- 4.8.1 If water is to be sampled,

- A. Collect water sample using clean, unused polyethylene containers. (Each sample must total 2 liters in volume, whether in one or more containers.)
- B. Record applicable information on the Environmental Media Sampling Form EAP-5.1.10.
- C. Seal containers for transit with tape.
- D. Label containers with the assigned sample number as recorded in step B. above.
- E. Load sample containers in vehicle for transfer to laboratory for analysis.

- 4.8.2 If milk is to be sampled,

- A. Request local farmers to remove raw milk samples from collecting tanks or milk trucks containing milk from at least two milkings and place sample in clean, unused polyethylene containers in presence of sample team. (Each sample must total 2 liters in volume, whether in one or more containers.)
- B. Record applicable information on the Environmental Media Sampling Form EAP-5.1.10.
- C. Seal containers for transit with tape.
- D. Label containers with the assigned sample number as recorded in step B. above.
- E. Load sample containers in vehicle for transfer to laboratory for analysis.

4.8.3 If soil is to be sampled,

- A. Use a spade to dig 3 to 4 inches of soil from an area of about one square foot and place the soil in a bucket.
- B. Mix the soil in the bucket to distribute the topsoil evenly with the subsoil.
- C. Remove enough of the soil from the bucket to make at least a 2 1/2 pound sample (approximately 1 kg.), place in an appropriate size polyethylene bag and close bag securely.
- D. Record applicable information on the Environmental Media Sampling Form EAP-5.1.10.
- E. Label bag with the assigned sample number as recorded in step D. above.
- F. Load sample bags in vehicle for transfer to laboratory for analysis.

4.8.4 If vegetation is to be sampled,

- A. Take samples of leafy vegetation in quantities of about 2 1/2 pounds (approximately 1 kg.) using shears if necessary.
- B. Place samples in an appropriate size polyethylene bag and close bag securely.
- C. Record applicable information on the Environmental Media Sampling Form EAP-5.1.10.
- D. Label bag with the assigned sample number as recorded in step C. above.
- E. Load sample bags in vehicle for transfer to laboratory for analysis.

4.8.5 If snow is to be sampled,

- A. Use a scoop to dig 3 to 4 inches of snow from area sufficient to supply a total of 20 liters of snow.
- B. Place sample in clean, unused polyethylene containers.
- C. Record applicable information on the Environmental Media Sampling Form EAP-5.1.10.

- D. Seal containers for transit with tape.
- E. Label containers with the assigned sample number as recorded in step C. above.
- F. Load sample containers in vehicle for transfer to laboratory for analysis.

4.9 Environmental Sampling and Closeout

Survey team members shall:

- 4.9.1 Report to radio dispatcher that environmental sampling has been completed and that you are returning to the dispatch center.
- 4.9.2 Drive back to the dispatch center but do not enter the building.
- 4.9.3 Remove protective clothing, if applicable, folding them inside out to prevent contamination and put them into a plastic bag.
- 4.9.4 Check survey vehicle inside and outside for possible contamination with the a count rate survey meter, window-opened, before leaving the vehicle in the parking lot. Radio the dispatcher for further instructions, if contamination is detected (≈ 100 cpm above background).
- 4.9.5 Check equipment for contamination in the parking lot. Radio the dispatcher for further instructions if contamination is detected (≈ 100 cpm above background), and refer to EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL.
- 4.9.6 Monitor each other for contamination (≈ 100 cpm above background on a count rate survey meter). If contamination is detected, radio the dispatcher to request further directions and aid in performing decontamination measures. See EAP-24 EOF VEHICLE AND PERSONNEL DECONTAMINATION. Request an individual to pick up environmental samples, TLD's and data forms so that laboratory analyses can be made. Return to the dispatch center after decontamination with your dosimeters and Environmental Sample Information Form EAP-5.1.1. Record your final dosimetry readings.

- 4.9.7 If contamination is not detected, return to the dispatch center with environmental samples, TLD's and data forms so that laboratory analyses can be made. Record your final dosimetry reading on Environmental Sample Information Form EAP-5.1.1.

5.0 FORMS, FIGURES AND ATTACHMENTS

- 5.1 Form EAP-5.1.1, Environmental Sample Information (2 pages)
- 5.2 Figure EAP-5.1.2, Onsite Nine Mile Point Environmental Map 4
- 5.3 Figure EAP-5.1.3, Offsite Environmental Station Location Map 7
- 5.4 Form EAP-5.1.4, List of Environmental Monitoring Stations (2 pages)
- 5.5 Form EAP-5.1.5, List of Environmental TLD's (4 pages)
- 5.6 Form EAP-5.1.6, List of Emergency TLD's (2 pages)
- 5.7 Form EAP-5.1.7, Environmental Sample Communication
- 5.8 Form EAP-5.1.8, Environmental Sample TLD Form
- 5.9 Form EAP-5.1.9, Radiological Environmental Sampling Program
- 5.10 Form EAP-5.1.10, Environmental Media Sampling Form

ENVIRONMENTAL SAMPLE INFORMATION

1. Date: _____ Time: _____ Survey authorized by: _____
2. Team Dispatcher _____, Dispatch Center at: _____
Tel. Number _____
3. Team Number _____
4. Team Leader _____, Initial dosimeter reading: _____
Final dosimeter reading: _____
TLD Number: _____
5. Team Member _____, Initial dosimeter reading: _____
Final dosimeter reading: _____
TLD Number: _____
6. Survey Team briefed by: _____ at: _____
7. Maximum whole body dose allowed for this survey:
Team Leader: _____ rem; authorized by: _____
Team Member: _____ rem; authorized by: _____
8. Projected Duration of Survey: _____ (hours)
9. Assigned radio channel: _____,
10. Protective measures required:
 - (1) _____ pocket dosimeter (high range) _____ specify range
 - (2) _____ pocket dosimeter (low range) _____ specify range
 - (3) _____ pocket dosimeter (other) _____
 - (4) _____ Scott Air Pak II
 - (5) _____ Coveralls
 - (6) _____ Gloves
 - (7) _____ Shoe covers
 - (8) _____ Other (specify)

FORM EAP-5.1.1

ENVIRONMENTAL SAMPLE INFORMATION (continued)

11. Special or hazardous conditions:

12. Special instructions:

13. Assigned survey locations:

14. Mission start time: _____



CITY OF OSWEGO

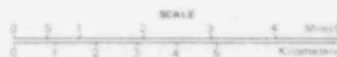




Offsite Survey Locations

LEGEND	
Interstate Highways	
U.S. & State Highways	
County Roads	
Town Roads	
County Boundaries	
Township Boundaries	
City & Village Boundaries	
Railroads	
Emergency Response Planning Area (ERPA) & Number	
ERPA - Water Area Nos.	
Offsite Survey Locations	

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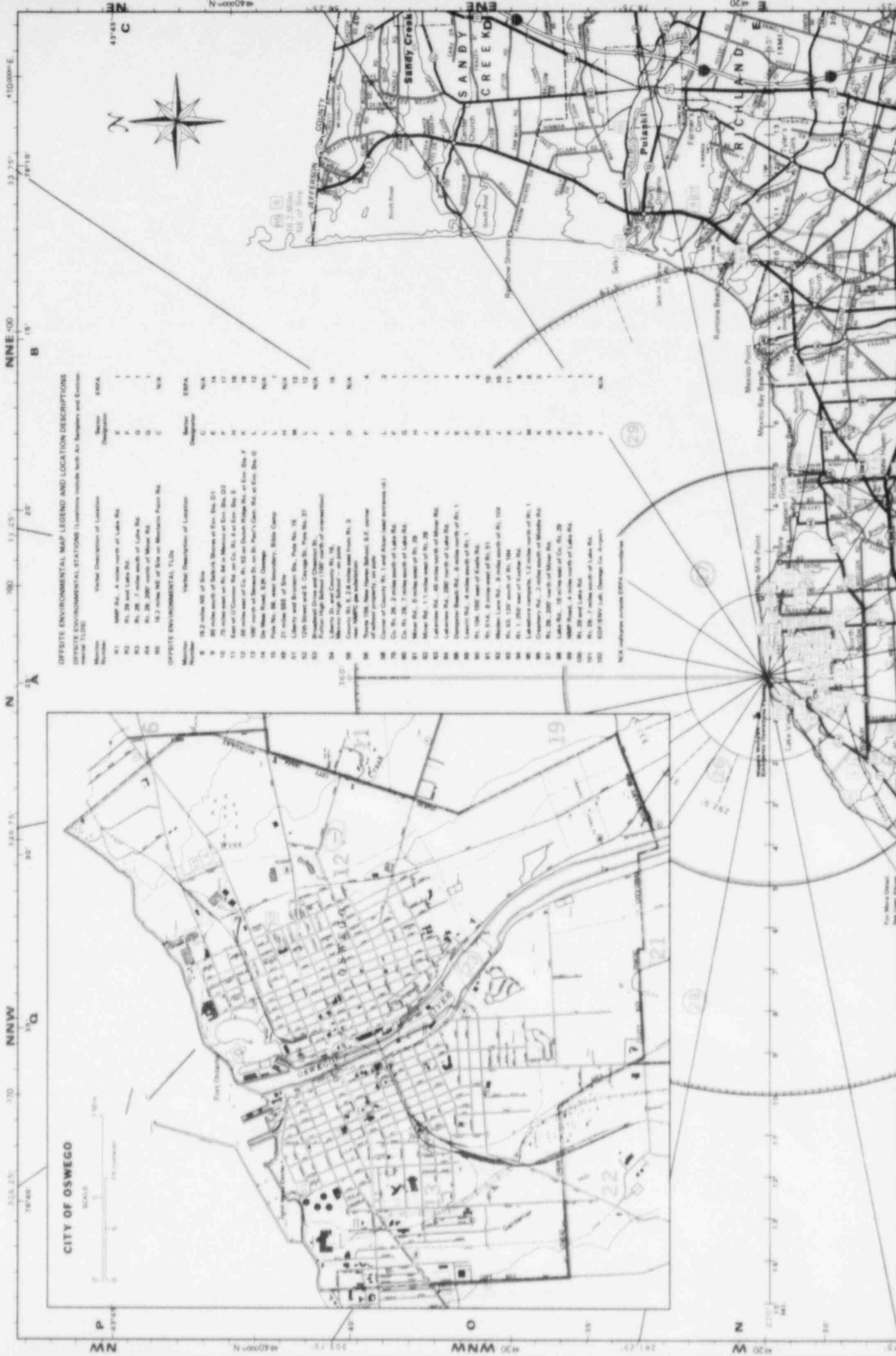
ATI
APERTURE
CARD

James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures

MAP NUMBER 4

Also Available On
Aperture Card

8603200053-02



OFFSITE ENVIRONMENTAL MAP LEGEND AND LOCATION DESCRIPTIONS
OFFSITE ENVIRONMENTAL STATIONS (Locations include both Air Samplers and Surface
water TLSD)

Monitor Number	Vehicle Description of Location	Sector Designation	ERPA
81	MAP Rd., 4 miles north of Lakes Rd.	E	1
82	Rt. 28 and Lakes Rd.	F	1
83	Rt. 28, 7 miles south of Lakes Rd.	G	1
84	Rt. 28, 200' north of Mirror Rd.	G	1
85	19.2 miles NE of Site on Mexico Point Rd.	C	N/A

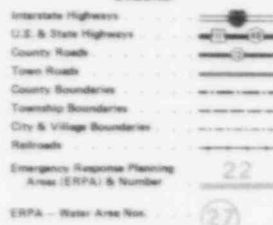
OFFSITE ENVIRONMENTAL TLSD

Monitor Number	Vehicle Description of Location	Sector Designation	ERPA
86	19.2 miles NE of Site	C	N/A
87	10 miles south of Lakeshore at Elm St. D1	E	14
88	10 miles west of Rt. 28 at Mexico at Elm St. D2	F	17
89	East of O'Connor Rd. on Co. Rt. 4 at Elm St. E	H	19
90	10 miles west of Co. Rt. 32 at Lakeshore Rd. at Elm St. F	H	19
91	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	H	12
92	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
93	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
94	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
95	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
96	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
97	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
98	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
99	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
100	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
101	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
102	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
103	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
104	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
105	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
106	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
107	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
108	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
109	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
110	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
111	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
112	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
113	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
114	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
115	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
116	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
117	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
118	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
119	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
120	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
121	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
122	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
123	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
124	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
125	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
126	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
127	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
128	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
129	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
130	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
131	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
132	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
133	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
134	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
135	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
136	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
137	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
138	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
139	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
140	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
141	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
142	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
143	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
144	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
145	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
146	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
147	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
148	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
149	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A
150	10 miles west of Lakeshore St. on St. Peter's Church Rd. at Elm St. G	L	N/A

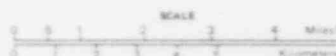
N/A indicates no data available



Offsite Environmental Station Locations



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Chester, Vermont 05433
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TI
APERTURE
CARD

**James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures**

MAP NUMBER 7

**Also Available On
Aperture Card**

8603200053-03

LIST OF ENVIRONMENTAL MONITORING STATIONSONSITE

<u>Sector</u>	<u>Station ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
D	D ₁ Onsite	30' south of NMP-2 Stone & Webster Warehouse	E, N.E.	2500'
D	H Onsite	Dirt access road on JAFNPP site along the lake	E, N.E.	5000'
E	I Onsite	Along dirt access road .5 mile south of Environ- mental Station H (onsite)	E	4500'
F	J Onsite	Along Lake Road (1600') .3 mile east of JAFNPP access road	E, S.E.	4700'
F	K Onsite	250' south of Lake Road near JAFNPP access road	E, S.E.	3525'
G	D ₂ Onsite	Along NMP-2 material access road approximately 50' from Lake Road intersection	S.E.	2800'
G	E Onsite	Along south side of Lake Road 800' west of NMP-2 materials access road	S.E.	2300'
J	F Onsite	Lake Road and Energy Informa- tion Center driveway	S	2000'
K	G Onsite	Nine Mile Meteorological Tower	S, S.W.	2100'

LIST OF ENVIRONMENTAL MONITORING STATIONSOFFSITE

<u>Sector</u>	<u>Station ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
C	C Offsite	1.3 miles north on Montario Point Road	N.E.	16.2 miles
E	D ₁ Offsite	NMP Road, .4 miles North of Lake Road	E	1.8 miles
F	D ₂ Offsite	Rt. 29 and Lake Road	E, S.E.	1.5 miles
G	E Offsite	Rt. 29, .7 miles South of Lake Road	S.E.	1.5 miles
G	F Offsite	Rt. 29 and Miner Road	S.E.	2.2 miles
L	G Offsite	100' north of Seneca Street on St. Paul's Cemetery Road	S.W.	5.3 miles

LIST OF ENVIRONMENTAL TLDsONSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
A	41	Unit 2 Construction Site NW of North Fence	N	600'
A	42	Unit 2 Construction Site Turbine Building	N	200'
A	62	Unit 2 Construction Site Turbine Building	N	200'
A	75	Unit 2, N. Fence North of Rx. Bldg. (RETS #6)	N	800'
A	76	Unit 2, N. Fence North of Change House (RETS #7)	N	600'
A	77	Unit 2, N. Fence North of Pipe Bldg. (RETS #8)	N	600'
A	86	Unit 2, N. Fence, N. of W. Side Screen House (RETS #20)	N	500'
A	87	Unit 2, N. Fence, N. of E. Side Screen House (RETS #21)	N	500'
B	39	N. Fence, Opp. RW Bldg. NMP-1	N, N.E.	300'
D	3	30' South of NMP-2 Stone & Webster Warehouse by Environmental Station D ₁	E, N.E.	2500'
D	23	Dirt access road along the lake on JAFNPP site by Environmental Station H (Onsite)	E, N.E.	5000'
D	27	North fence inside JAFNPP* by lake shore	E, N.E.	1100'
D	28	Light pole inside JAFNPP across from road intersection	E, N.E.	3600'
D	29	North fence inside JAFNPP opposite Screenhouse	E, N.E.	3400'
D	30	Northwest corner of fence inside JAFNPP	E, N.E.	2800'

FORM EAP-5.1.5 (con't)

LIST OF ENVIRONMENTAL TLDsONSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
D	47	NE shoreline inside JAFNPP on fence	E, N.E.	4100'
E	19	East boundary JAFNPP Site Pole #9	E	6900'
E	24	Along dirt access road by I Onsite Environmental Station	E	4500'
E	48	On a pole .36 mile north on access road west of road between H & I Onsite Environ- mental Stations	E	4800'
E	59	Environmental Laboratory - JAFNPP	E	2700'
E	61	On a pole 700' north of Environmental TLD #48 on access road of JAFNPP site	E	4800'
E	78	JAF, E. of E. Old Laydown Area, on tree (RETS #10)	E	4900'
F	25	Along Lake Road (1600') .3 mile east of JAFNPP access road by J Onsite Environmental Station	E, S.E.	4700'
F	26	250' south of Lake Road, near JAFNPP access road by K Onsite Environmental Station	E, S.E.	3525'
F	50	Lake Road 400' West of J Onsite Environmental Station (1200') .23 mile east of JAFNPP access road	E, S.E.	4675'
G	4	Along NMP-2 access road 50' from Lake Road by D ₂ Onsite Environmental Station	S.E.	2800'
G	5	Along south side of Lake Road 800' west of materials access road by E Onsite Environmental Station	S.E.	2300'

FORM EAP-5.1.5 (con't)

LIST OF ENVIRONMENTAL TLDsONSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
J	6	Along south side of Lake Road 500' east of NMP-1 access road by F Onsite Environmental Station	S	2000'
K	7	.5 mile north of Lake Road past entrance to Energy Information Center driveway by G Onsite Environmental Station	S, S.E.	2100'
L	15	Pole #66, northeast section of Bible Camp	S.W.	1.0 mile
N	18	Energy Information Center picnic area northshore on lamp post	W	1600'
N	68	Unit 1, Unit - Unit 2 Fence, S. Section	W	300'
O	67	Unit 2 Construction Site, Trailer Offices at W. Boundary	W, N.W.	300'
P	66	Unit 1, Unit 1 - Unit 2 Fence, Mid. Section	N.W.	300'
Q	31	North fence NMP-1	N, N.W.	300'
Q	64	Unit 1, Unit 1 - Unit 2 Fence, N. Section	N, N.W.	300'
Q	85	Unit 1, N. Fence, N. of W. Side Screen House (RETS #19)	N, N.W.	400'
*N/A	71	Unit 2 Construction Site Reactor Building	N/A	N/A
*N/A	72	Unit 2 Construction Site Reactor Building	N/A	N/A
*N/A	73	Unit 2 Construction Site Reactor Building	N/A	N/A
*N/A	74	Unit 2 Construction Site Reactor Building	N/A	N/A

*Centerpoint NMP Unit 2 Reactor Building

FORM EAP-5.1.5 (con't)

LIST OF ENVIRONMENTAL TLDsOFFSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
C	8	13 miles north on Montario Point Road by C Offsite Environmental Station	N.E.	16.2 miles
D	44	Corner Route 3 and Kelly Drive southwest of intersection on pole	E, N.E.	13.0 miles
D	55	Gas Substation, Route 5, West of Pulaski, New York	E, N.E.	14.0 miles
E	9	.65 mile north of the entrance to Selkirk Shores State Park on Route 3	E	11.7 miles
E	43	On a pole .9 mile north on Route 3 from intersection of Route 104B and Route 3 in a field north of road	E	10.0 miles
E	88	Demster Beach Rd. N, pole #35 0.6 miles N, of Rt. 1 (RETS #22)	E	4.8 miles
E	98	Lake Rd., pole #145, 0.15 miles E. of Rt. 29 (RETS #37)	E	1.2 miles
E	99	NMP Rd., 0.4 miles N. of Lake Rd. Environmental Station D ₁	E	1.8 miles
F	10	.75 mile west on County Route 64 in Village of Mexico	E, S.E.	9.1 miles
F	56	Route 104 New Haven School S.E. corner on pole	E, S.E.	5.3 miles
F	54	Liberty Street & County Route 16 - Mexico High School on pole	E, S.E.	9.8 miles
F	79	Co. Rt. 29 S, pole #63, 0.2 miles S. of Lake Rd. (RETS #11)	E, S.E.	1.3 miles
F	89	Leavitt Rd., pole #16, 0.4 miles S. of Rt. 1 (RETS #23)	E, S.E.	5.0 miles
F	100	Rt. 29 and Lake Rd., Env. Sta. D ₂	E, S.E.	1.5 miles
G	45	Corner Route 64 & 35 on pole	S.E.	8.0 miles

FORM EAP-5.1.5 (con't)

LIST OF ENVIRONMENTAL TLDsOFFSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
G	80	Co. Rt. 29 S, pole #54, 0.7 miles S. Lake Rd. (RETS #12)	S.E.	1.8 miles
G	90	Rt. 104, pole #300, 150 ft. E. of Keefe Rd. (RETS #24)	S.E.	4.4 miles
G	97	Rt. 29, pole #50, 200 ft. N. of Miner Rd. (RETS #34)	S.E.	1.5 miles
G	101	Rt. 29, 0.7 miles S. of Lake Rd., Env. Sta. E	S.E.	1.5 miles
H	11	250' east of O'Connor Road on County Route 4	S, S.E.	7.3 miles
H	49	Phoenix, N.Y. - Control (Connolly Road)	S, S.E.	19.6 miles
H	81	Miner Rd., pole #16, 0.5 miles W. of Rt. 29 (RETS #13)	S, S.E.	1.7 miles
H	91	Rt. 51A, pole #59, 0.8 miles W of Rt. 51 (RETS #25)	S, S.E.	5.0 miles
J	12	.55 mile East of County Route 53 on Dutch Ridge Road	S	7.8 miles
J	46	Corner Route 176 & Black Creek Road	S	8.0 miles
J	53	Broadwell & Chestnut Street Fulton High School	S	14.8 miles
J	82	Miner Rd. pole #1 1/2, 1.1 miles W. of Rt. 29 (RETS #14)	S	1.7 miles
J	92	Maiden Lane Rd., power pole, 0.6 miles S of Rt. 104 (RETS #26)	S	4.5 miles
K	83	Lakeview Rd., Birch Tree, 0.45 miles N. of Miner Rd. (RETS #15)	S, S.W.	1.2 miles
K	93	Rt. 53, pole #1-1, 120 ft. S of Rt. 104 (RETS #27)	S, S.W.	4.5 miles

FORM EAP-5.1.5 (con't)

LIST OF ENVIRONMENTAL TLDsOFFSITE

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
K	96	Creamery Rd. 0.3 miles S. of Middle Rd., pole 1 1/2 (RETS #32)	S, S.W.	3.7 miles
L	13	100' N. of Seneca Street on St. Paul's Cemetery by G Environmental Station	S.W.	5.3 miles
L	14	DeMass Road, S.W. Oswego - Control	S.W.	12.4 miles
L	52	East 12th & Cayuga Streets Oswego High School	S.W.	6.0 miles
L	58	Corner of County Route 1 and Alcan (E. of E. Entrance)	S.W.	2.9 miles
L	65	Dutch Ridge & Kerfien Roads	S.W.	7.8 miles
L	84	Lakeview Rd. N. pole #6117, 200 ft. N. of Lake Rd. (RETS #16)	S.W.	1.1 miles
L	94	Rt. 1, ple #82, 250 ft. E. of Kocher Rd. (RETS #28)	S.W.	4.6 miles
M	51	Oswego Steam Station, North end of west fence inside property (W. Liberty & Bronson Streets)	W, S.W.	7.7 miles
M	95	Lakeshore Camp Site from Alcan W. Access Rd., pole #21, 1.2 miles N. of Rt. 1 (RETS #29)	W, S.W.	3.5 miles
N	15	Pole #66, W. Bound	W	0.5 miles

FORM EAP-5.1.6

LIST OF EMERGENCY TLDs

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
A	E-1	Directly north of NMP-1 Screenhouse	N	375'
D	E-2	30' south of NMP-2 Stone & Webster Warehouse by D, Onsite Environmental Station	E, N.E.	2500'
D	E-3	Directly north of JAFNPP Screen- house on fence by Environmental TLD #29	E	3350'
D	E-4	On solitary Black Walnut tree 250' south of H Onsite Environ- mental Station directly on Dynamite Road	E, N.E.	4800'
E	E-24	Hickory Grove at end of Hickory Grove Drive on NM pole #43	E	5.0 miles
E	E-30	Intersection of Route 104B and Rt. 16 (Texas) on pole #153	E	8.0 miles
F	E-5	250' south of Lake Road near JAFNPP access road in woods by K Onsite Environmental Station	E, S.E.	3525'
F	E-19	Nine Mile Pole #58 1/3 the distance between Lake Road and Miner Road on west side of Route 29	E, S.E.	1.3 miles
F	E-20	Pole #141-1, N.W. corner of intersection of County Route 29 and Lake Road (Co. Rt. 1-A)	E, S.E.	1.2 miles
F	E-25	Nine Mile Point Rd. halfway between Lake Rd. and Miner Rd. on pole #30	E, S.E.	2.2 miles
G	E-13	Nine Mile Pole #46, S.E. corner of intersection of Miner Road and County Route 29	S.E.	1.8 miles
G	E-16	10' high on first metal tower south of K Onsite Environmental Station	S.E.	1.0 mile

FORM EAP-5.1.6 (con't)

LIST OF EMERGENCY TLDs

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
G	E-17	Nine Mile Pole #15, first pole on Miner Road and JAFNPP transmission line	S.E.	1.3 miles
G	E-18	Nine Mile Pole #53, 2/3 distance between Lake and Miner Roads on west side of Route 29	S.E.	1.6 miles
G	E-26	Intersection of Nine Mile Point Road and County Route 1 on NM pole #112	S.E.	2.8 miles
H	E-12	Nine Mile Pole #5, half-way between the two transmission lines on Miner Road	S, S.E.	1.5 miles
H	E-6	Metal tower, 10' high, half-way between E & F Onsite Environmental Stations on Lake Road, 100' from NMP-1 access road	S	2000'
H	E-27	Intersection of County Route 1 and County Route 29 on NM pole #216	S, S.E.	2.6 miles
J	E-10	North side of Nine Mile Pole #20 on the west side of the inter- section of Miner & Lakeview Roads	S	1.5 miles
J	E-11	Nine Mile Pole #1 by intersec- tion of Miner Road and Nine Mile Point's transmission line road	S	1.5 miles
J	E-14	Second set of NMP-1's metal transmission poles from Miner Road, N.W. Street	S	1.1 miles
J	E-15	On Stone & Webster Road adjacent to transmission lines on 5th set of metal transmission poles south of NMP-1 switchyard	S	0.7 mile
J	E-28	Intersection of Route 104 and Maiden Lane Road on NM pole #159	S	4.0 miles
K	E-7	Energy Information Center access road, 125' before 20 mph sign on west side of the road, 6' up on the first Black Walnut tree	S, S.W.	2100'

FORM EAP-5.1.6 (con't)

LIST OF EMERGENCY TLDs

<u>Sector</u>	<u>TLD ID #</u>	<u>Location Description</u>	<u>Direction from Site</u>	<u>Distance from Site</u>
K	E-9	15' high on Nine Mile Pole #90, S.E. corner of intersection of Lakeview and Lake Road (Co. Rt. 1-A)	S, S.W.	1.0 mile
K	E-23	Met Tower on Env. Sta G Pole	S, S.W.	2100'
K	E-29	Intersection of Middle Road and Creamery Road on pole #28	S, S.W.	3.4 miles
K	E-31	Intersection of County Route 4 and County Route 53 on pole #49	S, S.W.	5.9 miles
L	E-8	N.E. corner of Ontario Bible School, on access road, 8' high on pole #64, 200' from the lake	S.W.	0.8 mile
N/A	E-21 & 22	NMPNS Administration Building (controls) in Lead Pig	N/A	N/A

DATE _____ TEAM NUMBER _____ TEAM LEADER / TLD NUMBER _____
TEAM MEMBER / TLD NUMBER _____

[illegible]

FORM EAP-5.1.9
RADIOLOGICAL ENVIRONMENTAL SAMPLING PROGRAM

The following table should be used in determining environmental samples and quantity to be sampled:

<u>Medium Sampled</u>	<u>Quantity/Vol. Each Sample</u>	<u>Analysis</u>	<u>Preferred Sample Location</u>
Air-Particulate	27,000 ft ³ ** 20 ft ³ *	Beta, gamma	Downwind from site
Air-Iodine	27,000 ft ³ ** 20 ft ³ *	Beta, gamma	Downwind from site
Water-Lake (Note 1)	2 liters	Beta, gamma Isotope	10 downstream from site 2 upstream from site for control
Water-Tap (Note 2)	2 liters	Gamma Isotope	2 from control 15 mi. from site 4 downwind from site
Soil (Note 3)	1 kg.	Gamma Isotope	2 from control 15 mi. 6 downwind from site
Vegetation (Note 3)	1 kg.	Gamma Isotope	2 from control 15 mi. from site 6 downwind from site
Milk (Note 4)	2 liters	I-131, Cs-137, Sr-90	2 from control 15 mi. from site*** 5-10 downwind from site***
Snow	20 liters	Gamma Isotope	2 from control 15 mi. from site*** 5-10 downwind from site***

* Downwind Survey Team Air Sample

** Normal Environmental Monitoring Program Air Sample

*** If Owner Cooperation Available

Note 1: Upstream samples should be a minimum of 5 mi. upstream of plant outfall.

Note 2: Control samples should come from least prevalent wind direction from township (municipal) water supply.

Note 3: Control samples should come from least prevalent wind direction at nearest TLD site for sample accountability. Downwind samples should be taken at/near TLD locations for sample accountability.

Note 4: Milk samples should be raw, untreated milk from dairies in least prevalent wind direction for control purposes.

NOT ALL SAMPLES ON THIS TABLE NEED TO BE COLLECTED DURING EMERGENCY CONDITIONS, HOWEVER, A REPRESENTATIVE SAMPLE SHOULD BE TAKEN ON THOSE LISTED AS TIME PERMITS.

This procedure may continue for a relatively long period of time after the emergency has been cancelled. However, this procedure should continue in effect until all required samples have been collected, prepared, and analyzed.

FORM EAP-5.1.10

ENVIRONMENTAL MEDIA SAMPLING FORM

- PREPARE IN DUPLICATE -

Sample Location _____

Date Collected _____ Time Collected _____

Date Delivered _____ Time Delivered _____

Collected By _____

Type* of Sample or Swipe (if applicable) _____

Sample Volume _____

Sample Weight _____

* Milk, water (raw or treated), fish, vegetation, soil, smears, or swipes, etc.

Assigned Identification Number _____

EAP-7.1

Pages 9, 10 and 11 remain the same;
transfer from the previous revision.

CONTROLLED

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 2

PROCEDURE NO.: EAP-7.1

TITLE: EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS*

POPC REVIEW: Meeting No. 86-003 Date 1-8-86

APPROVED BY: *R. [Signature]*
Resident Manager

APPROVED BY: *[Signature]*
Radiological and Environmental
Services Superintendent

PAGE NO.	1	2	3	4	5	6	7	8	9	10
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REV. NO.	2	4	3	3	3	3				

Rev. No. 4

Date: 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-7.1

EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS*

1.0 PURPOSE

This procedure provides instructions for making out-of-plant and off-site surveys which may be required as a result of an emergency condition at JAF. Survey teams are dispatched at the direction of the Emergency Director.

2.0 REFERENCES

- 2.1 EAP-17 EMERGENCY ORGANIZATION STAFFING
- 2.2 EAP-5.1 ENVIRONMENTAL MONITORING
- 2.3 EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES
- 2.4 EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL

3.0 INITIATING EVENTS

- 3.1 A request for out-of-plant and downwind survey has been issued by the Emergency Director, Radiological Support Coordinator or designees, and,
- 3.2 Survey team members have been notified and assembled at the Radiation Protection Office in accordance with EAP-17 EMERGENCY ORGANIZATION STAFFING, and,
- 3.3 EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES procedure is being implemented.

4.0 PROCEDURE

Survey Team Leader or designee:

- 4.1 Pre-deployment briefing (Ensure each team has a copy of this procedure)
 - 4.1.1 Receive a briefing on the current situation from the Emergency Director, Radiological Support Coordinator or designee. Record briefing information on Downwind Survey Information Sheet Form EAP-7.1.1.

- 4.2 With the aid of survey team member, obtain a Downwind Survey Kit and check the equipment at the dispatch center or other location as directed by the dispatcher.
- 4.2.1 Check equipment against inventory list stored with the kit. Obtain any items missing or short of quantity.
 - 4.2.2 Install and check batteries in survey, communication and other mission related equipment, as required. Source check survey equipment for proper response.
 - 4.2.3 Conduct a radio check with the radio dispatcher to establish radio communications.
 - 4.2.4 Install a particulate filter and an iodine collection cartridge on the air sampler.
 - 4.2.5 Gather necessary protective equipment as instructed in the briefing (dosimeters, respirators, clothing, gloves, shoe covers, etc.). Examine personal pocket dosimeters. Record current readings under "Initial Dosimeter Reading" on the Downwind Survey Information Sheet Form EAP-7.1.1.
- 4.3 Transport all equipment designated to survey vehicle and prepare it for the mission: (Private vehicles may be used if necessary with a portable radio.)
- 4.3.1 Check spare tire and gas level before driving out making sure the vehicle has enough gas for the trip.
 - 4.3.2 Complete the preoperational check of the air sampler by plugging it into the 120 volt receptacle in the vehicle and switching it on. Observe satisfactory operation as indicated by flow on the indicator. Turn the unit off after checking and leave the filter and cartridge installed.
 - 4.3.3 Load equipment onto vehicle, then don protective clothing if directed to do so per briefing.
 - 4.3.4 While in transit, frequently observe the meter indication to help locate the plume. Report readings above background as designated during briefing to the radio dispatcher.

4.3.5 Conduct an operational check of radio communications with radio dispatcher or inform dispatcher of team status and request any final instructions prior to departure.

4.4 Survey Instructions (Use the maps provided in the Downwind Survey Kit along with the survey/sample maps and location descriptions provided in this procedure to locate survey/sample locations: FIGURE EAP-7.1.3, 7.1.4, 7.1.5, 7.1.6 and TABLE EAP-7.1.7.)

NOTE: Survey teams will be sent to designated locations selected for ease of access and importance of expected dose to the population. Survey teams may be requested to proceed to any or all of three general areas, as follows:

- a. Downwind Security Fence. This is the outermost fence surrounding the plant. At a minimum, radiation level readings will be taken at a specified point at the fence and in both directions along the fence from that point.
- b. Site Boundary. This is defined as the joint NMPC and NYPA site property line. Surveys conducted at designated points along or within the site boundary normally are performed in the same manner as for off-site downwind surveys.
- c. Off-site. This is the property beyond the site boundary. Points in this area are surveyed for airborne activity as well as for deposition.

4.1.1 Determine the maximum concentration at each survey location by scanning to the left and right. At the position of highest dose rate commence survey and data recording.

4.4.2 Perform both beta and gamma surveys with an ionization chamber survey meter. (Record instrument serial numbers, time, survey location and beta/gamma dose rates on Downwind Survey Log Sheet Form EAP-7.1.2).

- a. Take three readings at waist level (3 feet above ground) within a circle of about 10-15 yards in diameter at the sampling location.

- b. Take three readings at 3 inches above ground at locations corresponding to the waist level readings.
- 4.4.3 Transmit results of survey to the dispatch center. (Be sure to identify team, time, survey location as well as dose rate data.) Acknowledge accurate receipt of information repeated back by radio dispatcher.
- 4.4.4 As directed by radio dispatcher, conduct an air sample in accordance with steps 4.4.5 - 4.4.11 or proceed to next sampling location and survey in accordance with steps 4.4.1 - 4.4.3 or return to station in accordance with step 4.4.14.
- 4.4.5 Set up the portable air sampler such that it has power, has both particulate filter and iodine collection cartridge and is between 3 and 7 feet off the ground.
- 4.4.6 Obtain a sample of 25 cubic feet. (Run the sampler for a time interval corresponding to the flow rate data affixed to the pump such that 25 cubic feet is obtained. A normal flow rate is about 3.3 cfm.)
- 4.4.7 Perform a background count, particulate filter count and iodine cartridge count separately using the count rate meter. (Iodine sample counts greater than 10,000 cpm should be returned as directed for Ge(Li) analysis.)
- 4.4.8 For air samples collected in locations with a dose rate greater than 5 mR/hr, move to an area with a dose rate of less than 1 mR/hr and draw a one minute sample purge prior to background counting.
- 4.4.9 Record applicable data for air sample collected on both the Downwind Survey Log Sheet Form EAP-7.1.2 and the Air Sample envelope.
- 4.4.10 Place particulate filter in envelope and iodine cartridge in plastic bag for transfer to the lab for Ge(Li) analysis. Put fresh particulate filter and iodine cartridge into holder for next air sample.

- 4.4.11 Transmit results of air sampling to the dispatch center. (Be sure to identify team, time sample collected, survey location, sample count data and sample volume.) Acknowledge accurate receipt of information repeated back by radio dispatcher.
- 4.4.12 As directed by radio dispatcher, proceed to next sampling location and survey in accordance with steps 4.4.1 - 4.4.3, or proceed with steps 4.4.13 - 4.4.14.
- 4.4.13 As directed by the dispatcher, proceed to selected environmental monitoring stations to retrieve air samples and TLDs, if required. Survey radiation levels at these locations and record the data on the Downwind Survey Log Sheet Form EAP-7.1.2. Refer to EAP-5.1 ENVIRONMENTAL MONITORING.
- 4.4.14 Return to the location specified by the radio dispatcher and turn in samples and records:
- a. Before dropping off the vehicle, remove any protective clothing and respirators. Place the used protective clothing on the vehicle floor until a contamination survey is completed.
 - b. Check the survey vehicle interior and exterior for possible contamination with the count rate meter before leaving the vehicle in the parking lot. Report readings above background as designated during briefing to the radio dispatcher for further instructions. Otherwise, proceed to the location specified.
 - c. Check equipment for contamination at the dispatch center. If contamination is found, refer to EAP-15 EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL.
 - d. Check each team member's dosimeter reading, record it under "Final Dosimeter Reading" on the Downwind Survey Information Sheet Form EAP-7.1.1. Turn over this record and the Downwind Survey Log Sheets, Form EAP-7.1.2, to the radio dispatcher.

5.0 FIGURES, FORMS AND ATTACHMENTS

- 5.1 FORM EAP-7.1.1, Downwind Survey Information Sheet
- 5.2 FORM EAP-7.1.2, Downwind Survey Log Sheet
- 5.3 FIGURE EAP-7.1.3, Onsite Emergency Planning Survey Map 1
- 5.4 FIGURE EAP-7.1.4, Onsite Emergency Planning Survey Map 2
- 5.5 FIGURE EAP-7.1.5, Onsite Emergency Planning Survey Map 3
- 5.6 FIGURE EAP-7.1.6, Offsite Survey Locations Map 4
- 5.7 TABLE EAP-7.1.7, Table of Onsite and Offsite Survey/ Sample Locations (4 pages)

DOWNWIND SURVEY INFORMATION SHEET

1. Date _____ Time _____ Team No. _____ Survey Requested By _____
2. Team Dispatcher _____; Dispatch Center at _____ ext. _____
3. Team Leader _____; Initial dosimeter reading _____
Final dosimeter reading _____
4. Team Member _____; Initial dosimeter reading _____
Final dosimeter reading _____
5. Survey Info. briefed/filled in by _____ at _____
6. Nature of airborne release: _____ ground; _____ elevated; _____ unknown.
7. Survey points/locations: _____

8. Wind directions (from) or critical sectors/ERPAs: _____
9. Environmental monitoring stations to be checked and samples brought back:
Station No. or location: _____, for: _____ air; _____ TLD
_____, for: _____ air; _____ TLD
_____, for: _____ air; _____ TLD
10. Projected dose rates at survey locations (when available):
location: _____: dose rate: _____ mr/hr
location: _____: dose rate: _____ mr/hr
location: _____: dose rate: _____ mr/hr
11. Protective measures required:

(1) _____ pocket dosimeter	(6) _____ cover-alls	(10) other (specify) _____
(2) _____ TLD	(7) _____ gloves	_____
(3) _____ other dosimeter (specify) _____	(8) _____ shoe covers	_____
(4) _____ SCEA	(9) _____ KI	_____
(5) _____ respirator - particulate/canister		_____
12. Radiation data to be collected:

(1) beta/gamma whole body	(3) beta/gamma ground
(2) air sample	(4) other (specify) _____
13. Assigned radio channel: _____.
14. Any other special or hazardous conditions: _____
15. Special instructions: _____

DOWNWIND SURVEY LOG SHEET

Date of Surveys

/ /

Dose Rate Instrument Model # _____ S/N _____
 Count Rate Instrument Model # _____ S/N _____
 High Volume Air Sampler Model # _____ S/N _____

NOTE: Iodine canisters with count rate greater than 10,000 cpm should be returned to the site for GeLi analysis on a priority basis. Based on 50% N.Y.S. protective action guide.

Time	Survey Location	Dose Rate 3 inch(mrem/hr)	Dose Rate 3 foot(mrem/hr)	Air Sample cpm	Sample Volume (ft ³)
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	
				Bkg.	
		γ=	γ=	Filt.	
		β=	β=	Part.	

Team Member

Team Member





Offsite Survey Locations

LEGEND	
Interstate Highways	
U.S. & State Highways	
County Roads	
Town Roads	
County Boundaries	
Township Boundaries	
City & Village Boundaries	
Railroads	
Emergency Response Planning Area (ERPA) & Number	
ERPA - Water Area Nos.	
Offsite Survey Locations	

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SCALE
0 1 2 3 4 Miles
0 1 2 3 4 Kilometers

TI
APERTURE
CARD

MAP NUMBER 4

James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures

Also Available On
Aperture Card

8603200053-04

TABLE EAP-7.1.7

TABLE OF ONSITE AND OFFSITE SURVEY/SAMPLE LOCATIONS

SECTOR & SAMPLE ID#	LOCATION DESIGNATION	DISTANCE FROM SITE**	AZIMUTH ^o	ERPA(S)
C-1 (offsite)	1.3 miles north on Montario Point Road by Environmental Station C.	16.2 miles	40 ^o	N/A*
D-1 (onsite)	30' south of Stone & Webster Warehouse on NMP-2 by Environmental Station D.	0.4 miles	72 ^o	1
D-2 (onsite)	Dirt access road along the lake on JAFNPP Site by Environmental Station H.	1.0 mile	73 ^o	1
D-3 (offsite)	In hamlet of Selkirk on County Route 5.	11.3 miles	71 ^o	14
D-4 (offsite)	0.65 miles north of the entrance to Selkirk Shores State Park on Route 3.	11.3 miles	77 ^o	14
D-5 (offsite)	Corner Rainbow Shores Road and Route 3.	13.5 miles	65 ^o	N/A*
E-1 (onsite)	In front of NMP-2 combined construction offices.	0.3 miles	89 ^o	1
E-2 (onsite)	Along dirt access road by Environmental Station H on JAFNPP Site.	0.9 miles	93 ^o	1
E-3 (offsite)	Corner of Lake Road and Nine Mile Point Road.	1.9 miles	97 ^o	1,2
E-4 (offsite)	Shore Oaks - at the end of Shore Oaks Drive.	2.7 miles	94 ^o	2,4
E-5 (offsite)	Hickory Grove - at the end of Hickory Grove Drive.	4.6 miles	96 ^o	4
E-6 (offsite)	Intersection of Route 104B, Route 1 and Route 43.	6.6 miles	101 ^o	7
E-7 (offsite)	Texas - intersection of Route 104B and County Route 16.	7.8 miles	95 ^o	15
E-8 (offsite)	Corner of Ramona Beach Road and Route 3.	10.2 miles	86 ^o	14

*N/A = not in an ERPA, outside 10 mile EPZ.

**Center of site is NMP Unit 2.

TABLE EAP-7.1.7 (con't)

TABLE OF ONSITE AND OFFSITE SURVEY/SAMPLE LOCATIONS

SECTOR & SAMPLE ID#	LOCATION DESIGNATION	DISTANCE FROM SITE**	AZIMUTH ^o	ERPA(S)
F-1 (onsite)	Along Lake Road about 0.3 miles off JAFNPP access road to Environmental Station J.	1.2 miles	107 ^o	1
F-2 (offsite)	Intersection of County Route 29 and Lake Road.	1.1 miles	105 ^o	1
F-3 (offsite)	Nine Mile Point Road halfway between Lake Road and Miner Road intersection.	2.1 miles	114 ^o	2
F-4 (offsite)	Intersection of Pleasant Point Drive and County Route 1.	3.9 miles	110 ^o	4
F-5 (offsite)	Intersection of Route 104 and Route 6 by New Haven School and Environmental TLD #56.	5.5 miles	121 ^o	4,7,8,9
F-6 (offsite)	Intersection of Route 104 and Route 43 at Tollgate.	7.4 miles	116 ^o	7,8
F-7 (offsite)	Intersection of County Route 64 and Route 104 in the Village of Mexico.	9.3 miles	117 ^o	16
G-1 (onsite)	NMP-2 Training Center.	0.2 miles	129 ^o	1
G-2 (onsite)	Along NMP-2 material access road approximately 50' from Lake Road intersection by Environmental Station D ₂ .	0.5 miles	142 ^o	1
G-3 (onsite)	250' south of JAFNPP access road on Lake Road by Environmental Station K.	0.7 miles	131 ^o	1
G-4 (offsite)	Intersection of Miner Road and County Route 29.	1.9 miles	142 ^o	1,2
G-5 (offsite)	Intersection of Nine Mile Point Road and County Route 1.	2.8 miles	134 ^o	2,4,5
G-6 (offsite)	Intersection of Route 104 & 104B.	4.8 miles	126 ^o	4,9
G-7 (offsite)	Intersection of Lilly Marsh Road and Darrow Road.	6.1 miles	135 ^o	9
G-8 (offsite)	Cummings Bridge - intersection of Routes 6 and 51.	7.3 miles	136 ^o	8,9

**Center of site is NMP Unit 2.

TABLE EAP-7.1.7 (con't)

TABLE OF ONSITE AND OFFSITE SURVEY/SAMPLE LOCATIONS

SECTOR & SAMPLE ID#	LOCATION DESIGNATION	DISTANCE FROM SITE**	AZIMUTH ^o	ERPA(S)
G-9 (offsite)	Hamlet of Vermillion on Route 6.	9.6 miles	137 ^o	8,18
H-1 (onsite)	South side of Lake Road about 800' west of NMP-2 materials access road by Env. Sta. E.	0.5 miles	155 ^o	1
H-2 (offsite)	Nine Mile Pole #3, half-way between the two transmission lines on Miner Road.	1.6 miles	157 ^o	1,2,3
H-3 (offsite)	North Scriba - intersection of County Routes 1 and 29.	2.5 miles	152 ^o	2,5
H-4 (offsite)	Hammonds Corners - intersec- tion of Routes 104 and 29.	3.5 miles	159 ^o	5,10
H-5 (offsite)	South New Haven - intersec- tion of Routes 51 and 51A.	5.2 miles	149 ^o	9
H-6 (offsite)	250' east of O'Connor Road and County Route 4 by Environmental Station E.	7.1 miles	159 ^o	18
H-7 (offsite)	Intersection of County Route 6 and McDougall Road.	9.2 miles	156 ^o	18
J-1 (onsite)	Along Lake Road, west of NMP-2 Cooling Tower.	0.4 miles	174 ^o	1
J-2 (offsite)	NMP Pole #1 - intersection of Miner Road and NMP Transmission Road.	1.5 miles	177 ^o	1,3
J-3 (offsite)	Intersection of North Road and NMP Transmission Lines east of Lakeview Road.	2.2 miles	178 ^o	3,5
J-4 (offsite)	Intersection of Route 104 and County Route 51A.	3.8 miles	176 ^o	5,10
J-5 (offsite)	Intersection of O'Connor Road and Hay Fly Road.	5.5 miles	176 ^o	10
J-6 (offsite)	Intersection of Route 176 and Black Creek Road.	7.9 miles	177 ^o	20
J-7 (offsite)	Intersection of Route 176 and Howard Road.	11.1 miles	176 ^o	N/A*

*N/A = not in an ERPA, outside 10 mile EPZ.

**Center of site is NMP Unit 2.

TABLE EAP-7.1.7 (con't)

TABLE OF ONSITE AND OFFSITE SURVEY/SAMPLE LOCATIONS

<u>SECTOR & SAMPLE ID#</u>	<u>LOCATION DESIGNATION</u>	<u>DISTANCE FROM SITE**</u>	<u>AZIMUTH^o</u>	<u>ERPA(S)</u>
K-1 (onsite)	Intersection of Lake Road and E. I. C. Rd by Env. Sta. F.	0.8 miles	211 ^o	1
K-2 (offsite)	Intersection of Miner Road and Lakeview Road.	1.6 miles	189 ^o	1,3
K-3 (offsite)	Intersection of County Route 1 (North Road) and Creamery Road.	2.6 miles	205 ^o	3,5,6
K-4 (offsite)	Scriba - intersection of Route 104, Creamery Road and Klocks Corners Road.	3.9 miles	194 ^o	5,6,10,11
K-5 (offsite)	Lansing - intersection of County Routes 4 & 53.	5.7 miles	201 ^o	11,19
K-6 (offsite)	0.55 miles east of the corner of Route 53 and Dutch Ridge Road by Environmental Station F.	7.6 miles	193 ^o	19
K-7 (offsite)	Minetto - intersection of County Route 48 and Worden Road.	9.0 miles	201 ^o	21
L-1 (onsite)	Energy Information Center access road, approx. 600' from Lake Road.	0.5 miles	224 ^o	1
L-2 (offsite)	Intersection of Lakeview and Lake Road (Co. Rt. 1A).	1.4 miles	219 ^o	1,3
L-3 (offsite)	Walker - intersection of County Routes 1 and 1A.	3.1 miles	221 ^o	3,6
L-4 (offsite)	100' N of Seneca St. on St. Paul's Cemetery Road by Env. Sta. G.	5.2 miles	226 ^o	12
L-5 (offsite)	Oswego - inter. of Rtes. 104 & 57.	6.6 miles	229 ^o	12
L-6 (offsite)	SUNY at Oswego - intersection of Route 104 and college access road.	8.1 miles	232 ^o	22
L-7 (offsite)	Oswego Center - intersection of County Routes 7 and 20.	9.6 miles	220 ^o	20
M-1 (onsite)	Energy Information Center access road - approx. 60' from building.	0.5 miles	246 ^o	1
M-2 (onsite)	Meteorological Tower.	0.8 miles	250 ^o	1
N-1 (onsite)	Energy Information Center.	0.4 miles	265 ^o	1

**Center of site is NMP Unit 2.

CONTROLLED 27

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: EAP-11

TITLE: SITE EVACUATION*

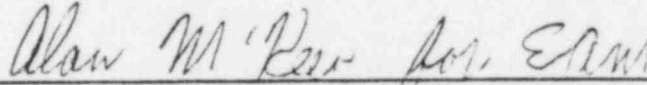
PORC REVIEW: MEETING NO. 86-003 Date 1-8-86

APPROVED BY:



Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

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REV. NO.	1	3	1	1	1	3	3	1	4	4	3

Rev. No. 4

Date: 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-11

SITE EVACUATION*

1.0 PURPOSE

This procedure provides instructions for the orderly evacuation of personnel from the site to a remote assembly area, or home.

2.0 REFERENCES

2.1 RPOP-2 PERSONNEL DECONTAMINATION

2.2 EAP-4 DOSE ESTIMATES FROM DOSE ASSESSMENT CALCULATOR

2.3 EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES

2.4 EAP-8 PERSONNEL ACCOUNTABILITY

2.5 EAP-9 SEARCH AND RESCUE OPERATIONS

2.6 EAP-18 PROTECTIVE ACTION RECOMMENDATIONS

2.7 RADIATION PROTECTION PROCEDURES

2.8 Definitions

2.8.1 Protected Area - That area of JAFNPP within the security patrolled fence.

2.8.2 Exclusion Area - The Authority and NMPC property around the protected area in which the licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area.

2.8.3 Restricted Area Evacuation - Evacuation of all personnel within the restricted area of the plant to their designated assembly areas.

2.8.4 Site Evacuation - Evacuation of all nonessential personnel from within protected area to their homes or to the designated remote assembly area; and, as appropriate, the evacuation of individuals from the Energy Information Center to their homes or a designated remote assembly area.

- 2.8.5 Remote Assembly Area - Specific location outside of the exclusion area for the assembly of personnel in the event of a Site Evacuation. The primary remote assembly area is the Niagara Mohawk Service Center on Howard Road, Fulton, N.Y. (alternate EOF).

3.0 INITIATING EVENT

- 3.1 A site evacuation shall be implemented upon occurrence of one or more of the following abnormal conditions:
- 3.1.1 Radiological conditions in any previously Unrestricted Area, (including areas on-site but outside of plant buildings), which will result in personnel dose rates in excess of 5 mrem/hr or a projected dose in excess of 100 mrem whole body and/or airborne radioactivity in excess of 1 MPC or 40 MPC-hrs/week from uncontrolled sources of radiation as determined by the results of EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY.
- 3.1.2 Significant ground level atmospheric releases have occurred or are projected to occur.
- 3.1.3 Other safety hazards, such as toxic gases, flammable gases, and/or fire affect widespread areas on-site and, in particular, the primary assembly areas.
- 3.1.4 Adverse weather conditions such as floods, hurricanes, or tornadoes are present or are expected to occur. Normally in the case of adverse weather, advance weather warnings will provide adequate time for an orderly dismissal of plant personnel without the need for evacuation.
- 3.1.5 An immediate site evacuation should be implemented upon occurrence of radiological conditions in widespread areas on-site of such magnitude that personnel exposures in excess of 5 rem whole body or 25 rem thyroid would be likely based on EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY if a normal site evacuation was implemented.
- 3.2 The implementation of a site evacuation shall be ordered after it has been determined that it is the protective action which will result in the lowest personnel exposure. Site evacuations shall be initiated either before or after the passage of the release, and evacuation routes shall be chosen to lead personnel

away from the path of the plume. The Emergency Director shall consider the dose rates at the personnel assembly area, dose rates on-site, dose rates along evacuation routes, number of personnel on-site, whether or not the emergency can be mitigated prior to personnel receiving significant exposures.

4.0 PROCEDURE

4.1 Site Evacuation - No OffSite Radiological Considerations:

- 4.1.1 If the Emergency Director determines that the site should be evacuated and no radiological hazards exist outside the plant based on EAP-4 DOSE ESTIMATES FROM DOSE ASSESSMENT CALCULATOR or EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES, the following actions shall be taken:

NOTE: The term Emergency Director shall be used throughout this procedure although the Emergency Director may delegate any of these tasks.

- 4.1.1.1 The Emergency Director shall determine which personnel are to remain at the site (e.g., Security, RES personnel, operators, etc). These personnel shall be notified that they are to remain onsite and that non-essential personnel are to be evacuated. The Emergency Director or designee will also notify the personnel where to report and what safety precautions are to be observed.
- 4.1.1.2 The Emergency Director shall notify the security force that non-essential personnel are going to be evacuated from the site and that they should stand by to implement EAP-8 PERSONNEL ACCOUNTABILITY. Advise the security force that personnel dosimetry is to be collected at the gate.
- 4.1.1.3 If a restricted area evacuation has already been called and personnel are at their primary assembly areas the Emergency Director shall contact each of the assembly areas and direct that non-essential personnel are to leave the site. Personnel should be advised that the evacuation is not urgent and no off-site radiological hazards are present.

The Emergency Director shall advise of any evacuation route restrictions or whether personnel should use normal routes, if known. Calls to the

assembly areas should be staggered to avoid large crowds at the security buildings. Use the form EAP-11.1 as a checklist for contacting assembly areas.

The Emergency Director shall designate one evacuee as the responsible individual at the remote assembly area. Instruct this person to contact the Emergency Director upon arrival at that area for further instructions.

- 4.1.1.4 If a restricted area evacuation has not been called and the Emergency Director decides that all non-essential personnel should proceed directly off-site he shall direct the Control Room Operator to sound the evacuation tone using the multitone generator.

The Control Room Operator shall announce the following over the page party system (including all buildings and area within the exclusion areas):

ATTENTION ALL STATION PERSONNEL. ALL PERSONNEL EXCEPT THOSE WITH EMERGENCY ASSIGNMENTS SHALL EVACUATE THE SITE PROMPTLY AND ORDERLY. PROCEED TO THE PRIMARY SECURITY BUILDING, TURN-IN YOUR SECURITY BADGE AND DOSIMETRY, PROCEED HOME.

Repeat the alarm and the announcement three additional times at one minute intervals.

- 4.1.1.5 After non-essential personnel are evacuated from the site, the security force shall complete EAP-8 PERSONNEL ACCOUNTABILITY and report the results to the Emergency Director.

- 4.1.1.6 The Emergency Director, when notified by security, if necessary shall proceed with EAP-9 SEARCH AND RESCUE OPERATIONS to find any person(s) not accounted for.

4.2 Site Evacuation - Offsite Radiological Considerations:

- 4.2.1 The specific actions to be taken will vary greatly with the type of incident, magnitude of offsite releases and degree of urgency in evacuating personnel from the site. The actions given in this section are intended to provide guidance to the Emergency Director in determining the specific actions to be taken.

- 4.2.2 Prior to directing the evacuation of personnel, the Emergency Director shall assess onsite and offsite radiological conditions, determine the plume pathway from EAP-4 DOSE ESTIMATES FROM DOSE ASSESSMENT CALCULATOR or EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES and select an evacuation route or routes which avoids the plume pathway to the greatest extent possible. If protective action recommendations to off-site authorities have been made using EAP-18 PROTECTIVE ACTION RECOMMENDATIONS, consider actions recommended and use Attachment 11.2 to insure continuity of evacuation routes. Make an estimate of the potential dose to personnel from an evacuation and consider the possibility of delaying evacuation until the release is terminated or the plume passes.
- 4.2.3 All of the personnel evacuated from the site shall be directed to assemble at an off-site location by the Emergency Director. Determine if the primary remote assembly area (Niagara Mohawk Service Center) is an acceptable facility based on offsite dose estimates at that location. If it is not, designate another area to serve as the remote assembly area. Determine the advisability of setting up stations for monitoring and/or decontamination of personnel and vehicles evacuated from the site at the remote assembly area.
- 4.2.4 The Emergency Director shall determine which personnel are to remain at the site. If significant personnel exposure is anticipated, select the personnel with the lowest accumulated quarterly exposure, if possible. Prepare a list and request these individuals not to evacuate, instruct them where to report.
- 4.2.5 Based on radiological conditions, the Emergency Director shall decide whether or not personnel should use normal exits or if the main gates are to be opened. Decide whether or not the evacuation should be staggered or if all non-essential personnel should be released at once.
- 4.2.6 The Emergency Director shall determine if any road blocks or special traffic arrangements are necessary to facilitate evacuation or the setup of monitoring stations. Also if the EOF is operable notify that emergency facility of the radiological conditions that have mandated the site evacuation.

4.2.7 The Emergency Director shall designate one evacuee as the responsible individual at the remote assembly area. Instruct this person to contact the Emergency Director upon arrival at that area, for further instructions.

4.2.8 The Emergency Director shall contact Security and advise them of the intended course of action, the route, the designated assembly area and whether or not to collect dosimetry devices. Request that they stand by to implement EAP-8 PERSONNEL ACCOUNTABILITY.

NOTE: If evacuation to the remote assembly area is ordered, the Emergency Director will contact Security and advise them to distribute copies of Attachment 11.3 to personnel who are exiting the site.

4.2.9 The Radiological Support Coordinator shall be directed by the Emergency Director to dispatch a Radiation Survey Team to report to the parking lot to evaluate contamination on cars. Time permitting, cars found to be contaminated to levels greater than 100 cpm above background should be hosed at the warehouse fire hose valve located adjacent to the primary parking area in accordance with RADIATION PROTECTION PROCEDURES. Otherwise, cars should be decontaminated at the remote assembly area once they arrive.

4.2.10 The Emergency Director shall contact the control room and advise the Shift Supervisor of the intended course of action. If it has been decided to release all non-essential personnel at once, give the Shift Supervisor the appropriate announcement to be made in conjunction with the Evacuation Alarm (routes, assembly, etc.).

4.2.11 If a restricted area evacuation has been ordered and plant personnel are assembled at the primary assembly areas and it has been decided to evacuate on a staggered basis, the Emergency Director shall notify each assembly area using the form EAP-11.1 and advise them of actions to be taken (routes, assembly, etc.)

4.2.12 If a restricted area evacuation has not been ordered and the Emergency Director decides that all non-essential personnel should proceed directly off-site, he or she shall:

- 4.2.12.1 Direct the Control Room Operator to sound the evacuation tone using the multitone generator.
- 4.2.12.2 Direct the Control Room Operator to announce the following over the page party system (including all buildings and area within the exclusion area(s):

ATTENTION ALL STATION PERSONNEL. ALL PERSONNEL EXCEPT THOSE WITH EMERGENCY ASSIGNMENTS SHALL EVACUATE THE SITE PROMPTLY AND ORDERLY. PROCEED TO THE PRIMARY SECURITY BUILDING, TURN-IN YOUR SECURITY BADGE AND DOSIMETRY, PROCEED TO THE REMOTE ASSEMBLY AREA (designate).

(Continue with additional instructions as necessary.)

- 4.2.12.3 Notify the NMP-1 SS in the event that the site is being evacuated. Request the NMP-1 SS to instruct Niagara Mohawk Security to unlock the Niagara Mohawk Fulton Service Center.
- 4.2.12.4 Repeat the alarm and the announcement three additional times at one minute intervals.
- 4.2.12.5 Direct Security to implement appropriate personnel accountability measures as provided in EAP-8, PERSONNEL ACCOUNTABILITY.
- 4.2.12.6 Personnel within the restricted area should proceed to the designated assembly area, without delaying at the Health Physics Access Control Point for monitoring. Personnel should don a clean pair of coveralls over their potentially contaminated clothing. Otherwise, personnel should proceed to the designated assembly area.
- 4.2.12.7 Direct a radiation survey team to the remote assembly area with portable friskers. Personnel found to be contaminated should be decontaminated using RPOP-2 as a guide.
- 4.2.12.8 If necessary, based on the outcome of accountability efforts or other reports, direct Security to initiate search and rescue measures as provided in EAP-9, SEARCH AND RESCUE OPERATIONS.

4.2.12.9 When the site evacuation is complete, Security personnel not necessary to maintain an appropriate security posture should be directed to remote assembly area to await further instructions. Security personnel will be instructed to insure continuity with their own contingency plans.

4.2.12.10 Upon decontamination of personnel and autos at the remote assembly area, the Emergency Director may dismiss personnel if desired.

4.2.13 The Radiological Support Coordinator shall determine the need and extent for personal vehicle monitoring and additional personnel monitoring and will establish appropriate monitoring stations at the remote assembly area.

5.0 FIGURES, FORMS AND ATTACHMENTS

5.1 Form EAP-11.1, Contact List for Site Evacuation

5.2 Attachment 11.2, Emergency Planning Zones and Evacuation Routes

5.3 Attachment 11.3, Remote Assembly Area

FORM EAP-11.1

CONTACT LIST FOR SITE EVACUATION

		<u>NOTIFIED</u>	
		Time	/ Initials
CONTROL ROOM	310	_____	_____
TSC	449	_____	_____
MAINTENANCE SHOP	225	_____	_____
I & C SHOP	235	_____	_____
RADIATION PROTECTION OFFICE	246	_____	_____
NEW ADMINISTRATION BUILDING	437, 280	_____	_____
SECONDARY ACCESS BUILDING	428, 430	_____	_____
MAIN ACCESS BUILDING	283, 282	_____	_____



CITY OF OSWEGO

SCALE

0 1 2 3 4 5 6 7 8 9 10

1000 FEET

1000 METERS

1000 YARDS

1000 MILES

1000 KILOMETERS

1000 KILOMETERS

1000 KILOMETERS

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Primary Evacuation Routes

James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures

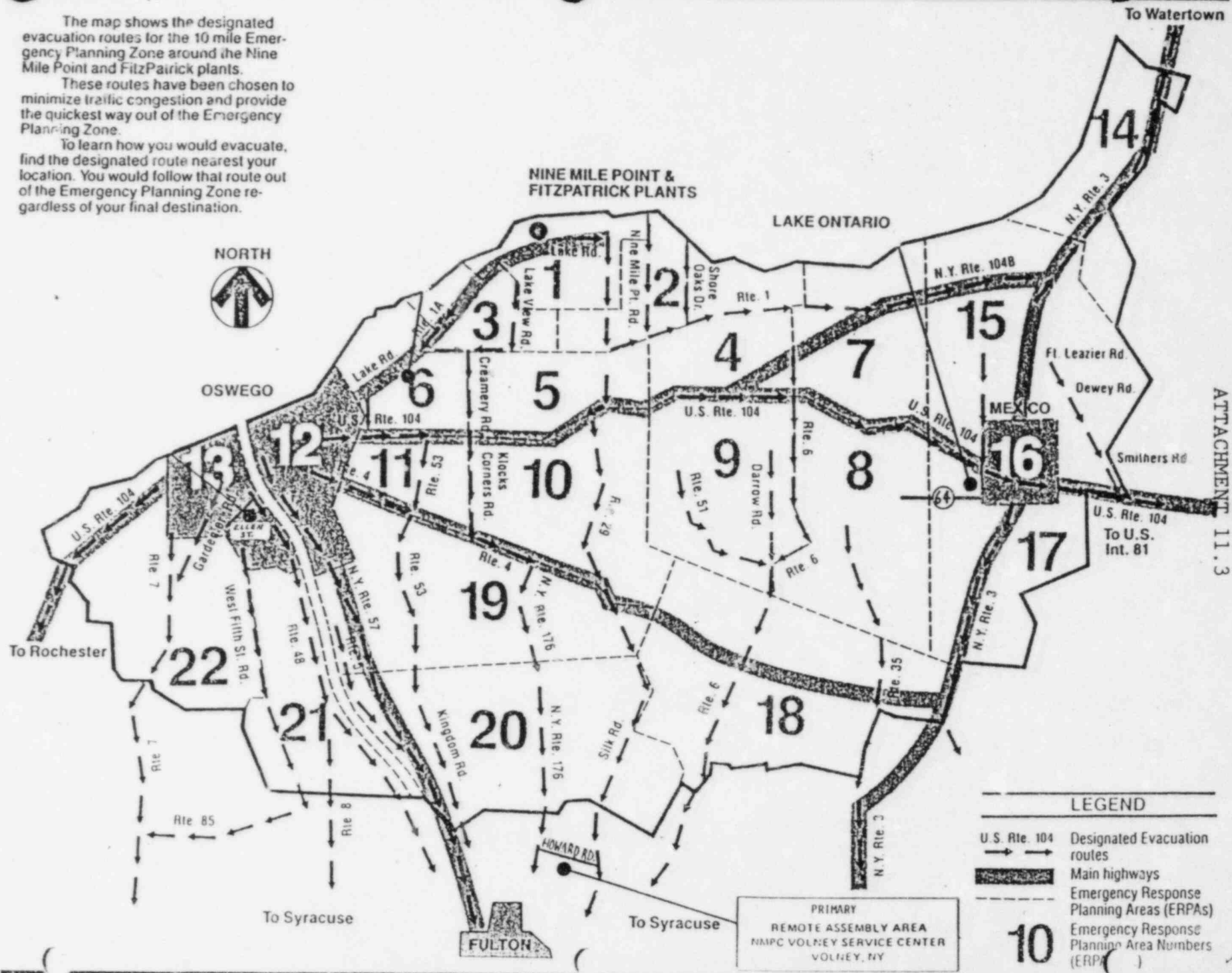
TI
APERTURE
CARD

MAP NUMBER 8

Also Available On
Aperture Card

8603200053-05

To learn how you would evacuate, find the designated route nearest your location. You would follow that route out of the Emergency Planning Zone regardless of your final destination.



ATTACHMENT 11.3

CONTROLLED 27

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: EAP-17

TITLE: EMERGENCY ORGANIZATION STAFFING*

PORC REVIEW: Meeting No. 86-007 Date 2-5-86

APPROVED BY: *A. Carver*
Resident Manager

APPROVED BY: *Ed Mulcahey*
Radiological and Environmental
Services Superintendent

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EMERGENCY ORGANIZATION ASSIGNMENTS
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Emergency Organization Personnel	Phone Number	Emergency Organization Title	Reporting Location
Abbott, Bruce	963-8923	Out of Plant Survey Coord/Dispatcher (A)	TSC
Abbott, Peter	298-5509	Shift Supervisor (P)	CR
Allen, Cynthia	298-4547	Clerical/Registration (P)	JNC
Allen, K. Shawn	343-2546	Assistant Shift Supervisor (P)	CR
Auchampau, Judy	298-6484	Emergency Log Keeper (P)	EOF
Austin, Clara	963-7045	Clerical/Registration (P)	JNC
Austin, John	342-2860	Administrative Manager (P)	JNC
Avrakotos, Nicholas	342-5257	Emergency Director Aide (P)	TSC/EOF
Baker, Robert	342-0871	Manager (A)	TSC
Bathie, James	593-7383	Manager (A)	OSC
Benson, Michael	343-8022	Communications (A)	TSC
Bergene, Theodore	342-4482	ALARA Supervisor (P)	TSC/OSC
Bernstein, Boris	947-5846	Plant Engineer (A)	TSC
Berzins, Elwood	963-8188	Public Information Liaison (P)	TSC/EOF
	963-8869		
Bogart, Kenneth	963-8618	Communicators (A)	EOF
Bostian, Bonnie	343-7592	Clerical/Registration (P)	JNC
Brons, Jack	914-762-7362	Recovery Manager (P)	EOF
Brown, Charles	622-1669	Plant Engineer (A)	TSC
Brozenich, Paul	342-3897	Shift Supervisor (P)	CR
Burch, David	342-4428	Reactor Analyst (P)	CR
Burns, Robert	203-431-0608	Recovery Manager (A)	EOF
Butler, Thomas	298-4531	Emergency Director Aide (A)	TSC/EOF
Carlson, Bennett	598-1445	NYS RECS Communicator (P)	TSC
Castaldo, Elizabeth	342-0026	Clerk (P)	EOF
Catella, Frederick	298-5718	Manager (A)	EOF
Chaldu, Patricia	343-8653	Staffing Coordinator (A)	EOF
Childs, Verne	963-3832	Technical Support (P)	JNC
Claxton, Randy	592-5441	Radiation Data Coordinator (A)	EOF
Clemmens, Anne	343-2680	Clerical/Registration (P)	JNC
Clemons, Monica	963-3584	Clerk (A)	EOF
Coffey, Thomas	342-5527	Plant Computer Operator (P)	EOF
Conger, Edward	695-5312	Stock/Warehouseing (A)	OSC
Converse, Radford	343-8613	Emergency Director (A)	TSC/EOF

(P) = Primary

(A) = Alternate

EMERGENCY ORGANIZATION ASSIGNMENTS
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Emergency Organization Personnel	Phone Number	Emergency Organization Title	Reporting Location
Cottongim, Arlene	699-8696	Telephone/Telecopy Operator (A)	TSC
Curran, Andrew	564-6656	Technical Liaison (A)	EOF
Daby, Steven	298-4709	Clerical/Registration (A)	JNC
Daczkowski, Wallace	622-2262	Environmental Sample Coordinator (A)	EOF
DeNeve, Richard	695-6342	Dose Assessment Coordinator (A)	EOF
Dietz, Rose	343-4307	Clerical/Registration (P)	JNC
Donovan, Laura	342-4587	Clerk (P)	EOF
Dull, Duane	963-7138	Inplant Coordinator/Dispatcher (A)	TSC/OSC
Dull, Lisa	963-7138	Clerical/Registration (A)	JNC
Durr, Ellen	343-6084	Telephone/Telecopy Operator (P)	TSC
Egelston, Barbara	343-0059	Public Information Liaison (A)	TSC/EOF
Erkan, John	342-4852	Plant Engineer (P)	TSC
Fernandez, William	343-2923	Manager (P)	TSC
		Emergency Director (A)	TSC/EOF
Fish, Hamilton	446-7400	Public Information Technical Asst (A)	TSC/EOF
Fitzgerald, John	458-8987	Manager (P)	OSC
Flaherty, Joseph	598-8186	Communications and Records Coordinator (A)	TSC
Fox Mary	343-7794	Clerk (P)	EOF
Frawley, Patrick	343-3589	Staffing Coordinator (P)	EOF
Fronk, Gary	593-7965	Dose Assessment Coordinator (P)	EOF
Gambill, Jerry	457-1220	Accountability Supervisor (A)	JAF
Gannon, Cornelius	343-2336	Radiation Protection Supervisor (P)	TSC/OSC
Goodroe, Kenneth	343-2737	Manager (A)	OSC
Gorman, Barrie	342-0115	Plant Chemistry & Environ Super (P)	TSC/OSC
Grandy, Boyd	343-8082	Manager (A)	OSC
Grodi, David	343-4297	Communicator (P)	EOF
Haas, Henry	797-3712	Accountability Supervisor (P)	JAF
Haley, James	343-4008	Security Coordinator (A)	TSC
Halstead, Dawn	593-6619	Emergency Log Keeper (A)	TSC
Hamblin, William	964-2695	Plant Chemistry & Environ Super (A)	TSC/OSC
Hanley, Frances	343-6308	Emergency Log Keeper (P)	TSC
Hansen, Mogens	592-4620	Plant Engineer (P)	TSC
Hart, David	298-4085	Communicator (P)	EOF

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Emergency Organization Personnel	Phone Number	Emergency Organization Title	Reporting Location	
Heath, Alan	342-5366	Security Coordinator (P)	JNC	
Herrmann, Terry	598-5251	Plant Engineer (P)	TSC	
Holliday, Arnold	963-7133	Manager (A)	OSC	
Holliday, David	343-3224	Technical Support (P)	JNC	
Hoy, Norman	638-4972	Plant Engineer (P)	TSC	
Hyne, Edward	652-5065	Assistant Shift Supervisor (P)	CR	
Jensen, Stuart	298-6428	Radiation Data Coordinator (P)	EOF	
Johnson, Daniel	342-4368	Shift Supervisor (P)	CR	
Johnson, Sharon	343-7936	Clerk (A)	EOF	
Jones, Larry	343-4714	Plant Engineer (A)	TSC	
Juravich, Stephen	343-3249	NRC Communicator (P)	TSC	
Karsten, Richard	622-2562	Communicator (A)	EOF	
Keith, Hartford	342-0515	Communications and Records Coord (P)	TSC	
Kieper, Dennis	342-3182	I & C Supervisor (A)	OSC	
Kilpeck, Kevin	451-6910	NYS RECS Communicator (A)	TSC	
Klinger, James	298-4349	Communications (P)	TSC	
Lawton, Robert	963-7577	Communications (A)	TSC	
Lindsey, Douglas	598-6770	Operations Coordinator (P)	CR	
Liseno, Robert	298-2094	Emergency Maintenance Coordinator (P)	TSC	
Locy, Roger	343-3444	Operations Coordinator (A)	CR	
LoTempio, Andrea	342-2759	Clerical/Registration (A)	JNC	
LoTempio, Peter	342-2759	Purchasing/Accounting (P)	EOF	
Lyons, John	343-5524	Technical Coordinator (A)	TSC	
MacCammon, Gordon	298-4323	Accountability Supervisor (A)	JAF	
Maki, Robert	342-3815	Shift Supervisor (P)	CR	
Maniccia, Theresa	343-3588	Dose Assessment Clerk/Assistant (P)	TSC	
Mariano, Bonnie	342-3095	Clerical/Registration (P)	JNC	
Mason, Carolyn	668-7148	Clerical/Registration (A)	JNC	
Mather, Timothy	343-2561	Communicator (A)	EOF	
Matthews, Ronald	652-9304	I & C Supervisor (P)	OSC	
McCarty, John	298-5576	Dose Assessment Coord. (A)	TSC/EOF	
McDougal, Floyd	232-2654	Switchboard Operator (P)	EOF	
McGrath, Mella	342-1682	Clerical/Registration (P)	JNC	

(P) = Primary
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TABLE 5.2

EMERGENCY ORGANIZATION ASSIGNMENTS MONTH/YEAR ASSIGNMENT 10/85

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Emergency Organization Personnel	Phone Number	Emergency Organization Title	Reporting Location
McKeen, Alan	451-9207	Radiation Support Coordinator (A)	TSC/EOF
M Mahon, Mark	564-5194	ALARA Supervisor (A)	TSC/OSC
McMillen, Marilyn	695-2232	Switchboard Operator (A)	EOF
Milesi, Leo	488-7538	Security Coordinator (A)	JNC
Moreau, Claude	342-5085	Communicator (A)	EOF
Morris, James	342-5029	Communicator (P)	EOF
Moskalyk, Thomas	635-7262	Manager (A)	TSC
Mott, Deborah	342-5452	Telephone/Telecopy Operator (A)	TSC
Mulcahey, Eric	343-1510	Radiation Support Coordinator (P)	TSC/EOF
Nelson, Nancy	963-3938	Emergency Log Keeper (A)	EOF
Pelton, Thomas	652-7313	Assistant Shift Supervisor (P)	CR
Peters, Robert	343-8440	Maintenance Engineer (P)	OSC
Pike, Robert	342-1978	Assistant Shift Supervisor (P)	CR
Pirong, Richard	635-6959	Plant Computer Operator (P)	TSC
Pitsley, Cheryl	343-2728	Clerical/Registration (P)	JNC
Plumpton, Thomas	598-4691	Shift Supervisor (P)	CR
Pobutkiewicz, Stanley	633-8890	Plant Computer Operator (A)	TSC
Pozzuoli, Henry	695-6438	Communicator (P)	EOF
Prarie, Calvin M.	342-3915	Out-of-Plant Coord/Dispatcher (P)	TSC
Primeau, Gerald	343-6836	Clerical/Registration (A)	JNC
Pritchard, Sherry	343-9632	Communicator (A)	EOF
Proctor, Wesley	342-3306	Public Information Technical Asst (A)	TSC/EOF
Prokop, Jerome	342-2716	Public Information Technical Asst (P)	TSC/EOF
Prucnal, Beverly	343-3654	Administrative Manager (A)	JNC
Ramstad, Robert	342-2667	Stock/Warehouseing (P)	OSC
Recknall, James	342-3341	Plant Computer Operator (A)	EOF
Reich, Lise	598-8090	Telephone/Telecopy Operator (P)	TSC
Robert, Dennis	963-8874	Waste Management (A)	CR
Robinson, William	696-8738	NRC Communicator (A)	TSC
Romanowski, Joseph	342-3029	Technical Liaison (P)	EOF
Ruddy, Daniel	342-0032	Maintenance Engineer (A)	OSC
Sanford, Randy	343-9414	Offsite Security Coordinator (A)	EOF
Sarkissian, Robert	342-2417	Assistant Shift Supervisor (P)	CR

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<u>Emergency Organization Personnel</u>	<u>Phone Number</u>	<u>Emergency Organization Title</u>	<u>Reporting Location</u>
Schadt, John	963-3918	Purchasing/Accounting (A)	EOF
Schilling, Richard	342-2371	Shift Supervisor (P)	CR
Schlau, Peter	343-3249	Maintenance Engineer (A)	OSC
Scott, John	963-3891	Communicators (P)	EOF
Shafer, Harold	298-6035	JAF Radio Operator (A)	EOF
Shannon, Marlene	343-1661	Clerk (A)	EOF
Sherman, Jodi	342-5735	Clerical/Registration (A)	JNC
Simpson, Donald	343-5614	Manager (P)	EOF
Snyder, Lisa	963-3546	Clerical/Registration (A)	JNC
Solini, John	622-3420	Environmental Sample Coordinator (P)	EOF
Sova, Karen	343-7933	Dose Assessment Clerk/Assistant (A)	TSC
Squires, Douglas	963-8520	Assistant Shift Supervisor (P)	CR
Steere, Richard	938-5145	Clerical/Registration (A)	JNC
Stoutenger, JoAnn	342-1208	Clerical/Registration (A)	JNC
Street, John	343-9404	NYS RECS Communicator (A)	TSC
Swinburne, Paul	343-7868	JAFNPP Licensing Rep to Oswego County (A)	OCEOC
Symborski, Daun	343-2306	Clerical/Registration (P)	JNC
Szeluga, Kurt	343-5312	Rad Protection Supervisor (A)	TSC/OSC
Teifke, Thomas	963-7472	Security Coordinator (P)	TSC
Tiner, Gregory	457-9594	JAF Radio Operator (P)	EOF
Tolbert, John	598-6326	Reactor Analyst (A)	CR
Torbitt, Donald	593-7629	Assistant Shift Supervisor (P)	CR
Vargo, George	598-7845	Dose Assessment Coordinator (P)	TSC/EOF
Vickery, Raymond	343-6662	Clerical/Registration (A)	JNC
Walker, Kelly	598-8261	Rad Support Coordinator (P)	EOF
Walker, Paul	963-7741	Shift Supervisor (P)	CR
Wallace, David	342-4367	JAFNPP Licensing Rep to Oswego County (P)	OCEOC
Walz, Victor	564-6302	Technical Coordinator (P)	TSC
Warchol, Michael	964-2413	Offsite Security Coordinator (P)	EOF
Wierowski, James	716-482-6379	Radiation Support Coordinator (A)	EOF
Wiese, Richard	457-4403	Emergency Maintenance Coordinator (A)	TSC
Zimmerman, Donald	343-7885	Implant Survey Coord/Dispatcher (P)	TSC/OSC
Zufelt, Edison	298-5956	Communications (P)	TSC

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NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

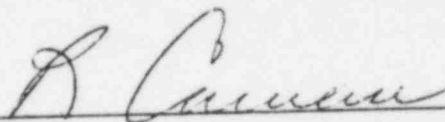
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: EAP-18

TITLE: PROTECTIVE ACTION RECOMMENDATIONS*

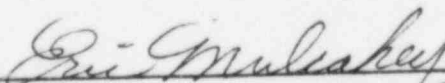
PORC REVIEW: Meeting No. 86-007 Date 2-5-86

APPROVED BY:



Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

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DATE: 02/86

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-18

PROTECTIVE ACTION RECOMMENDATIONS*

1.0 PURPOSE

This procedure provides guidelines for determining protective action recommendations to be given to state and local officials. Because protective action decisions could be influenced by factors not included here, use this procedure with common sense and good judgement.

2.0 REFERENCES

- 2.1 EAP-4 DOSE ASSESSMENT CALCULATIONS.
- 2.2 EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES.
- 2.3 EAP-12 DOSE ESTIMATED FROM AN ACCIDENTAL RELEASE OF RADIOACTIVE MATERIAL TO LAKE ONTARIO.
- 2.4 HIGH RANGE CONTAINMENT MONITOR RESPONSE TO POST ACCIDENT FISSION PRODUCT RELEASES - JAMES A. FITZPATRICK NUCLEAR POWER PLANT, SL-4370, SARGEANT LUNDY, MAY 1985.
- 2.5 OSWEGO COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN, NINE MILE POINT NUCLEAR STATION AND JAMES A. FITZPATRICK NUCLEAR POWER STATION, APPENDIX A, JULY 1981.
- 2.6 MANUAL OF PROTECTIVE ACTION GUIDES AND PROTECTIVE ACTIONS FOR NUCLEAR INCIDENTS, SEPTEMBER 1975.
- 2.7 SAND 77-1725 (UNLIMITED RELEASE).
- 2.8 NRC I & E NOTICE NO. 83-28.
- 2.9 PARSONS BRINKERHOFF REPORT, 1984 POPULATION ESTIMATES.
- 2.10 GE NEDO-22215 PROCEDURES FOR THE DETERMINATION OF THE EXTENT OF CORE DAMAGE UNDER ACCIDENT CONDITIONS.
- 2.11 RTP-34 CONTAINMENT RADIATION MONITORING - POST ACCIDENT.

3.0 INITIATING EVENTS

Offsite dose estimates have been completed via reference 2.1, 2.2 or 2.3.

4.0 PROCEDURE

NOTE: If a GENERAL EMERGENCY has been declared, refer to Figure EAP-18.8, "Criteria for Protective Action Recommendations for General Emergencies" and Attachment 1, "Evaluation of Containment Exposure Rates" for guidance.

Radiological Support Coordinator or designee shall:

Perform step 4.1 to determine airborne protective action recommendations and/or step 4.2 to determine waterborne protective action recommendations.

4.1 Airborne Protective Actions (Record results on Airborne Worksheet Form EAP-18.1.)

4.1.1 Projected whole body and thyroid doses shall be obtained from the individual performing EAP-4 DOSE ASSESSMENT CALCULATIONS. As accurate field data becomes available, EAP-7.2 DOWNWIND SURVEY DOSE ESTIMATES results should be used to refine the initial projected doses as the most reliable in determining protective action recommendations.

4.1.2 It will be necessary to use Form EAP-18.1 to record information obtained from EAP-4 and/or EAP-7.2.

4.1.3 When performing EAP-4, data will be made available from one of three types of calculations (i.e. IDAC, Class A Model and/or Dose Calculator). A description of how to use this data to determine protective action recommendations follows:

4.1.3.1 Using IDAC Output to Determine PARs:

It is first necessary to determine what ERPAs the plume has possibly affected and then obtain the three displays from IDAC and perform the following calculations on separate EAP-18.1 forms:

A. For each affected ERPA, assign the highest IDAC data (i.e. X/Q, Whole Body and Thyroid Dose) that could be associated with that ERPA in order to perform PAR calculations.

Ex: ERPA #1 PARs would most likely be based on calculations which use either the .3, .6 or 1.2 mile centerline doses whichever is highest.

ERPA #2 and #3 PARs would most likely be based on calculations which use 2 mile centerline doses.

In cases such as ERPA #5 which lies between the 2 and 5 mile points, it will be necessary to choose the higher of the two doses when performing the PAR calculation.

B. Determine the evacuation time for the area (ERPA) of concern for which protective action recommendations will be determined:

1. Determine and record the prevailing weather conditions. (Adverse weather consists of conditions considered to cause a slippery roadway and/or reduced visibility. Normal weather conditions are considered to be clear sky and dry roadway.)
2. Determine and record the prevailing scenario based on those delineated on the Evacuation Time Estimates Figure EAP-18.2.
3. Using the Evacuation Time Estimates Figure EAP-18.2 and the information previously recorded on the Airborne Worksheet, determine and record the evacuation time for the area (ERPA) of interest. The Evacuation Time Estimate should be for the resident population with autos, unless a request is made for one of the other population subgroups.

C. Complete the calculations on the table of the Airborne Worksheet to determine the doses to the population in the ERPA of concern if they took shelter and if they evacuated.

NOTE: Shelter dose and projected dose for the whole body will only be different if the county supplies additional

information regarding the sheltering of individuals in some type of structure. Based on the county's information and referring to Figure EAP-18.3, a Shelter Shielding Factor other than 1.0 may be appropriate and shelter dose may then be less than projected dose.

- D. Based on the results obtained in Step C above, refer to the Whole Body and Thyroid Guidance Chart Figure EAP-18.4 to determine the whole body and thyroid indicated actions. Record this result by circling the chosen indicated action on the Airborne Worksheet.
- E. Based on the results of Step D above, determine the more severe (i.e., evacuation is more severe than sheltering) of the two indicated actions and circle it as the protective action recommendation on the Airborne Worksheet. Record the date, time and signature.
- F. Record the protective action recommendation determined in Step E above on the Protective Action Map Figure EAP-18.6 (ERPAs).
- G. Complete the Protective Action Map after all EAP-18.1 forms have been completed. Record date, time, signature and any additional comments necessary for clarity. Also, attach all completed EAP-18.1 forms.
- H. Transmit the completed Protective Action Map and forms to the Emergency Director or Recovery Manager for approval and signature.
- I. Once the Emergency Director has reviewed and approved of the protective action recommendations as noted by signature on the Protective Action Map, inform the appropriate agencies in accordance with EAP-1.1 OFFSITE NOTIFICATIONS.

J. Repeat this procedure for each area (ERPA) of interest for which projected doses have been calculated taking into account the following:

1. Consideration should be given to recommend the same or lower protective actions for adjacent ERPAs.
2. During lake breeze conditions (i.e. when the wind direction is anywhere between 230° and 90°) take into account the uncertainty in the plume location. Protective action recommendations shall include an area 22½° either side of the indicated wind direction.
3. Protective action recommendations will be made for entire ERPAs even though only a portion of that ERPA may be affected.

4.1.3.2

Using Class A Model output to determine PARS:

It is first necessary to determine what ERPAs the plume has possibly affected and then obtain projected doses for those areas in order to perform the following calculations on form EAP-18.1:

- A. For each affected ERPA, use the highest 6 hour projected receptor dose in that ERPA to perform PAR calculations on form EAP-18.1. Continue with Steps B through I listed under Section 4.1.3.1.
- B. Repeat this procedure for each area (ERPA) of interest for which projected doses have been calculated.

4.1.3.3

Using Dose Estimate Calculator output to determine PARS:

- A. Obtain completed Form EAP-4.1 and use those projected doses for performing PAR calculations. Proceed with Steps B through G listed under section 4.1.3.1.

4.2 Waterborne Protective Actions

- 4.2.1 Record projected doses and estimated release duration, as obtained from EAP-12 DOSE ESTIMATED FROM AN ACCIDENTAL RELEASE OF RADIOACTIVE MATERIAL TO LAKE ONTARIO on the Waterborne Worksheet Form EAP-18.5.
- 4.2.2 Compare projected swimming (whole body and skin) and boating doses recorded, with Waterborne Protective Action Guides on the Waterborne Worksheet and determine the recommended action.
- 4.2.3 Based on results of step 4.2.2 above, take the higher recommended action and record this on the Protective Action Map Figure EAP-18.6. Record date/time and signature on the Waterborne Worksheet.
- 4.2.4 Complete the Protective Action Map by recording date, time, signature and any additional comments necessary for clarity.
- 4.2.5 Transmit completed Protective Action Map to the Emergency Director or Recovery Manager for approval and signature.
- 4.2.6 Once the Emergency Director or Recovery Manager has reviewed and approved the protective action recommendations as noted by signature on the Protective Action Map, inform the appropriate agencies in accordance with EAP-1.1 OFFSITE NOTIFICATIONS.

NOTE: The plume exposure pathway wall maps located in the Control Room, Technical Support Center and the Emergency Operations Facility may be used to determine and record protective action recommendations.

5.0 ATTACHMENTS

- 5.1 Form EAP-18.1, Airborne Worksheet
- 5.2 Figure EAP-18.2, Evacuation Time Estimates (14 pages)
- 5.3 Figure EAP-18.3, Representative Shielding Factors from Gamma Cloud Source

- 5.4 Figure EAP-18.4, Whole Body and Thyroid Guidance Chart
- 5.5 Form EAP-18.5, Waterborne Worksheet
- 5.6 Figure EAP-18.6, Protective Action Map - ERPA's
- 5.7 Figure EAP-18.7, Emergency Planning And You
- 5.8 Figure EAP-18.8, Flowchart for General Emergency Offsite Protective Decisions
- 5.9 Figure EAP-18.9, Containment Radiation Monitor Worksheet
- 5.10 Figure EAP-18.10, Approximate Source and Damage Estimate
- 5.11 Attachment 1, Evaluation of Containment Exposure Rates

DATE _____

WEATHER CONDITION NORMAL ADVERSE
 (CIRCLE ONE)

TIME ESTIMATE SCENARIO _____

EVACUATION TIME (hrs) _____

DOSE CONSIDERATION	PROJECTED DOSE (rem)	SHELTER DOSE (rem)	EVACUATION DOSE (rem)
WHOLE BODY	PD = _____	SD = PD X SSF SD = _____	IF $RD \geq \text{Evac Time}$ $ED = \frac{PD}{RD} \times \text{EV. T}$ IF $RD < \text{Evac Time}$ $ED = PD$ ED = _____
THYROID	PD = _____	FOR $RD \leq 2 \text{ hrs}$ $SD = PD \times .33$ FOR $RD > 2 \text{ hrs}$ $SD = PD \left(1 - \frac{1.34}{RD}\right)$ SD = _____	IF $RD \geq \text{Evac Time}$ $ED = \frac{PD}{RD} \times \text{EV. T}$ IF $RD < \text{Evac Time}$ $ED = PD$ ED = _____

KEY

OTHER

PD - PROJECTED DOSE
SD - SHELTER DOSE
ED - EVACUATION DOSE
SSF - STRUCTURAL SHIELDING
FACTOR (FIGURE EAP-18.3)
RD - RELEASE DURATION
Evac time - EVACUATION TIME
(FIGURE EAP-18.2)
ERPA - EMERGENCY RESPONSE
PLANNING AREA

"OTHER" EXPLANATION : _____

Figure EAP-18.2 (1 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
SCHOOL-IN-SESSION SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	From - To	Transients
	With Autos	Without Autos			
	From - To	From - To			
1	1.67 - 2.5	1.33 - 2.33	-	-	1.67 - 2.0
2	1.167 - 2.33	1.33 - 2.5	-	-	1.167 - 2.33
3	1.67 - 2.5	1.33 - 1.5	-	-	-
4	1.0 - 2.33	1.5 - 2.83	1.5	- 2.5	1.0 - 2.33
5	1.67 - 2.5	1.33 - 2.33	-	-	1.67 - 2.33
6	3.83 - 6.167	4.33 - 6.67	-	-	3.83 - 6.167
7	1.0 - 2.167	1.33 - 2.67	-	-	1.0 - 2.167
8	0.83 - 2.0	1.167 - 2.33	-	-	0.83 - 2.0
9	0.83 - 1.83	1.33 - 2.33	-	-	0.83 - 1.83
10	1.67 - 2.33	1.83 - 2.67	-	-	1.67 - 2.33
11	3.83 - 6.167	4.167 - 6.5	-	-	3.83 - 6.167
12	3.83 - 6.33	6.33 - 8.67	4.167	- 6.5	3.83 - 6.33
13	4.67 - 7.83	6.67 - 9.0	4.0	- 5.0	4.67 - 7.83
14	0.67 - 2.167	3.67 - 5.33	-	-	1.0 - 2.33
15	0.83 - 2.167	3.67 - 5.5	-	-	0.83 - 2.167
16	0.67 - 2.0	3.83 - 5.5	0.83	- 2.167	0.67 - 3.0
17	0.83 - 1.83	3.67 - 5.5	1.0	- 1.167	0.83 - 1.0
18	0.67 - 1.67	3.67 - 5.33	-	-	0.67 - 1.67
19	3.83 - 6.167	5.5 - 7.5	-	-	3.167 - 5.167
20	3.67 - 6.0	5.5 - 7.5	-	-	3.67 - 6.0
21	2.5 - 4.0	6.33 - 8.67	2.83	- 4.33	2.5 - 4.0
22	4.67 - 7.83	6.33 - 8.83	5.0	- 8.0	4.67 - 7.83
ALL ERPAs	4.67 - 7.83	6.67 - 9.0	5.0	- 8.0	4.67 - 7.83

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (2 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
SCHOOL-IN-SESSION SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	2.83	2.67	-	2.83
2	2.83	2.83	-	2.83
3	3.0	1.67	-	-
4	2.67	3.167	2.67	2.67
5	2.83	2.67	-	2.83
6	7.67	8.0	-	7.67
7	2.5	3.0	-	2.5
8	2.5	2.67	-	2.5
9	2.167	2.67	-	2.167
10	2.83	3.167	-	2.83
11	7.67	7.83	-	7.67
12	7.67	10.33	7.83	7.67
13	9.67	10.67	6.0	9.67
14	2.5	6.167	-	2.67
15	2.5	6.33	-	2.5
16	2.33	6.5	2.5	2.33
17	2.33	6.33	2.0	1.83
18	2.0	6.167	-	2.0
19	7.5	8.83	-	6.33
20	7.5	8.83	-	7.5
21	5.0	10.33	5.167	5.0
22	9.67	10.5	9.83	9.67
All ERPAs	9.67	10.67	9.83	9.67

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (3 of 14)

EVACUATION TRAVEL TIME ESTIMATES BY ERPA
SCHOOL-NOT-IN-SESSION SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To		
1	2.33 - 3.5	1.33 - 2.33	-	2.5 - 3.67
2	2.33 - 3.5	1.33 - 1.5	-	2.33 - 3.5
3	1.67 - 2.5	1.33* - 1.5	-	-
4	2.167 - 3.33	2.67 - 3.83	1.5 - 2.33	2.167 - 3.33
5	1.67 - 2.5	1.33 - 2.33	-	1.67 - 2.33
6	3.83 - 6.33	4.33 - 6.67	-	3.83 - 6.33
7	2.167 - 3.33	1.167 - 2.167	-	2.167 - 3.33
8	0.83 - 1.83	1.167 - 2.00	-	0.83 - 1.83
9	0.83 - 1.83	1.33 - 2.33	-	0.83 - 1.83
10	1.67 - 2.33	1.83 - 2.67	-	1.67 - 2.33
11	3.83 - 6.167	4.167 - 6.5	-	3.83 - 6.167
12	4.0 - 6.33	4.0 - 6.33	3.67 - 5.67	4.0 - 6.33
13	3.67 - 6.167	4.0 - 6.5	3.167 - 4.67	3.67 - 6.167
14	2.0 - 3.167	2.5 - 3.5	-	2.33 - 3.5
15	2.0 - 3.167	1.167 - 2.167	-	2.33 - 3.5
16	0.67 - 1.5	1.33 - 2.33	-	0.67 - 1.5
17	0.67 - 1.5	1.167 - 2.0	-	0.67 - 0.83
18	0.67 - 1.67	1.167 - 1.83	-	0.67 - 1.67
19	3.83 - 6.167	4.0 - 6.5	-	3.167 - 6.167
20	3.67 - 6.167	4.0 - 6.167	-	3.67 - 6.167
1	2.33 - 3.83	2.67 - 4.167	-	2.33 - 3.83
22	3.67 - 6.0	4.0 - 6.33	4.0 - 6.33	3.67 - 6.0
ALL ERPAs	4.00 - 6.33	4.33 - 6.67	4.0 - 6.33	4.0 - 6.33

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (4 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
SCHOOL--NOT-IN-SESSION SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	4.167	2.5	-	4.33
2	4.167	1.67	-	4.167
3	3.0	1.67	-	-
4	4.0	4.5	2.67	4.0
5	2.83	2.5	-	2.83
6	7.67	8.167	-	7.67
7	4.0	2.5	-	4.0
8	2.0	2.33	-	2.0
9	2.0	2.67	-	2.0
10	2.83	3.167	-	2.83
11	7.67	7.83	-	7.67
12	7.67	7.83	6.83	7.67
13	7.5	7.83	5.5	7.5
14	3.83	4.0	-	4.167
15	3.83	2.5	-	3.83
16	1.83	2.5	-	1.83
17	1.67	2.167	-	1.0
18	2.0	2.167	-	2.0
19	7.67	7.83	-	6.33
20	7.5	7.5	-	7.5
21	4.5	5.0	-	4.5
22	7.5	7.67	7.67	7.5
All ERPAs	7.67	8.167	7.67	7.67

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (5 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
WEEKEND/HOLIDAY SUMMER SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To	From - To	From - To
1	2.167 - 3.167	1.33 - 1.5	-	2.33 - 3.167
2	2.167 - 3.167	1.33 - 1.5	-	-
3	1.0 - 1.83	1.5 - 2.33	-	-
4	2.0 - 3.0	2.5 - 3.5	1.5 - 1.67	-
5	1.0 - 1.83	1.33 - 2.33	-	1.83 - 1.0
6	2.5 - 3.83	2.83 - 4.33	-	1.0 - 1.83
7	2.0 - 3.0	1.167 - 1.33	-	-
8	0.83 - 1.0	1.0 - 1.167	-	-
9	0.83 - 1.0	1.33 - 1.5	-	-
10	0.83 - 1.83	1.167 - 2.167	-	-
11	2.5 - 3.83	2.67 - 4.0	-	2.5 - 4.0
12	2.5 - 3.83	2.67 - 4.0	2.83 - 4.33	2.5 - 3.83
13	1.83 - 2.83	2.167 - 3.167	2.33 - 3.33	1.83 - 2.83
14	1.83 - 2.83	2.33 - 3.167	-	2.167 - 3.167
15	1.83 - 3.0	1.167 - 1.33	-	2.167 - 3.167
16	0.67 - 0.83	1.167 - 1.33	-	-
17	0.67 - 0.83	1.0 - 1.167	-	-
18	0.67 - 0.83	1.0 - 1.167	-	-
19	2.33 - 3.83	2.67 - 4.0	-	-
20	2.33 - 3.67	2.83 - 4.167	-	-
21	1.67 - 2.33	2.0 - 2.83	-	-
22	1.83 - 2.83	2.167 - 3.0	-	1.83 - 2.83
ALL ERPAs	2.5 - 3.83	2.83 - 4.33	2.83 - 4.33	2.5 - 4.0

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (6 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
WEEKEND/HOLIDAY SUMMER SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	3.83	2.167	-	4.0
2	3.83	1.67	-	-
3	2.167	2.67	-	-
4	3.67	4.167	2.33	-
5	2.167	2.67	-	1.167
6	4.67	5.0	-	2.167
7	3.67	2.167	-	-
8	1.67	1.33	-	-
9	1.67	2.167	-	-
10	2.167	2.33	-	-
11	4.67	4.83	-	4.5
12	4.67	4.83	5.0	4.67
13	3.5	3.83	3.83	3.5
14	3.5	3.67	-	3.67
15	3.5	2.33	-	3.83
16	1.5	2.33	-	-
17	1.5	1.33	-	-
18	1.5	1.33	-	-
19	4.5	4.67	-	-
20	4.5	5.0	-	-
21	2.83	3.167	-	-
22	3.33	3.67	-	3.33
All ERPAs	4.67	5.0	5.0	4.67

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (7 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
WEEKEND/HOLIDAY WINTER SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To	From - To	From - To
1	1.0 - 1.83	1.33 - 2.167	-	1.0 - 1.167
2	1.0 - 1.167	1.33 - 1.5	-	-
3	1.0 - 1.83	1.5 - 2.33	-	-
4	1.0 - 1.167	1.5 - 1.67	1.5 - 1.67	-
5	1.0 - 1.83	1.33 - 2.33	-	0.83 - 1.0
6	2.33 - 3.67	2.83 - 4.167	-	1.0 - 1.83
7	0.83 - 1.0	1.167 - 1.33	-	-
8	0.67 - 1.0	1.0 - 1.167	-	-
9	0.83 - 1.0	1.33 - 1.5	-	-
10	0.83 - 1.83	1.167 - 2.167	-	-
11	2.33 - 3.67	2.67 - 4.0	-	2.33 - 3.67
12	2.5 - 3.83	2.67 - 4.0	2.83 - 4.167	2.5 - 3.83
13	1.83 - 2.83	2.167 - 3.0	2.33 - 3.33	1.67 - 2.83
14	0.5 - 0.67	1.0 - 1.167	-	0.67 - 0.83
15	0.83 - 1.0	1.167 - 1.33	-	0.83 - 1.0
16	0.67 - 0.83	1.167 - 1.33	-	-
17	0.67 - 0.83	1.0 - 1.167	-	-
18	0.67 - 0.83	1.0 - 1.167	-	-
19	2.33 - 3.67	2.67 - 3.83	-	-
20	2.33 - 3.5	2.83 - 4.167	-	-
21	1.67 - 2.33	2.0 - 2.83	-	-
22	1.83 - 2.67	2.167 - 3.0	2.0 - 3.0	2.0 - 2.67
ALL ERPAs	2.5 - 3.83	2.83 - 4.167	2.83 - 4.167	2.5 - 3.83

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (8 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
WEEKEND/HOLIDAY WINTER SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	2.167	2.5	-	1.33
2	1.33	1.67	-	-
3	2.167	2.67	2.33	-
4	1.83	2.33	-	-
5	2.167	2.67	-	1.167
6	4.5	5.0	-	2.167
7	1.67	2.167	-	-
8	1.67	1.33	-	-
9	1.67	2.167	-	-
10	2.167	2.33	-	-
11	4.5	4.67	-	4.5
12	4.5	4.67	5.0	4.5
13	3.33	3.67	3.83	3.33
14	0.83	1.33	-	1.0
15	1.67	2.33	-	1.167
16	1.5	2.33	-	-
17	1.5	1.33	-	-
18	1.5	1.33	-	-
19	4.33	4.5	-	-
20	4.33	5.0	-	-
21	2.83	3.167	-	-
22	3.33	3.5	3.5	3.33
All ERPAs	4.5	5.0	5.0	4.5

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (9 of 14)

EVACUATION TRAVEL TIME ESTIMATES BY ERPA
EVENING SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To	From - To	From - To
1	1.167 - 2.167	1.33 - 2.5	-	1.33 - 2.33
2	1.167 - 2.167	1.33 - 2.5	-	-
3	1.0 - 1.83	1.5 - 2.33	-	-
4	1.0 - 1.167	1.5 - 2.67	1.5 - 1.67	-
5	1.0 - 1.83	1.33 - 2.33	-	0.83 - 1.0
6	2.33 - 3.67	2.83 - 4.0	-	1.0 - 1.83
7	0.83 - 2.0	1.167 - 2.33	-	-
8	0.83 - 1.0	1.0 - 1.167	-	-
9	0.83 - 1.0	1.33 - 1.5	-	-
10	0.83 - 1.83	1.33 - 2.167	-	-
11	2.33 - 3.67	2.5 - 3.83	-	2.33 - 3.67
12	2.33 - 3.67	2.5 - 3.83	2.83 - 4.0	2.33 - 3.67
13	2.83 - 4.67	3.167 - 5.0	2.33 - 3.167	2.83 - 4.67
14	0.67 - 2.0	1.167 - 2.33	-	0.83 - 2.167
15	0.83 - 2.0	1.167 - 2.5	-	1.0 - 2.167
16	0.67 - 0.83	1.167 - 1.33	-	-
17	0.67 - 0.83	1.0 - 1.167	-	-
18	0.67 - 0.83	1.0 - 1.167	-	-
19	2.33 - 3.5	2.67 - 3.83	-	-
20	2.167 - 3.5	2.83 - 4.0	-	-
21	1.5 - 2.33	2.0 - 2.67	-	-
22	2.83 - 4.67	3.167 - 4.83	3.0 - 4.83	2.83 - 4.67
ALL ERPAs	2.83 - 4.67	3.167 - 5.0	3.0 - 4.83	2.83 - 4.67

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (10 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
EVENING SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	2.5	2.83	-	2.67
2	2.5	2.83	-	-
3	2.167	2.67	-	-
4	2.5	3.0	2.33	-
5	2.167	2.67	-	1.167
6	4.33	4.83	-	2.167
7	2.33	2.67	-	-
8	1.67	1.33	-	-
9	1.67	2.167	-	-
10	2.167	2.33	-	-
11	4.33	4.5	-	4.33
12	4.33	4.5	4.33	4.33
13	5.67	6.0	3.67	5.67
14	2.33	2.67	-	2.5
15	2.33	2.83	-	2.5
16	1.5	2.33	-	-
17	1.5	1.33	-	-
18	1.5	1.33	-	-
19	4.33	4.5	-	-
20	4.167	4.83	-	-
21	2.83	3.167	-	-
22	5.67	5.0	5.83	4.67
All ERPAs	5.67	6.0	5.83	5.67

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (11 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
NIGHTTIME SCENARIO
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To	From - To	From - To
1	1.167 - 2.167	1.33 - 2.33	-	1.33 - 2.33
2	1.167 - 2.167	1.33 - 2.33	-	-
3	1.0 - 1.83	1.5 - 2.33	-	-
4	1.0 - 2.167	1.5 - 2.67	1.5 - 1.67	-
5	1.0 - 1.83	1.33 - 2.33	-	0.83 - 1.0
6	2.5 - 3.67	2.83 - 4.0	-	1.0 - 1.83
7	0.83 - 2.0	1.167 - 2.33	-	-
8	0.83 - 1.0	1.0 - 1.167	-	-
9	0.83 - 1.0	1.33 - 1.5	-	-
10	0.83 - 1.83	1.167 - 2.167	-	-
11	2.33 - 3.67	2.5 - 3.83	-	2.33 - 3.67
12	2.33 - 3.67	2.5 - 3.83	2.83 - 4.0	2.33 - 3.67
13	2.33 - 3.83	2.83 - 4.167	2.33 - 3.167	2.33 - 3.83
14	0.67 - 2.0	1.167 - 2.33	-	0.83 - 2.167
15	0.83 - 2.0	1.167 - 2.5	-	1.0 - 2.167
16	0.67 - 0.83	1.167 - 1.33	-	-
17	0.67 - 0.83	1.0 - 1.167	-	-
18	0.67 - 0.83	1.0 - 1.167	-	-
19	2.33 - 3.5	2.67 - 3.83	-	-
20	2.167 - 3.5	2.83 - 4.0	-	-
21	0.67 - 2.33	2.0 - 2.67	-	-
22	2.33 - 3.83	2.67 - 4.167	2.67 - 4.0	2.33 - 3.83
ALL ERPAs	2.33 - 3.83	2.83 - 4.167	2.83 - 4.0	2.33 - 3.83

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (12 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
NIGHTTIME SCENARIO
ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	2.5	2.67	-	2.67
2	2.5	2.67	-	-
3	2.167	2.67	-	-
4	2.5	3.0	2.33	-
5	2.167	2.67	-	1.167
6	4.33	4.83	-	2.167
7	2.33	2.67	-	-
8	1.67	1.33	-	-
9	1.67	2.167	-	-
10	2.167	2.33	-	-
11	4.33	4.5	-	4.33
12	4.33	4.5	4.83	4.33
13	4.67	5.0	3.67	4.67
14	2.33	2.67	-	2.5
15	2.33	2.83	-	2.5
16	1.5	2.33	-	-
17	1.5	1.33	-	-
18	1.5	1.33	-	-
19	4.33	4.5	-	-
20	4.167	4.67	-	-
21	2.83	3.167	-	-
22	4.67	5.0	4.83	4.67
All ERPAs	4.67	5.0	4.83	4.67

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (13 of 14)
EVACUATION TRAVEL TIME ESTIMATES BY ERPA
SCHOOL-IN-SESSION SCENARIO WITH TEMPORARY CONSTRUCTION WORKFORCE
NORMAL WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
	From - To	From - To		
1	2.5 - 3.83	1.33 - 2.33	-	3.5 - 4.83
2	2.33 - 3.67	2.5 - 3.67	-	2.33 - 3.67
3	2.167 - 3.5	2.67 - 3.83	-	-
4	2.33 - 2.5	2.83 - 4.167	1.5 - 2.5	2.33 - 3.5
5	2.167 - 3.33	2.67 - 3.83	-	2.167 - 3.167
6	4.0 - 6.5	4.5 - 6.83	-	4.0 - 6.5
7	2.33 - 3.5	1.33 - 2.67	-	2.33 - 3.5
8	0.83 - 2.167	1.167 - 2.33	-	0.83 - 2.167
9	0.83 - 1.83	1.33 - 2.33	-	0.83 - 1.83
10	2.167 - 3.33	2.33 - 3.5	-	2.167 - 3.33
11	4.0 - 6.5	4.167 - 6.67	-	4.0 - 6.5
12	4.0 - 6.5	6.5 - 8.83	4.167 - 6.67	4.0 - 6.5
13	4.83 - 8.167	6.83 - 8.67	3.167 - 5.167	4.83 - 8.167
14	2.167 - 3.33	3.67 - 5.33	-	2.5 - 3.67
15	2.167 - 3.5	3.83 - 5.5	-	2.167 - 3.5
16	0.67 - 2.0	3.83 - 5.67	0.83 - 1.0	0.67 - 2.0
17	0.83 - 2.0	3.67 - 5.67	1.0 - 1.167	0.83 - 1.0
18	0.67 - 1.67	3.67 - 5.33	-	0.67 - 1.67
19	4.0 - 6.33	5.67 - 7.67	-	3.33 - 5.5
20	3.83 - 6.33	5.67 - 7.67	-	3.33 - 6.33
21	2.67 - 4.33	6.5 - 9.0	2.83 - 4.5	2.67 - 4.33
22	4.83 - 8.0	6.5 - 9.167	5.167 - 8.33	4.83 - 8.0
ALL ERPAs	4.83 - 8.167	6.83 - 9.167	5.167 - 8.33	4.83 - 8.167

Notes:

- (1) The evacuation travel time ranges presented in this Table are based on operational strategies indicated in the evacuation implementation procedures. Lower bound evacuation travel times (shorter times) can be anticipated when:
 - (a) Unexpected long-term capacity restrictions on key highway links owing to incidents such as accidents, vehicle breakdowns, and highway construction, do not occur;
 - (b) A high state of operational readiness (traffic control officers mobilized, traffic control devices operational, all buses stationed to begin their initial runs, etc.) is attained;
 - (c) An informed and cooperative public follow directions as instructed.
 Upper bound evacuation travel times (longer times) are representative of a situation where:
 - (a) Capacity restrictions adversely affect traffic flow, but not to the point where a breakdown in traffic flow would result;
 - (b) A low state of operational readiness results from minimal mobilization of the emergency workforce;
 - (c) A low degree of cooperation from the public occurs.
- (2) The evacuation travel time ranges are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Normal weather conditions are considered to be clear sky and dry roadway pavement for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicates that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

Figure EAP-18.2 (14 of 14)
 EVACUATION TRAVEL TIME ESTIMATES BY ERPA
 SCHOOL-IN-SESSION SCENARIO WITH TEMPORARY CONSTRUCTION WORKFORCE
 ADVERSE WEATHER

ERPA	Resident Population		Special Facilities	Transients
	With Autos	Without Autos		
1	4.5	2.67	-	5.67
2	4.5	4.33	-	4.5
3	4.167	4.5	-	-
4	4.33	4.83	2.67	4.33
5	4.0	4.5	-	4.0
6	7.83	8.33	-	7.83
7	4.167	3.0	-	4.167
8	2.5	2.83	-	2.5
9	2.167	2.67	-	2.167
10	4.0	4.167	-	4.0
11	7.83	8.167	-	7.83
12	8.0	10.67	8.167	8.0
13	10.0	11.0	6.167	10.0
14	4.167	6.167	-	4.33
15	4.167	6.33	-	4.167
16	2.5	6.67	2.67	2.5
17	2.33	6.5	2.167	1.83
18	2.0	6.167	-	2.0
19	7.83	9.167	-	6.67
20	7.67	9.0	-	7.67
21	5.167	10.83	5.33	5.167
22	10.0	10.83	10.167	10.0
All ERPAs	10.0	11.0	10.167	10.0

Notes:

- (1) The evacuation travel time estimates presented in this Table are based on operational strategies indicated in the evacuation implementation procedures.
- (2) The evacuation travel times are indicated as decimal hours and include 20 minutes of public preparation time.
- (3) Adverse weather conditions are considered to be a slippery roadway surface (e.g., due to snow or ice), and/or reduced visibility (e.g., due to fog or heavy rain) for the above scenario.
- (4) The population subgroups indicated in this Table are:
 - (a) resident population (with and without automobiles);
 - (b) special facilities (schools, colleges, nursing homes, hospitals, other health care facilities, residential facilities such as group homes, convents, and monasteries);
 - (c) transients (employees, visitors to parks, resident and day camps, hotels, and motels).
- (5) Gaps in this Table indicate that there is no special facility or transient population in the given ERPA.
- (6) The evacuation travel time ranges presented in this Table assume a simultaneous evacuation of the entire EPZ. The evacuation travel time for any individual ERPA in a staged evacuation will not exceed the travel time range indicated in this Table.

FIGURE EAP-18.3

REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE (1)

Structure or Location	Shielding Factor (a)	Representative Range
Outside	1.0	--
Vehicles	1.0	-- .
Wood-frame house (b) (no basement)	0.9	--
Basement of wood house	0.6	0.1 to 0.7 (c)
Masonry house (no basement)	0.6	0.4 to 0.7 (c)
Basement of masonry house	0.4	0.1 to 0.5 (c)
Large office or industrial building	0.2	0.1 to 0.3 (c), (d)

- (a) The ratio of the dose received inside the structure to the dose that would be received outside the structure.
- (b) A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.
- (c) This range is mainly due to different wall materials and different geometries.
- (d) The shielding factor depends on where the personnel are located within the building (e.g., the basement or an inside room).

(1) Ref.: SAND 77-1725 (Unlimited Release)

FIGURE EAP-18.4
WHOLE BODY AND THYROID GUIDANCE CHART (1)

WHOLE BODY GUIDANCE CHART

IF	THEN
Projected dose less than 1 rem	No action
Shelter dose less than 5 rem	Shelter*
Shelter dose equal to or greater than 5 rem and evacuation dose equal to or greater than shelter dose.	Shelter*
Shelter dose equal to or greater than 5 rem and evacuation dose less than shelter dose.	Evacuate

THYROID GUIDANCE CHART

IF	THEN
Projected dose less than 5 rem	No action
Shelter dose less than 25 rem	Shelter*
Shelter dose equal to or greater than 25 rem and evacuation dose equal to or greater than shelter dose.	Shelter*
Shelter dose equal to or greater than 25 rem and evacuation dose less than shelter dose.	Evacuate

*Shelter is to be with ventilation control. Ventilation control means turning off air conditioners or fans, closing doors and windows thus preventing access of outside air.

- (1) Ref.: Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, September 1975, revised June, 1979. (Derived from Table 5.1)

FORM EAP-18.5
WATERBORNE WORKSHEET

DATE: _____
TIME: _____

Projected whole body
or skin dose due to
swimming (rem) _____

Estimated
release duration (hrs) _____

Projected whole body
dose due to boating (rem) _____

WATERBORNE PROTECTIVE ACTION GUIDES (1)

Projected Dose (rem)	Recommended Actions
Projected whole body or skin dose due to swimming is equal to or greater than 1 rem.	Request the U.S. Coast Guard to remove all swimmers within the 10 mile Emergency Planning Zone of the plant.
Projected whole body dose due to boating is equal to or greater than 1 rem.	Request the U.S. Coast Guard to evacuate all boats and vessels within the 10 mile Emergency Planning Zone of the plant.

- (1) Ref.: Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, September 1975, revised June, 1979. (Derived from Table 5.1)

Radiological Support Coordinator

DESIGNATE ERPA'S WITH RECOMMENDED PROTECTIVE ACTIONS AS FOLLOWS:

N - NO ACTION

F - FOOD, WATER & MILD CONTROL

S - SHELTER

O - OTHER

E - EVACUATE

* - REMOVE SWIMMERS

● - EVACUATE BOATERS

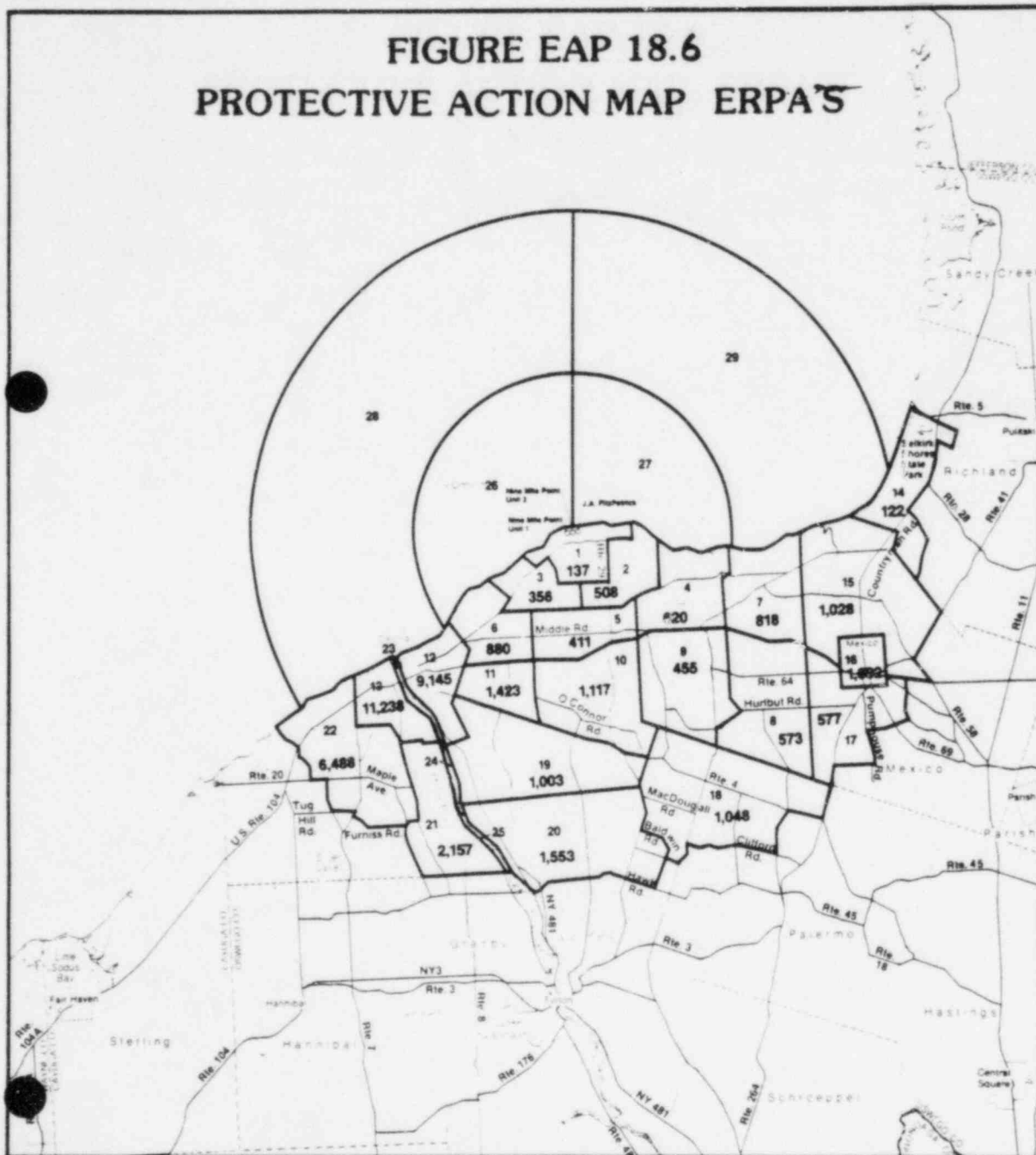
COMMENTS: _____

RADIOLOGICAL SUPPORT COORDINATOR _____

EMERGENCY DIRECTOR/OR RECOVERY MANAGER APPROVAL _____

TIME/DATE _____

FIGURE EAP 18.6
PROTECTIVE ACTION MAP ERPA'S



emergency planning and you

In 1983 more than 130,000 American families had to leave their homes because of emergencies. The American Red Cross operated thousands of temporary relocation centers as a result of natural acts like hurricanes, floods and tornadoes, and of large accidents, such as explosions, fires and serious transportation accidents.

The operators of the Nine Mile Point and FitzPatrick plants in Schenectady County recognize that, like many other industrial facilities, they have potential for releasing hazardous materials to the environment despite the stringent safety standards under which they operate.

Niagara Mohawk Power Corporation and the New York Power Authority have been working closely with federal, state, county and local officials to improve plans for handling an emergency. These plans will enable the utilities and government agencies to cope with any emergency situation that may arise. They were developed under revised regulations issued in 1980 by the federal government to strengthen and make more uniform the emergency plans near all nuclear stations.

We—the companies and agencies that developed these emergency plans—are prepared to put them to use. With the understanding and cooperation of you and your neighbors, we are confident that your health and safety will be protected in an emergency.

Oswego County Office of Emergency Preparedness
Oswego County Legislature
New York State Disaster Preparedness Commission
New York State Department of Health
New York State Emergency Management Office
Niagara Mohawk Power Corporation
New York Power Authority

notification

Sirens and tone alert radios have been installed to alert you of any emergency situation that would require you to take action. A steady three minute siren signal or tone alert radio message means one thing: **You should turn on your radio to an Emergency Broadcast System (EBS) station.**

The local originating EBS station is:
WKFM FM, Syracuse, N.Y. 104.7 Mhz
(24 hours)

Emergency messages will also be broadcast on:

WOSC AM, Fulton, N.Y.	1300 KHz
WGO AM, Oswego, N.Y.	1440 KHz
WGO FM, Oswego, N.Y.	105.5 Mhz
WSCP AM, Pulaski, N.Y.	1070 KHz
WRVO FM, SUNY-Oswego	88.9 Mhz
WHEN AM, Syracuse, N.Y.	620 KHz
(24 hours)	
WSYR AM, Syracuse, N.Y.	570 KHz
(24 hours)	

You should stay tuned to these stations and follow their directions carefully. Emergency Broadcast System messages will originate with state and county officials. You should take only the actions advised by these officials and broadcast on the above EBS stations.

actions

In order to give you the greatest degree of protection, instructions for your actions will be given by county or state officials based on careful consideration of all factors. Instructions will refer to the Emergency Response Planning Areas (ERPAs) shown on the map. Please be certain of the number assigned to your area because instructions could differ from one area to another.

Staying indoors—If people in your area are advised to stay indoors, you should go inside a nearby building and limit the ways that outside air can enter the building.

Leaving the Area—If you are instructed by county or state officials to leave the area temporarily, you should quickly gather the items necessary for three days and leave using the designated evacuation routes shown on the maps.

You should remain calm, avoid using the telephone and stay tuned to emergency broadcast stations.

reception centers

If you are advised to leave the area, please follow the directions given on the Emergency Broadcast System (EBS) stations. You and your family might be advised to go directly to the home of a friend or relative, or you might be advised to stop first at a reception center for radiation monitoring.

There, you would be assigned to a nearby temporary relocation shelter operated by the American Red Cross, if you cannot stay at the home of a friend or relative. The relocation shelters will be professionally staffed and will offer food, medical care and communications facilities. **No firearms or alcoholic beverages will be allowed.**

Reception Center Locations:

The Reception Center for areas west of the Nine Mile Point and FitzPatrick plants is the **New York State Fairgrounds on Route 890 in Syracuse** accessible from Route 481 South to Bear Street East to Route 690 West; Route 481 South to Bear Street East to Route 690 West; Route 481 South to Bear Street East to Route 690 West.

The Reception Center for areas east of the Nine Mile Point and FitzPatrick plants is **Jefferson Community College, Coffeen Street, Watertown** accessible from Route 3 North to I-81 North; Route 104 East to I-81 North; Exit 48 from I-81 North.

For more information call the Oswego County
Office of Emergency Preparedness at:
1-800-962-2792

emergency planning zones and evacuation routes

The map shows the designated evacuation routes for the 10 mile Emergency Planning Zone around the Nine Mile Point and FitzPatrick plants.

These routes have been chosen to minimize traffic congestion and provide the quickest way out of the Emergency Planning Zone.

To learn how you would evacuate, find the designated route nearest your location. You would follow that route out of the Emergency Planning Zone regardless of your final destination.

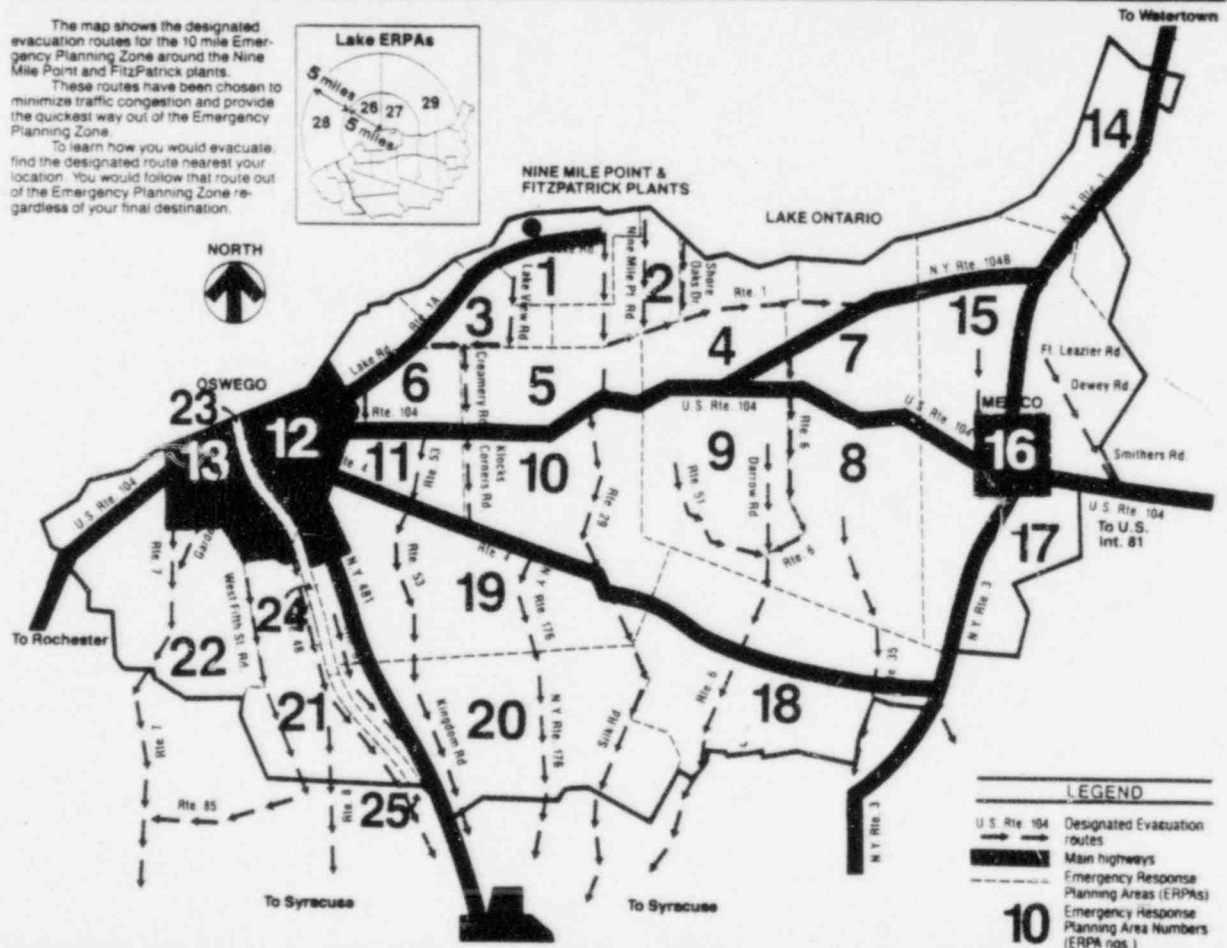
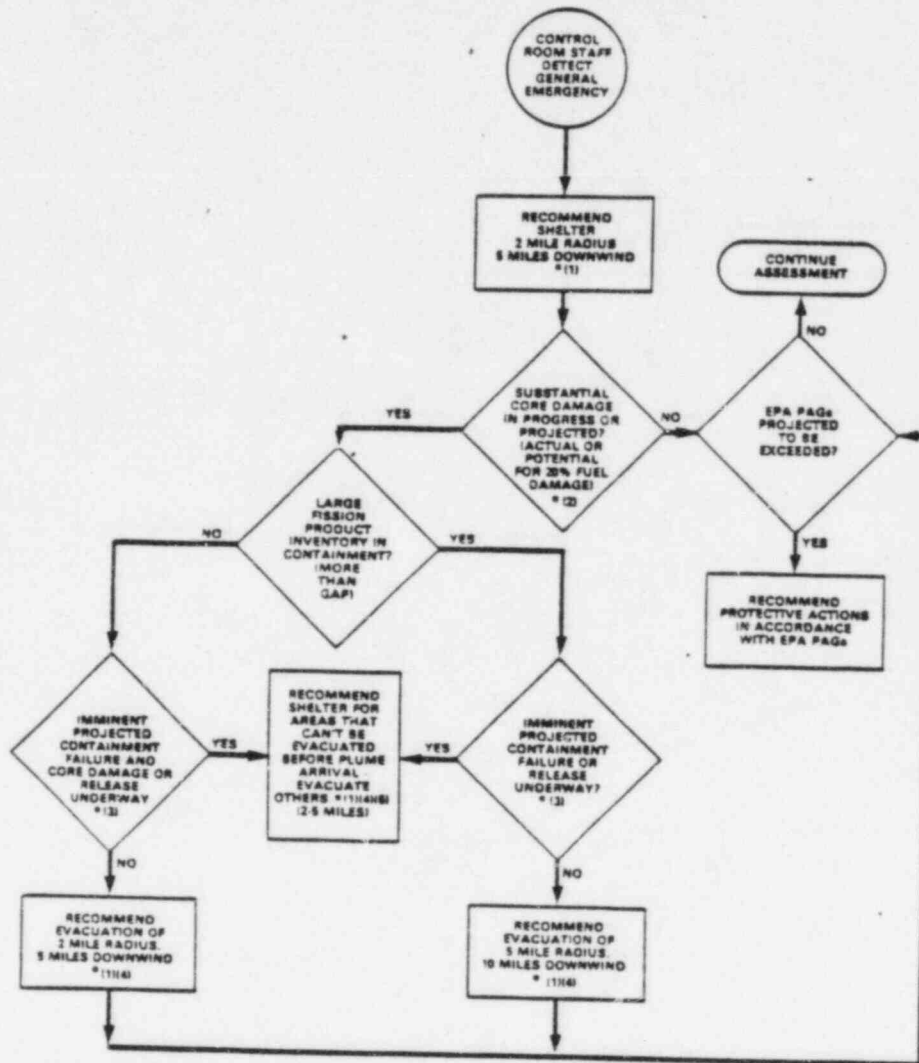


Figure EAP-18.8

FLOW CHART FOR GENERAL EMERGENCY OFFSITE PROTECTIVE DECISIONS **

The following actions will be based on predetermined observable instrumentation and plant status indicators (EALS) contained in the emergency plan and that have been reviewed by offsite officials. However, responsible offsite officials must decide the feasibility of implementing the protective actions at the time of the accident.



SOURCE: Appendix 1, NUREG-0894/FEMA-REP-1, Rev. 1

* (1) SITUATIONS REQUIRING URGENT ACTION BY OFFSITE OFFICIALS
(Based on Control Room Indicators, No Dose Projections Required)

- 15 Minute Decisionmaking, Activation of Alerting System and EBS Message

* (2) Actual or projected release of 20% gap from core.

* (3) "Puff" release (rate much greater than designed leak rate).

* (4) For all evacuations, shelter the remainder of the plume EPZ and relocate the population affected by any ground contamination promptly following plume passage.

* (5) Concentrate on evacuation of areas near the plant (e.g., may be time to evacuate 2 mile radius and not the 5 mile radius).

**Flowchart is recommended guidance by NRC to plant operator for any General Emergency classification. Use Attachment 1 of this procedure as a guide in making decisions concerning this chart.

Figure EAP-18.9

CONTAINMENT RADIATION MONITOR WORK SHEET

Name: _____

Time: _____

1. Containment Radiation Monitor Readings

17-RE-104A R/hr: _____ Date: _____ Hour: _____

17-RE-104B R/hr: _____ Date: _____ Hour: _____

2. Elapsed Time

Shutdown Date: _____ Time: _____

Elapsed time in Hours: _____

3. Compare actual readings to the curves shown on figure 2 and select the curve closest to the reading. Circle one

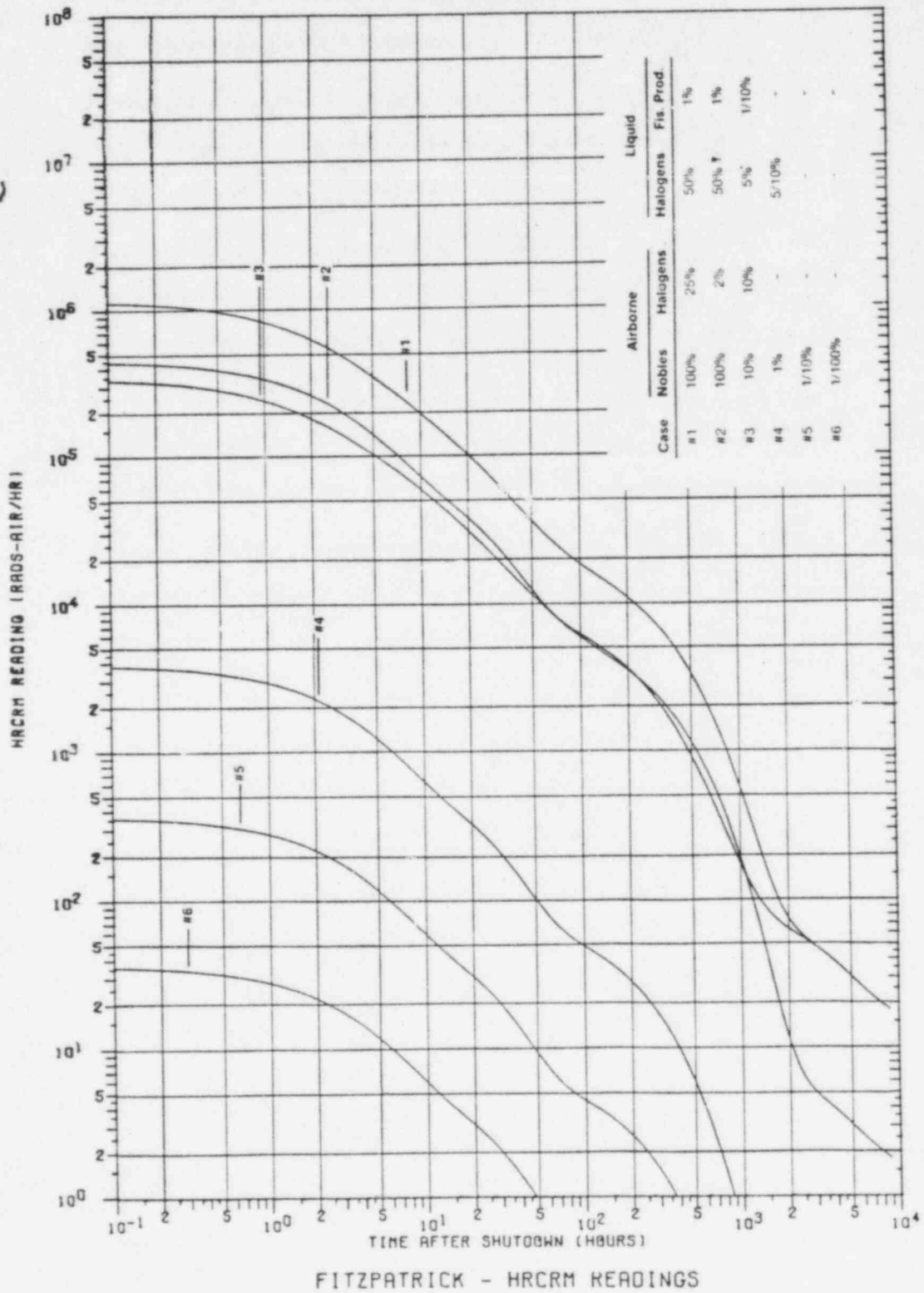
CORE INVENTORY RELEASE

Case	Airborne		Liquid	
	Noble Gases	Halogens	Halogens	Fission Prod.
1	100%	25%	50%	1%
2	100%	2%	50%	1%
3	10%	10%	5%	1/10%
4	1%	-	5/10%	-
5	1/10%	-	-	-
6	1/100%	-	-	-
7	No Fuel Damage.			

Name: _____

Figure EAP-18.10

APPROXIMATE SOURCE AND DAMAGE ESTIMATE



Attachment 1

Evaluation of Containment Exposure Rates

The following methods used for evaluating containment exposure rates as a means for estimating core damage area developed from Reference 2.4:

- 1.0 Obtain the containment radiation monitor reading in R/hr for each available monitor and record data on Figure EAP-18.9.
- 2.0 Determine the elapsed time from plant shutdown to the monitor reading in hours as follows:
 - A. Record time of reading on Figure EAP-18.9.
 - B. Record time of shutdown on Figure EAP-18.9.
 - C. Calculate hours since shutdown and record on Figure EAP-18.9.
- 3.0 Complete the worksheet shown in Figure EAP-18.9.
- 4.0 Refer to Figure EAP-18.10. If the reading lies near one of the predetermined release fractions, estimate the core inventory release directly from Figure EAP-18.10 and circle the appropriate value on the worksheet Figure EAP-18.9.
- 5.0 If the observed containment radiation monitor readings are less than the curve shown for case 6, no fuel damage is assumed (case 7).
- 6.0 If a General Emergency has been declared and the containment radiation monitor readings are:
 - A. Above the curve shown for case 3, then assume that core damage exceeds 20% and that there is a large fission product inventory in containment.
 - B. Above the curve shown for case 4 but below case 3, then assume the potential for 20% fuel damage exists, however, there is not a large fission product inventory in containment.
 - C. Below the curve shown for case 4 then NO substantial core damage has occurred.

CONTROLLED²⁷

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

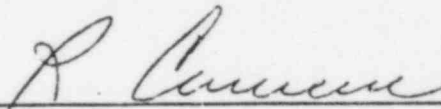
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: EAP-19

TITLE: EMERGENCY USE OF POTASSIUM IODIDE (KI)*

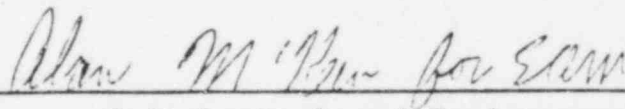
PORC REVIEW: Meeting No. 86-003 Date 1-8-86

APPROVED BY:



Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

PAGE NO.:	1	2	3	4	5	6	7	8	9	10
REV. NO.:	2	3	2	2	1	1	1	1	0	3

Rev. No. 3

Date 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-19

EMERGENCY USE OF POTASSIUM IODIDE (KI)*

1. PURPOSE

The purpose of this procedure is to provide instructions for the use of Thyroid Blocking Potassium Iodide (KI), for New York Power Authority employees only. (The purpose of using Potassium Iodide (KI) is to saturate the thyroid gland with stable iodine so the radioactive iodine will be "blocked". Studies indicate that iodine has approximately a six hour half time of uptake, so the stable KI can be given up to several hours after exposure to radioiodine and it will still have some thyroid blocking effect. Preferably, KI should be given prior to exposure to radioiodine. The National Council on Radiation Protection and Measurements (NCRP) in Report No. 55 recommends that "individuals who have had an accidental occupational exposure to radioiodine, regardless of the route of exposure, should immediately be given Potassium Iodide and this administration should be continued for 7 to 14 days.)

2.0 REFERENCES

- 2.1 National Council on Radiation Protection and Measurements Report No. 55. PROTECTION OF THE THYROID GLAND IN THE EVENT OF RELEASES OF RADIOIODINE
- 2.2 PASNY, INTERIM POLICY FOR THE DISTRIBUTION AND USE OF POTASSIUM IODIDE (KI), March 12, 1984.
- 2.3 Manufacturers (Wallace Laboratories) Recommendations on Use of Thyro-Block Tablets.
- 2.4 EAP-6 IN-PLANT EMERGENCY SURVEY/ENTRY
- 2.5 EAP 7.1 EMERGENCY OUT-OF-PLANT AND DOWNWIND SURVEYS
- 2.6 EAP 7.2 DOWNWIND SURVEY DOSE ESTIMATES
- 2.7 RTP-15 MINI SCALER OPERATION FOR AIR SAMPLE COUNTING
- 2.8 RTP-36 EMERGENCY AIR SAMPLE COUNTING, ENVIRONMENTAL LAB
- 2.9 RTP-23 HIGH VOLUME PORTABLE AIR SAMPLER

3.0 INITIATING EVENT

- 3.1 Annunciators, alarms or other instrumentation indicating abnormal radiological conditions in the plant or environs.

4.0 PROCEDURE

- 4.1 The Shift Supervisor/Emergency Director is the only individual authorized to implement this procedure.

4.2 Emergency Director or Designee Shall:

- 4.2.1 Request the Radiological Support Coordinator to determine the potential thyroid total absorbed dose from the radioisotope I^{131} emergency workers, in the JAFNPP Emergency Response facilities.

- 4.2.2 Should the estimate be in the 1 to 10 rads range, request the Radiological Support Coordinator to institute immediate isotopic monitoring. If the real exposure to any personnel is calculated to be in excess of 10 rad, instruct the Radiological Support Coordinator to administer Potassium Iodide for voluntary use. The Radiological Support Coordinator shall refer to Appendix A of this procedure prior to administering KI for voluntary use by JAF personnel. Appendix A is a memo (JSAFE-85-166) which lists JAF employees with known allergies to potassium iodide and those JAF employees not yet questioned about their allergies.

Employees with known allergies shall not use KI. Employees not yet questioned shall be made aware of possible allergies before they decide to use KI.

4.3 Radiological Support Coordinator or Designee Shall:

- 4.3.1 Monitor the radiological conditions in the emergency facilities or any work areas containing personnel. This shall be done in accordance with the following procedures: EAP-6, EAP-7.1, EAP-7.2, RTP-15, RTP-36, and RTP-23.

- 4.3.2 Determine the potential thyroid total absorbed dose from the radioisotope I^{131} for all risk personnel.

- 4.3.3 Should the estimate be in the 1 to 10 rads range, continue isotopic monitoring. If the real exposure to any personnel is calculated to be in excess of 10 rads, recommend to the Emergency Director the voluntary use of Potassium Iodide (KI) for risk personnel after referring to Appendix A which lists JAF employees with known KI allergies.
- 4.3.4 If instructed to administer Potassium Iodide (KI) by the Emergency Director to the risk personnel, Potassium Iodide shall be administered in a dosage of 130 mg (one tablet) orally, initially, followed by 130 mg. once daily. Administration of Potassium Iodide should not be less than 3 days and usually not for more than 10 days. The Authority's designated physician or medical consultant may change this total dose requirement based on monitoring measurements exposure potentials, etc. (The Authority's designated physician's phone number is included in SAP-3.)
- 4.3.5 Potassium Iodide (KI) should be administered no later than three hours after exposure.
- 4.3.6 Potassium Iodide (KI) is located in the Technical Support Center Emergency Lockers, the JAFNPP Plant Nurse's Office and the JAFNPP Emergency Operations Facility.
- 4.3.7 Consideration should be given to issuance of Potassium Iodide (KI) to technicians performing field survey work if potential thyroid total absorbed dose exceeds previously established parameters.

5.0 WARNING AND SIDE EFFECTS

5.1 Warning

Potassium Iodide should not be used by people allergic to iodide. Keep out of the reach of children. In case of overdose or allergic reaction, contact a physician or the public health authority.

5.2 Side Effects

- a. Usually, side effects of Potassium Iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.

- b. Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).
- c. A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.
- d. Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

6.0 FIGURES, FORMS AND ATTACHMENTS

- 6.1 EAP-19.1 - PASNY, Interim Policy for the Distribution and Use of Potassium Iodide (KI), March 12, 1984.
- 6.2 EAP-19.2 - Patient Package Insert for "THYRO-BLOCK" Potassium Iodide.
- 6.3 Appendix A - Memo (JSAFE-85-166)

EAP 19.1
INTERIM POLICY FOR THE DISTRIBUTION AND USE OF
POTASSIUM IODIDE (KI)

POWER AUTHORITY
OF THE STATE OF NEW YORK

INTERIM POLICY
FOR THE DISTRIBUTION AND USE OF
POTASSIUM IODIDE (KI)

Page 1 of 4

Revised: February 22, 1984
Effective Date: March 12, 1984

EAP 19.1 (Continued)
INTERIM POLICY FOR THE DISTRIBUTION AND USE OF
POTASSIUM IODIDE (KI)

I. GENERAL

With the rapid development of nuclear power reactors, and especially in view of a deepening energy crisis, concern has been raised that potential accidents at nuclear reactors could result in substantial offsite radiation exposures.

It is possible, but highly unlikely, that an accident at a nuclear power reactor could release large quantities of radionuclides, including isotopes of radioiodine, into the atmosphere. When the radioiodines are inhaled or ingested, they rapidly accumulate in the thyroid gland and are metabolized into organic iodine compounds. These compounds could reside in the thyroid gland long enough to cause local radiation damage. The dose to the thyroid can occur from (1) external dose from the passing cloud, (2) external dose from contaminated ground, and (3) internal dose from the inhalation or ingestion of radioiodines. Thyroiditis may occur as an early effect, but because it has been observed only with very large doses of I^{131} , it is unlikely to be a problem during offsite releases. Hypothyroidism and thyroid nodules with either benign or malignant characteristics are usually results of lower doses and do not occur until later. Therefore, it is considered in the best interest of Power Authority Management in support of its emergency workers to be prepared to take effective measures to prevent or mitigate the accumulation of radioiodines by the thyroid gland.

II. INTERIM POLICY FOR USE AND DISTRIBUTION OF POTASSIUM IODIDE (KI)

A major protective action to be considered after a serious accident at a nuclear power facility involving the release of radioiodine is the use of stable iodide as a thyroid blocking agent to prevent thyroid uptake of radioiodines.

Using guidance outlined in the National Council on Radiation Protection and Measurements Report No. 55 and recommendations of the Power Authority's medical consultant, the following interim policy for the use and distribution of Potassium Iodide has been developed;

EAP 19.1 (Continued)
INTERIM POLICY FOR THE DISTRIBUTION AND USE OF
POTASSIUM IODIDE (KI)

- A. An initial estimate of the potential thyroid total absorbed dose from radioisotope I¹³¹ from the release should be calculated.
- B. Should the estimate be less than 10 rads, no distribution of KI should be instituted. If the exposure is calculated to be in excess of 10 rads, the voluntary use should be as follows:
 - 1. Potassium Iodide should be administered no later than three hours after exposure, and preferably before.
 - 2. Potassium Iodide will be administered in a dosage of 130 mgm (one tablet) orally, initially, followed by 130 mgm once daily. This dosage should be administered for not less than 3 days and usually not for more than 10 days. The Authority's designated physician may change this total dose requirement based on monitoring measurements, exposure potentials, etc.
- C. Should the initial estimate have been 10-30 rads or more, all plant emergency personnel that are at risk should have potassium iodide (KI) administered as per Item B.1 and B.2 above.
- D. The decision to administer potassium iodide (KI) will be made by the plant's Emergency Director in coordination with the plant's Radiological and Environmental Services Superintendent.
- E. Potassium Iodide will only be distributed for use to personnel who are New York Power Authority Employees. It will not be given to non-NYPA employees. The distribution and use of KI to non-NYPA employees is under the jurisdiction of the New York State Department of Health and the appropriate County Health Department.

Non-NYPA employees who are emergency workers can contact the local Office of Disaster and Emergency Services for information on the availability of KI.

EAP 19.1 (Continued)
INTERIM POLICY FOR THE DISTRIBUTION AND USE OF
POTASSIUM IODIDE (KI)

III. LOGISTICS

- A. Potassium iodide tablets of strength of 130 mgm will be stockpiled and maintained at the nuclear plant under the direction of the Radiological & Environmental Services Superintendent.
- B. Suitable amounts will be available for immediate administration to those at highest risk of exposure.
- C. These sites to be determined by the site emergency planning coordinator in coordination with the Radiological Environmental Services Superintendent. Remaining tablets will be stored in areas logistically suitable for immediate administration to the remaining personnel, including Authority emergency personnel arriving at the facility.

EAP 19.2
PATIENT PACKAGE INSERT FOR THYRO-BLOCK
POTASSIUM IODIDE

Patient Package Insert For

THYRO-BLOCK™

(POTASSIUM IODIDE)
(pronounced pee-TASS-ee-um EYE-oh-eyd)
(abbreviated: KI)
TABLETS and SOLUTION U.S.P.

TAKE POTASSIUM IODIDE ONLY WHEN PUBLIC HEALTH OFFICIALS TELL YOU. IN A RADIATION EMERGENCY, RADIOACTIVE IODINE COULD BE RELEASED INTO THE AIR. POTASSIUM IODIDE (A FORM OF IODINE) CAN HELP PROTECT YOU.

IF YOU ARE TOLD TO TAKE THIS MEDICINE, TAKE IT ONE TIME EVERY 24 HOURS. DO NOT TAKE IT MORE OFTEN. MORE WILL NOT HELP YOU AND MAY INCREASE THE RISK OF SIDE EFFECTS. DO NOT TAKE THIS DRUG IF YOU KNOW YOU ARE ALLERGIC TO IODIDE. (SEE SIDE EFFECTS BELOW.)

INDICATIONS

THYROID BLOCKING IN A RADIATION EMERGENCY ONLY.

DIRECTIONS FOR USE

Use only as directed by State or local public health authorities in the event of a radiation emergency.

Store at controlled room temperature between 15° and 30°C (59° to 86°F). Keep container tightly closed and protect from light. Do not use the solution if it appears brownish in the nozzle of the bottle.

WARNING

Potassium iodide should not be used by people allergic to iodide. Keep out of the reach of children. In case of overdose or allergic reaction, contact a physician or the public health authority.

DESCRIPTION

Each THYRO-BLOCK™ TABLET contains 130 mg of potassium iodide.

HOW POTASSIUM IODIDE WORKS

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.

In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.

If you take potassium iodide, it will fill-up your thyroid gland. This reduces the chance that harmful radioactive iodine will enter the thyroid gland.

WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or antithyroid drug). Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium iodide should be taken as soon as possible after public health officials tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than 10 days.

SIDE EFFECTS

Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).

A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Then, if possible, call a doctor or public health authority for instructions.

HOW SUPPLIED

THYRO-BLOCK™ TABLETS (Potassium Iodide, U.S.P.) bottles of 14 tablets (NDC 0037-0472-20). Each white, round, scored tablet contains 130 mg potassium iodide.

James A. FitzPatrick
Nuclear Power Plant
P.O. Box 41
Lycoming, New York 13093
315 342.3840

APPENDIX A



Memorandum

December 6, 1985
JSAFE-85-166

MEMORANDUM TO: ART ZAREMBA
FROM: CAROL SOUCY
SUBJECT: P.I. ALLERGY

The following employees indicated a positive response when questioned at annual physical exam of an allergy to potassium iodide.

1. Anne Stark
2. Joseph Colloca

The following employees indicated allergy to IVP dye which is iodine based. They should be considered iodine allergic.

1. Dominick Alsheimer
2. Peter Reynolds

Carol A Soucy

CAROL A. SOUCY, RN C.O.H.N.
OCCUPATIONAL HEALTH NURSE

CAS:lmd

cc: File

EMERGENCY IMPLEMENTING PROCEDURES/VOLUME 3
UPDATE LIST

27

Date of Issue: February 28, 1986

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EAP-29	VENTILATION ISOLATION DURING AN EMERGENCY*	REV. 0	06/85
EAP-34	ACCEPTANCE OF ENVIRONMENTAL SAMPLES AT THE EOF DURING AN EMERGENCY	REV. 0	08/85
EAP-35	EOF TLD ISSUANCE DURING AN EMERGENCY	REV. 0	08/85
EAP-36	ENVIRONMENTAL LABORATORY USE DURING AN EMERGENCY	REV. 0	08/85
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SAP-4	OSWEGO COUNTY EMERGENCY PREPAREDNESS PHOTO IDENTIFICATION CARDS*	REV. 2	11/84
SAP-5	OFFSITE EMERGENCY PLAN INVENTORY*	REV. 2	12/83
SAP-6	DRILL/EXERCISE CONDUCT*	REV. 2	01/85
SAP-7	QUARTERLY SURVEILLANCE PROCEDURE FOR ON-CALL EMPLOYEES	REV. 2	04/85
SAP-8	SIREN SYSTEM FALSE ACTIVATION	REV. 1	12/85
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SAP-11	EOF DOCUMENT CONTROL	REV. 0	08/85
SAP-13	EOF SECURITY AND FIRE ALARM SYSTEMS DURING NORMAL OPERATIONS	REV. 0	06/85
SAP-14	EOF COM DEV 8200 SERIES TELECOMMUNICATIONS PROCESSOR	REV. 0	08/85

*PORC reviewed procedures

CONTROLLED 27

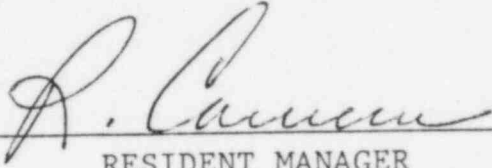
NEW YORK POWER AUTHORITY JAMES A. FITZPATRICK NUCLEAR POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

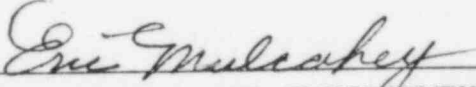
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: EAP-42

TITLE: OBTAINING METEOROLOGICAL DATA

PORC REVIEW: MEETING NO. NA DATE 12/85

APPROVED BY: 
RESIDENT MANAGER

APPROVED BY: 
RADIOLOGICAL AND ENVIRONMENTAL
SERVICES SUPERINTENDENT

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REV. NO. 1

DATE 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EAP-42

OBTAINING METEOROLOGICAL DATA

1.0 PURPOSE

This procedure provides instructions to the dose assessment designee for accessing meteorological data in the Control Room, Technical Support Center, or at the Emergency Operations Facility and also includes provisions for long-term forecasting.

2.0 REFERENCES

2.1 EAP-4, Dose Assessment Calculations

2.2 Class A Atmospheric Dispersion and Radiological Dose Assessment Model. Vol. II, Model Formulation.

3.0 INITIATING EVENTS

Dose assessment calculations being performed in accordance with EAP-4.

4.0 PROCEDURE

4.1 Method Description

There are three sequential methods for acquiring meteorological data for dose assessment input: the Primary Method involves obtaining data digitally through either the Niagara Mohawk or the NYPA Meteorological System; the Secondary Method involves extrapolating meteorological data from analog strip chart recorders and is utilized if digital data is unavailable; and a Back-up Method is utilized if both digital and analog data are unavailable, which involves obtaining information from outside sources.

4.2 Primary Method - Obtaining Digital Meteorological Data

4.2.1 To access meteorological data from either the Control Room, TSC or the EOF, log onto the Terminus 200 as follows:

4.2.1.1 Make sure power is applied to the unit; the power switch is on the back left side.

4.2.1.2 Insure that the "MOTOR" key is "ON" on the left hand side and the "All Caps" key is down.

- 4.2.1.3 Place "Black Box" modem switch to "A" or JAF position.
- 4.2.1.4 Hit "Return" key.
- 4.2.1.5 Utilize the available username and password on the nearby Digital Video Terminal.
- 4.2.1.6 The system menu will then appear; choose item "5" from the menu, called "Dispersion Reports" and hit "RETURN".
- 4.2.1.7 The "Class A Radiological Display Menu" is then displayed; choose "MR" for your selection. (Make sure the "CAPS" button is "ON" on the keyboard.)
- NOTE: The selection would be "ME" if using the Niagara Mohawk system.
- 4.2.1.8 For "REPORT TYPE", enter "1", "EMERGENCY".
- 4.2.1.9 For "Output Device Menu", enter "1", "Logged in device".
- NOTE: During print-out, you will have to hit the "RETURN" key each time a <cr> request is made in order to continue the printing process.
- 4.2.1.10 After the print-out, the "CLASS A RADIOLOGICAL DISPLAY MENU" will be re-displayed; hit "Return" and then "1" to repeat process.
- NOTE: When manually inputting meteorological data, an update is required every 15 minutes, therefore, repeat process as needed every 15 minutes.
- 4.2.1.11 To exit, enter "Ex" when the "CLASS A RADIOLOGICAL DISPLAY MENU" reappears.
- NOTE: The selection would be "XX" if using the Niagara Mohawk system.
- 4.2.1.12 The "NYPA Meteorological System Menu" will then appear; type "0" to exit.

NOTE:

When manually inputting the meteorological data, primary concern is given to wind speed and direction (and to the stability class), at a certain level which is dependant on the type of release. It is important to note that the latest 15 minute averages are utilized. (It is optional to record meteorological data on Form EAP-42.1, or utilize an available sheet of paper.)

4.2.2 In the event data is unavailable from the NYPA Meteorological System, it is possible to obtain the data from the Niagara Mohawk system as follows:

4.2.2.1 To access Niagara Mohawk meteorological data from either the Control Room or TSC, log onto the Terminet 200 as follows:

- A. Make sure power is applied to the unit; the power switch is on the back left side.
- B. Make sure the "MOTOR" key is "ON" on the left side and the "ALL CAPS" key is down.
- C. Place "Black Box" modem switch to "B" or "NiMo" position.
- D. Hit "Return" key.
- E. Utilize the available username and password on the nearby Digital Video Terminal.
- F. Proceed to step 4.2.1.6 and continue.

4.2.2.2 To access Niagara Mohawk meteorological data from the EOF, log on to the Terminet 200 as follows:

- A. Make sure power is applied to the unit; the power switch is on the back left side.
- B. Make sure the "MOTOR" key is "ON" on the left side and the "ALL CAPS" key is down.

- C. Place "Black Box" modem switch to "B" or "NiMo" position.
- D. Press "CTRL" and "E" simultaneously on keyboard and then press "Return".
- E. The terminal will respond with "HELLO: I'm Ready". Press "D" on keyboard and then "Return".
- F. Response on terminal will be "NUMBER"? Type in "9K3492020" and hit the "Return" twice.
- G. After a few seconds, the terminal will respond:

Dialing...
then
Ringing...
Answer Tone
On Line

then hit the "Return" key.
- H. Utilize the available username and password on the nearby Digital Video Terminal.
- J. Proceed to step 4.2.1.6 and continue.

4.2.3 Meteorological data for a ground or both ground and elevated release are to be derived as follows:

4.2.3.1 Locate the most recent 15 minute average on the left side of the Main Tower Parameters print-out under the "TIME AVG." column. Consult Figure EAP-42.2 or Figure EAP-42.3 for Niagara Mohawk and NYPA printouts.

4.2.3.2 If there has been a ground release or both a ground and elevated release, utilize the Main Tower wind speed and direction at the 30 foot level denoted by the column indicators WSPL for wind speed, and WDRL for wind direction. (Wind speed is either in a 1 or 2 digit form and is in MPH, and wind direction is in a 1 to 3 digit form, and is in degrees of arc.)

NOTE: Make sure to separate actual data from the flags following the data values if the Niagara Mohawk printout is utilized. (See Figure EAP-42.2.)

If the Main Tower 30 foot data is not available, adhere to the following hierarchy for data substitution:

- A. If the Main Tower 30 foot data is not available, utilize the 100 foot Main Tower Parameters indicated by WSPM for wind speed and WDRM for wind direction.
- B. If both 30 foot and 100 foot data are not available, utilize the 90 foot JAF Tower Parameters indicated by WSPJ for wind speed and WDRJ for wind direction.
- c. If the 30 foot, 100 foot and 90 foot data are not available, utilize the 200 foot Main Tower Parameters indicated by WSPU for wind speed and WDRU for wind direction.
- d. If the 30 foot, 100 foot, 90 foot and 200 foot data are not available, utilize the Inland Tower Parameters at 30 foot, indicated by WSPI for wind speed and WDRI for wind direction.
- e. If none of the aforementioned data is available proceed to section 4.3 after completing 4.2.3.3, and utilize the analog strip chart data.

4.2.3.3

To determine stability class for a ground or both a ground and elevated release, utilize the stability class letter as determined by the Main Tower Wind Direction Variation at the 30 foot level indicated by the "S" column marker following the WDV L column.

If the 30 foot data is not available, adhere to the following hierarchy for data substitution:

- a. If 30 foot stability class, derived from wind variation, is not available, utilize the stability class letter determined by the Wind Direction Variation at the 100 foot level indicated by the "S" column marker following the WDV M column.

- b. If both the Main 30 foot and 100 foot level stabilities are unavailable, utilize the stability class letter determined by the JAF Tower 90 foot Wind Direction Variation indicated by the "S" column marker following the WDVJ column.
- c. If the Main 30 foot, Main 100 foot, and the JAF 90 foot stabilities are unavailable, utilize the stability class letter determined by the Main Tower 200 foot Wind Direction Variation, indicated by the "S" column marker following the WDVU column.
- d. If the Main 30 foot, 100 foot, 200 foot and JAF 90 foot stabilities are unavailable, utilize the stability class letter determined by the Inland Tower Wind Direction Variation, indicated by the "S" column marker following the WDVJ column.
- e. If NO wind direction variation stability data are available at any of the three towers, utilize the stability letter determined by the Main Tower Temperature Difference between 30 and 100 foot, as indicated by the "S" column marker following the TDFM column.
- f. If wind direction variation stability data is unavailable, and the 30 - 100 foot temperature difference is unavailable, utilize the stability letter determined by the Main Tower Temperature Difference between 30 and 200 foot, as indicated by the "S" column marker following the TDFU column.
- g. If stability cannot be derived from the digital data, proceed to section 4.3 and utilize the analog strip chart data.

4.2.4 Meteorological data for an elevated release only should be extrapolated as follows:

4.2.4.1 Locate the most recent 15 minute average on the left side of the Main Tower Parameter print-out under the "TIME AVG" column.

4.2.4.2

If there has been an elevated release, utilize the Main Tower wind speed and direction at the 200 foot level denoted by the column markers WSPU for wind speed and WDRU for wind direction (wind speed is either in a 1 or 2 digit form and is in MPH, and wind direction is in a 1 to 3 digit form, and is in degrees of arc.)

NOTE: Make sure to separate actual data from the flags following the data values, if the Niagara Mohawk printout is utilized. (See Figure EAP-42.2.)

If the Main Tower 200 foot data is unavailable, adhere to the following hierarchy for data substitution:

- a. If the Main Tower 200 foot data is not available, utilize the Main Tower 100 foot wind speed and direction indicated by WSPM for wind speed and WDRM for wind direction.
- b. If the Main Tower 100 foot and 200 foot data are not available, utilize the JAF 90 foot wind speed and direction indicated by WSPJ for wind speed and WDRJ for wind direction.
- c. If the Main Tower 100 foot and 200 foot data and the JAF 90 foot data are unavailable, utilize the Main Tower 30 foot wind speed and direction indicated by WSPL for wind speed and WDRL for wind direction.
- d. If the Main Tower 30, 100 and 200 foot data and the JAF 90 foot data are unavailable, utilize the Inland Tower 30 foot wind speed and direction indicated by WSPI for wind speed and WDRI for wind direction.
- e. If none of the aforementioned data is available, proceed to section 4.3 (after completing 4.2.5.3) and utilize the analog strip chart data.

4.2.4.3

To determine stability class for an elevated release, utilize the stability class letter as determined by the Main Tower Wind Direction Variation at the 200 foot level, indicated by the "S" column marker following the WDVU column.

If the Main Tower Wind Direction Variation at the 200 foot level is unavailable, adhere to the following hierarchy for data substitution:

- a. If the 200 foot Stability Class is unavailable, utilize the stability class letter determined by the Main Tower Wind Direction Variation at the 100 foot level, indicated by the "S" column marker following the WDVU column.
- b. If both the 100 foot and 200 foot stabilities are unavailable, utilize the stability class letter determined from the JAF 90 foot Wind Direction Variation indicated by the "S" column marker following the WDVJ column.
- c. If the 90, 100 and 200 foot stabilities are unavailable, utilize the stability class letter determined from the Main Tower 30 foot Wind Direction Variation, indicated by the "S" column marker following the WDVU column.
- d. If the 30, 90, 100 and 200 foot stabilities are unavailable, utilize the stability class letter determined from the Inland Tower 30 foot Wind Direction Variation, indicated by the "S" column marker following the WDVJ column.
- e. If NO wind direction variation stability data are available at any of the three towers, utilize the stability letter determined by the Main Tower Temperature Difference between 30 and 200 foot, as indicated by the "S" column marker following the TDFU column.

- f. If the stability determined from the Main Tower Temperature Difference between 30 and 200 foot is unavailable, utilize the stability letter determined from the temperature difference between 30 and 100 foot, as indicated by the "S" column marker following the TDFM column.
- g. If stability cannot be derived from the digital data, proceed to section 4.3 and utilize the analog strip chart data.

4.3 Secondary Method - Obtaining Analog Meteorological Data

- 4.3.1 The primary method for obtaining meteorological data is via the G.E. Terminet 200. The Texas Instrument TIGRAPH 100 Graphic Display Recorders (Analog Strip Charts) located in the CR and TSC should only be used if data cannot be obtained using the G.E. Terminet 200.
- 4.3.2 Before attempting to obtain data from any of the strip chart recorders, ascertain if they are functioning by verifying that the date and time on the left side of the chart is correct. The strip chart runs at 1"/hr and the time and date are indicated every two hours or two inches. Time indicated is Eastern Standard Time.
- 4.3.3 In order to determine the time of a particular strip chart, open the clear plastic protective cover of the recorder and depress the "CHTADV" button located at the top of the strip chart. This will allow you to view the most recent recorded time.
- 4.3.4 When manually inputting meteorological data, primary concern is given to wind speed and direction, and to the stability class at a certain level, dependent on the type of release.
- 4.3.5 In order to properly estimate the last 15 minutes on the strip chart, measure the last 1/4" of data for each parameter, if not readily visible, and/or the chart has not already been advanced, do so in order to average the last 15 minutes of data properly.
- 4.3.6 Meteorological data for a Ground or both a Ground and Elevated release are to be determined as follows:

4.3.6.1

There are 3 recorders which measure wind speed and direction (Recorders D, G, and J). For each chart, wind speed (the left trace) is labeled Channel A and is in MPH (the range is 0 to 100 MPH and spans the left half of the chart) and wind direction (the right trace) is labeled Channel B and is in degrees (the range is 0 to 360 degrees and spans the right half of the chart). Consult Figure EAP-42.4.

To obtain wind direction and speed for a ground or ground and elevated release, you must first determine whether the Recorder "J" toggle switch is set for 30 or 100 foot (Main Tower). If it is set for 30 foot (Main), average the wind speed and direction as per step 4.3.5.

If the Recorder "J" toggle switch is set for 100 foot (Main Tower) and/or there is no 30 foot data, adhere to the following hierarchy of substeps:

- a. Average the wind speed and direction as per step 4.3.5 for Recorder "G", which is meteorological data for the JAF Tower 90 foot level.
- b. If Recorder "G" is inoperable, or data is invalid, average the wind speed and direction as per step 4.3.5 for Recorder "D", which is meteorological data for the Main Tower 200 foot level.
- c. If both Recorder "G & D" are inoperable, or data is invalid, average the wind speed and direction as per step 4.3.5 for Recorder "J" (if NOT already utilized), which will contain meteorological data for the Main Tower 100 foot level.
- d. If NO strip chart wind speed and direction data is available, proceed to section 4.4 after completing 4.3.8.

4.3.7

Meteorological data for an elevated release is to be determined as follows:

4.3.7.1

There are 3 recorders which measure wind speed and direction (Recorders D, G and J). For each chart, wind speed (the left trace) is labeled Channel A and is in MPH (the range is 0 to 100 MPH, and spans the left half of the chart) and wind direction (the right trace) is labeled Channel B and is in degrees (the range is 0 to 360 degrees and spans the right half of the chart). Consult Figure EAP-42.4.

To obtain wind speed and direction for an elevated release, adhere to the following substeps:

- a. Average the wind speed and direction as per step 4.3.5 for Recorder "D", which is meteorological data for the Main Tower 200 foot level.
- b. If Recorder "D" is inoperable, or data is invalid, average the wind speed and direction as per step 4.3.5 for Recorder "G", which is meteorological data for the JAF 90 foot level.
- c. If both Recorder "D & G" are inoperable, or invalid, average the wind speed and direction as per step 4.3.5 for Recorder "J" which is meteorological data for either the 30 or 100 foot Main Tower levels, as determined by the toggle switch position.
- d. If NO strip chart wind speed and direction data is available, proceed to section 4.4 after completing 4.3.8.

4.3.8

To determine stability class for either a ground or elevated release, you must utilize Recorder "K" information, which contains 4 channels that span the full chart:

- A. Trace labeled "A" provides ambient temperature, on a -4 to +11 scale and must be multiplied by ten (10) to derive the current temperature in degrees F at the Main Tower 30 foot level.
- B. Trace "B" provides temperature difference (delta T) between the 30 and 100 foot level on the Main Tower, and is on the -8 to +20 scale in degrees F.

- C. Trace "C" provides temperature difference between the 30 and 200 foot level on the Main Tower, and is on the same -8 to +20 scale in degrees F.
- D. Trace "D" provides sigma theta (wind direction variation), on a scale of 0 to 30 degrees, at a level dependant on the switch position on the front of the TIGRAPH recording panel:

<u>Switch Position</u>	<u>Level</u>	<u>Tower</u>
A	200 ft.	Main (Primary)
B	100 ft.	Main (Primary)
C	30 ft.	Main (Primary)
D	90 ft.	JAF (Back-up)

Consult Figure EAP-42.5.

To derive stability class for either a ground or elevated release, or both, utilize Figure EAP-42.4 and adhere to the following hierarchy of substeps:

- A. Average the trace "D" (sigma theta) on Recorder "K", utilizing the 0 to 30 scale, as per step 4.3.5, noting what the switch position is, and consulting Figure EAP-42.6 to determine letter stability class.

NOTE: If data is invalid, you may want to switch another switch position to get the most representative data (for the next 15 minute average). For example, for an elevated release you should utilize switch position A, then B, D and finally C, and for a ground release, the progression is C, B, D and then A.

- B. If Trace "D" is unavailable, average the Trace "C" (temperature difference 30 - 200 foot) on Recorder "K", utilizing the -8 to +20 degree F scale as per step 4.3.5 and consulting Figure EAP-42.6 to determine letter stability class.
- C. If Traces "D" and "C" are unavailable, average the Trace "B" (temperature difference 30 - 100 foot) on Recorder "K", utilizing the -8 to +20 degree F scale as per step 4.3.5 and consulting Figure EAP-42.6 to determine letter stability class.

- D. If Traces "D", "C" and "B" are unavailable, estimate stability by comparing wind direction and speed traces to the samples posted on the side of the TIGRAPH 100 housing and/or utilizing the "Atmospheric Stability Characterization" table on Figure EAP-42.6.
- E. If All Recorders are unavailable for meteorological data, proceed to section 4.4.

4.4 Back-Up Method - Obtaining Meteorological Information From Other Sources

- 4.4.1 If meteorological data is not obtained via the primary method (digital) or secondary method (analog strip charts) information on local wind speed and direction, and stability class can be obtained through other sources.
- 4.4.2 **Niagara Mohawk Meteorological Data**
 - 4.4.2.1 Telephone the Niagara Mohawk Nine Mile Point Nuclear Station #1 Control Room via the "hot line" or dial phone, and request pertinent meteorological data needed, and establish whether it is either digital or analog information.
 - 4.4.2.2 In addition, supplemental information may be obtained through Niagara Mohawk via their Meteorological Building, which would provide either digital or analog information.
- 4.4.3 **National Weather Service Meteorological Data**
 - 4.4.3.1 Data may be obtained via telephone on JAF's private number 315-455-1214. Indicate what meteorological data is needed and note the source of the information.
- 4.4.4 **Stability Estimation**
 - 4.4.4.1 Consult Figure EAP-42.6 and estimate stability class via a characterization of the local meteorological conditions.

4.5 Meteorological Forecasting

Meteorological forecasting capabilities during an emergency at JAF will be the responsibility of the Environmental Programs Department in the WPO and will be performed in the following manner:

4.5.1 Upon activation of the WPO Emergency Recovery Center (ERC), a communications link will be established between the EOF dose assessment group and the Recovery Center meteorological forecaster.

4.5.2 When the ERC forecaster arrives, he will:

- A. Familiarize himself with the nature of the situation requiring forecasting support.
- B. Activate the WPO connection with the WSI weather network to become familiar with the current and forecast weather situation.
- C. Contact an additional forecaster and request that person to leave and report to JAF EOF.
- D. Provide JAF dose assessment group, within three hours of initial notification, a weather description and weather forecast in the format found in Figure EAP-42.7.
- E. Provide weather condition and forecast updates until such responsibility is formally transferred to the forecaster at the JAF EOF, or the event requiring support is formally terminated. The forecaster will determine the frequency of updates based upon factors such as the variability of weather conditions and the needs of JAF emergency planning personnel. Once the forecast responsibility is transferred to JAF, the forecaster at the ERC will continue on duty in support of the JAF EOF forecaster until the event is terminated.

4.5.3 When the JAF EOF forecaster arrives at the EOF, he will:

- A. Report to the Dose Assessment Coordinator.
- B. Inform the ERC forecaster of his arrival.
- C. Familiarize himself with the nature of the initiating event and the latest developments.
- D. Review all meteorological forecast support provided up to that point.
- E. Activate the JAF connection with the WSI weather network and prepare to provide direct forecast support.

- F. Take over principal forecast responsibility from the ERC and provide all weather condition and forecast updates, as appropriate, until the event requiring support is formally terminated.

5.0 FIGURES, FORMS AND ATTACHMENTS

- 5.1 Form EAP-42.1, Obtaining Meteorological Data for Manual Computer Input.
- 5.2 Figure EAP-42.2, Sample Digital Print-Out for NMPC
- 5.3 Figure EAP-42.3, Sample Digital Print-Out for NYPA
- 5.4 Figure EAP-42.4, Analog Wind Speed and Direction, Recorders "D, G and J".
- 5.5 Figure EAP-42.5, Analog Sigma Theta, Temperature Difference, and Temperature, Recorder "K".
- 5.6 Figure EAP-42.6, Classification of Atmospheric Stability by the Vertical Temperature Difference and by the Standard Deviation of the Horizontal Wind Direction Typing Schemes.
- 5.7 Figure EAP-42.7, Weather Description and Forecast

FORM EAP-42.1

OBTAINING METEOROLOGICAL DATA FOR
MANUAL COMPUTER INPUT

Date: _____ Time: _____

Release Type: _____

Meteorology

Wind Speed: _____ MPH @ _____ ft. level on _____ Tower

Source: _____ Digital _____ Analog _____

Other (Specify) _____

Wind Direction: _____ deg. @ _____ ft level on _____ Tower

Source: _____ Digital _____ Analog _____

Other (Specify) _____

Stability Class: _____ (A - G)

Method: _____ (Sigma Theta - wind variation)

_____ (Temp. Difference - 30 - 200 ft)

_____ (Temp. Difference - 30 - 100 ft)

_____ Estimation

Source: _____ Digital _____ Analog _____

Other (Specify) _____

Additional information _____

Figure EAP-42.2

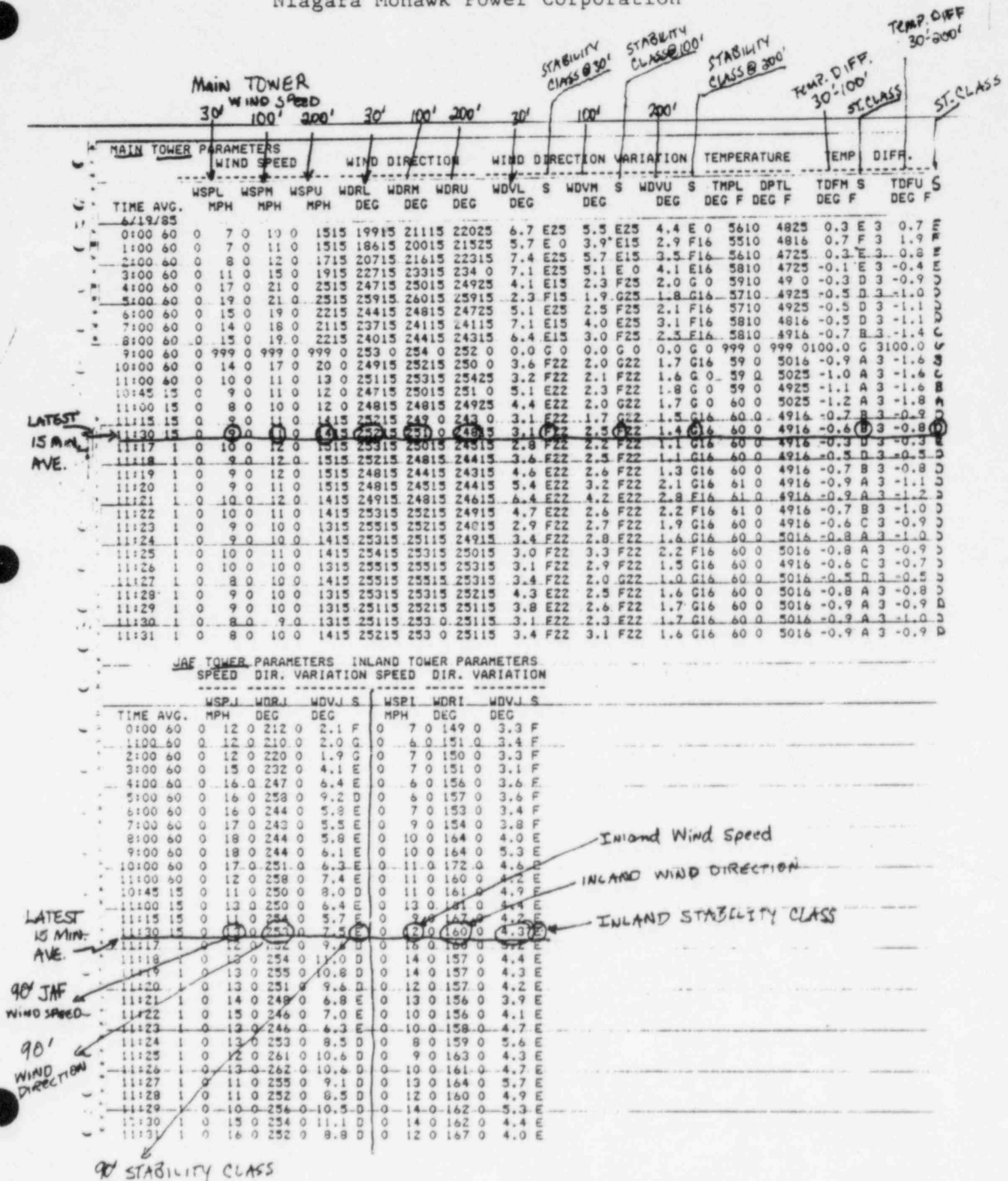
Sample Emergency Print-Out for
Niagara Mohawk Power Corporation

Figure EAP-42.3

Sample Emergency Print-Out for
New York Power Authority

MAIN TOWER PARAMETERS										WIND DIRECTION		WIND DIRECTION VARIATION		TEMPERATURE		TEMP. DIFF.		PRESS.		PRECIP.	
WIND SPEED																					
EST	WSPL	WSPH	WSPU	WDR1	WDRM	WDRU	WSVL	S	WDVM	S	WDVU	S	TMPL	DPTL	TDFM	S	TDFU	S	PRSL	PRCP	
TIME	AVE.	MPH	MPH	MPH	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	F	F	DEG	F	DEG	F	IN HG	IN
22:00 60	7	8	10	208	136	191	10.5	D	72.9	A	13.3	C	14	-4	.5	E	1.7	E	30.3	.00	
23:00 60	6	7	9	215	143	195	12.6	C	72.9	A	13.6	C	14	-2	.6	E	1.3	E	30.3	.00	
01:00 60	7	10	10	233	137	213	11.1	D	72.8	A	13.9	C	13	-2	1.8	F	3.3	F	30.3	.00	
11:00 60	6	10	12	242	174	233	10.7	D	72.7	A	12.9	C	12	-2	1.4	F	4.3	G	30.3	.00	
21:00 60	7	10	14	249	182	247	13.1	C	72.9	A	12.8	C	13	-1	.5	E	2.9	F	30.3	.00	
31:00 60	7	10	15	231	188	235	12.5	C	72.8	A	12.8	C	13	-2	.9	F	2.9	F	30.3	.00	
41:00 60	7	10	13	246	184	259	11.6	D	72.8	A	12.9	C	13	-3	.9	F	3.8	F	30.3	.00	
51:00 60	8	11	13	252	190	265	9.9	D	72.8	A	12.9	C	13	-4	1.2	F	4.6	G	30.3	.00	
61:00 60	7	9	10	244	190	273	11.7	D	72.8	A	13.4	C	14	-7	1.2	E	4.4	G	30.3	.00	
71:00 60	7	9	9	236	173	258	12.3	C	72.8	A	14.3	C	15	-4	.3	E	4.0	G	30.3	.00	
81:00 60	6	7	7	202	136	205	28.2	A	75.1	A	27.1	A	15	-3	.0	E	.9	E	30.4	.00	
91:00 60	7	7	8	198	128	191	13.8	B	73.2	A	14.3	C	13	-6	.0	E	.4	E	30.4	.00	
91:30 15	7	6	7	205	136	202	13.8	C	73.1	A	16.0	C	15	-4	.0	E	.5	D	30.4	.00	
91:45 15	7	7	7	216	139	199	18.5	B	73.6	A	16.8	C	16	-6	.0	E	.4	E	30.4	.00	
101:00 15	6	5	6	225	143	199	27.9	A	74.3	A	20.4	B	16	-5	.0	E	.4	E	30.4	.00	
101:15 15	999	999	999	999	999	999	999.9	X	999.9	X	999.9	X	999	999	999.9	X	999.9	X	999.9	999.99	
7a																					
INPUT(CR) TO CONTINUE																					
On																					
BACKUP TOWER PARAMETERS										INLAND TOWER PARAMETERS		SPEED DIR. VARIATION		SPEED DIR. VARIATION							
TIME	AVE.	MPH	DEG	DEG	MPH	DEG	DEG	MPH	DEG	MPH	DEG	MPH	DEG	MPH	DEG	MPH	DEG	MPH	DEG	MPH	DEG
22:00 60	9	208	23.9	A	4	202	11.5	D													
23:00 60	9	210	25.3	A	5	210	10.7	C													
01:00 60	10	215	23.3	A	5	222	13.7	C													
11:00 60	12	243	24.2	A	5	271	20.6	A													
21:00 60	11	247	23.8	A	4	302	19.2	B													
31:00 60	9	251	23.0	A	3	289	23.7	A													
41:00 60	10	248	23.6	A	3	238	11.6	C													
51:00 60	10	257	23.1	A	3	270	14.7	B													
61:00 60	8	252	24.2	A	4	245	17.6	B													
71:00 60	11	238	24.7	A	5	201	16.0	B													
81:00 60	6	192	25.9	A	7	227	10.8	C													
91:00 60	7	195	27.2	A	7	193	11.9	C													
91:30 15	7	206	24.3	A	7	203	10.5	D													
91:45 15	7	215	24.8	A	7	219	11.4	D													
101:00 15	6	209	32.4	A	7	219	10.2	D													
101:15 15	999	999	999.9	X	999	999	999.9	X													

Figure EAP-42.4

Analog Wind Speed and Direction
Recorders D, G and J

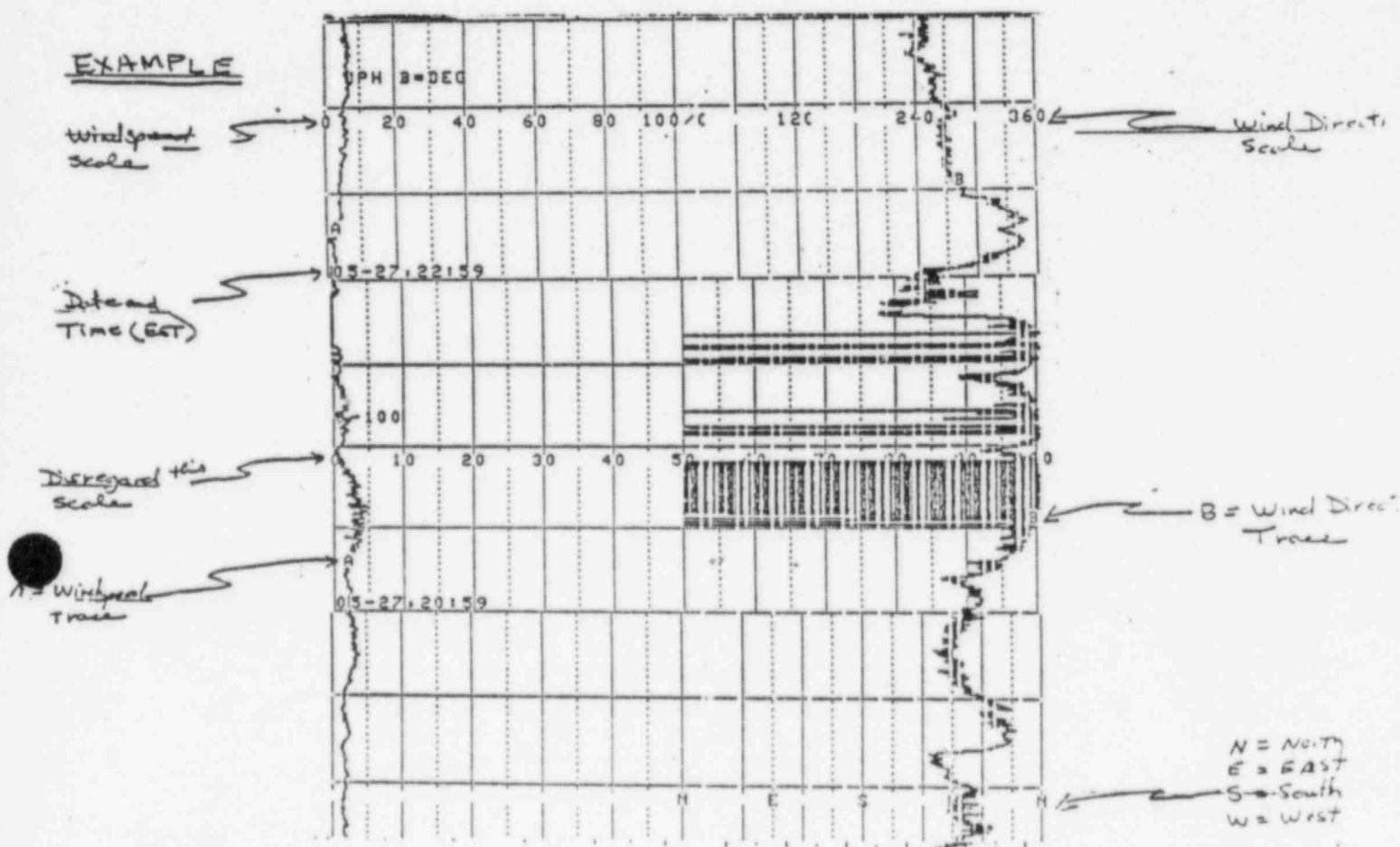


Figure EAP-42.5

Recorder "K"

EXAMPLE

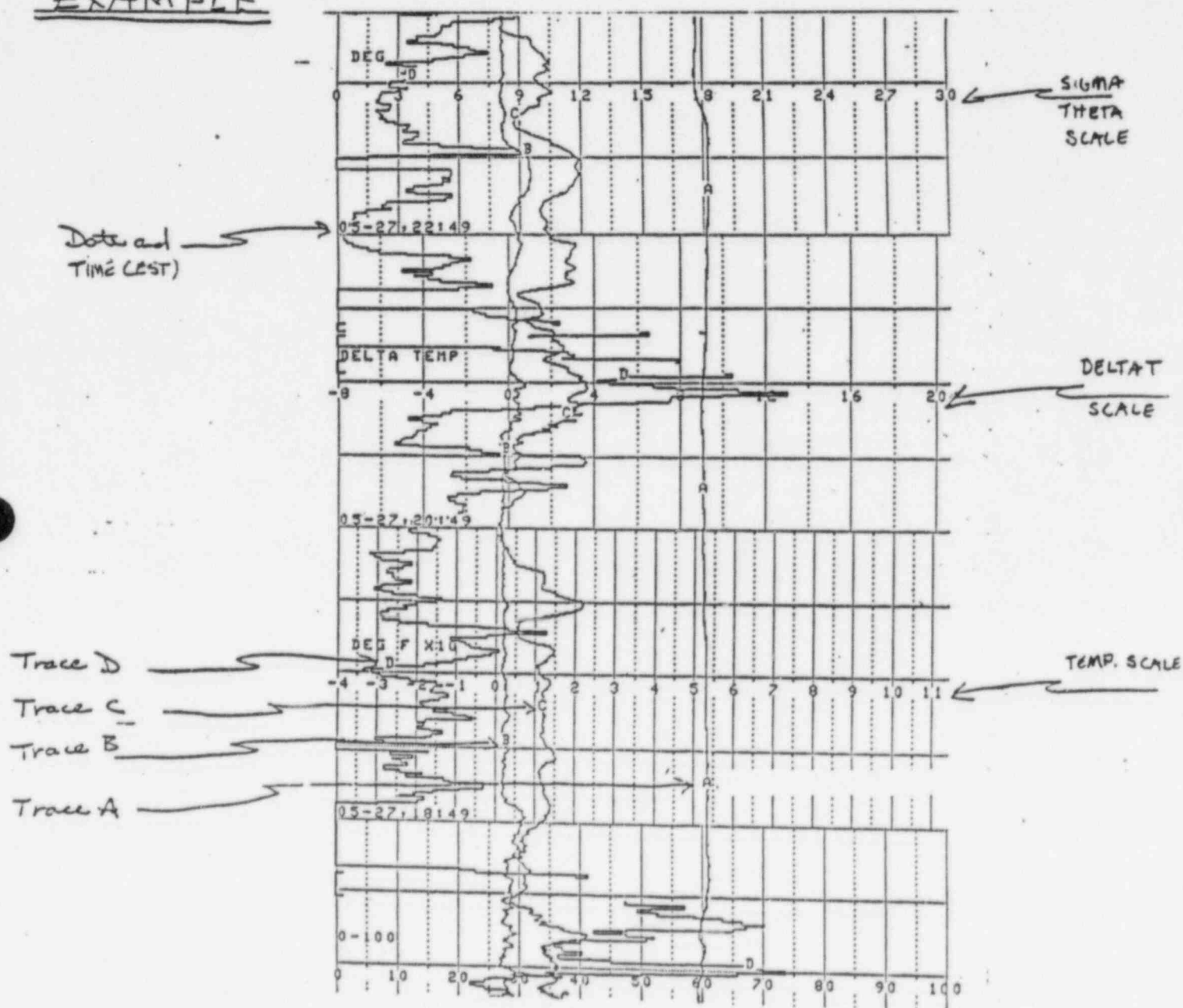


Figure EAP-42.6

CLASSIFICATION OF ATMOSPHERIC STABILITY BY THE VERTICAL
TEMPERATURE DIFFERENCE AND BY THE STANDARD DEVIATION OF THE
HORIZONTAL WIND DIRECTION TYPING SCHEMES

Stability Classification	Pasquill Categories	σ_θ , degrees	σ_θ , degrees Median Value
Extremely unstable	A	$\sigma_\theta \geq 22.5$	25.0
Moderately unstable	B	$22.5 > \sigma_\theta \geq 17.5$	20.0
Slightly unstable	C	$17.5 > \sigma_\theta \geq 12.5$	15.0
Neutral	D	$12.5 > \sigma_\theta \geq 7.5$	10.0
Slightly stable	E	$7.5 > \sigma_\theta \geq 3.8$	5.0
Moderately stable	F	$3.8 > \sigma_\theta \geq 2.1$	2.5
Extremely stable	G	$2.1 > \sigma_\theta$	1.7

Stability Classification	Pasquill Categories	Temperature Change With Height, °F/70 Feet**	Temperature Change With Height, °F/170 Feet†
Extremely unstable	A	$\Delta T/\Delta Z \leq -0.73$	$\Delta T/\Delta Z \leq -1.77$
Moderately unstable	B	$-0.73 < \Delta T/\Delta Z \leq -0.65$	$-1.77 < \Delta T/\Delta Z \leq -1.59$
Slightly unstable	C	$-0.65 < \Delta T/\Delta Z \leq -0.58$	$-1.59 < \Delta T/\Delta Z \leq -1.40$
Neutral	D	$-0.58 < \Delta T/\Delta Z \leq -0.19$	$-1.40 < \Delta T/\Delta Z \leq -0.47$
Slightly stable	E	$-0.19 < \Delta T/\Delta Z \leq 0.58$	$-0.47 < \Delta T/\Delta Z \leq 1.40$
Moderately stable	F	$0.58 < \Delta T/\Delta Z \leq 1.53$	$1.40 < \Delta T/\Delta Z \leq 3.73$
Extremely stable	G	$1.53 < \Delta T/\Delta Z$	$3.73 < \Delta T/\Delta Z$

Atmospheric Stability	Characterization
A	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	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	Late morning to late afternoon only, with partly cloudy skies; spring through fall, winds are usually below 11 miles per hour.
D	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 around, winds are moderate to high (greater than 6 miles per hour).
E	Night time only, with thin overcast or partly cloudy skies, all year around, winds less than 10 miles per hour.
F	Night time only, with clear to partly cloudy skies, all year around, winds less than 7 miles per hour.
G	Night time only, with clear skies or very few thin clouds, all year around, winds less than 5 miles per hour.

* Per NRC Regulatory Guide 1.123

** Adjusted to correspond to the ΔT measured between the 30-foot and 100-foot levels.

† Adjusted to correspond to the ΔT measured between the 30-foot and 200-foot levels.

FIGURE EAP-42.7

WEATHER DESCRIPTION AND FORECAST

CURRENT DATE:
CURRENT TIME:

FORECAST LEVEL (FEET):
FORECASTER'S INITIALS:

GENERAL WEATHER DESCRIPTION:

FORECAST TIME (LOCAL)	WIND SPEED (MPH)	WIND DESCRIPTION	STABILITY CLASS	TEMPERATURE °F	PRECIPITATION (TYPE, QUANTITY)

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NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

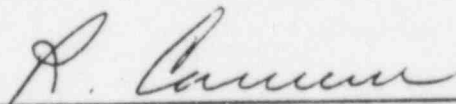
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: SAP-1

TITLE: MAINTAINING EMERGENCY PREPAREDNESS*

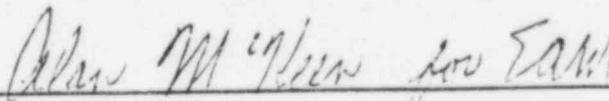
PORC REVIEW: Meeting No. 86-003 Date 1-8-86

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Resident Manager

APPROVED BY:



Radiological and Environmental
Services Superintendent

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Date: 12/85

DRILL REPORT3. Organization Involvement (Circle applicable) (Continued)

Site Security	Yes / No
Fire Brigade	Yes / No
White Plains Office (WPO)	Yes / No
Joint News Center (JNC)	Yes / No
Operational Support Center (OSC)	Yes / No
Alternate Operating Support Center (AOSC)	Yes / No
First Aid Team	Yes / No

b. Non NYPA

NY State Radiological Emergency Preparedness Group (REPG)	Yes / No
NY State Department of Health	Yes / No
NY State Office of Disaster Preparedness	Yes / No
NY State Bureau of Radiological Health	Yes / No
US Nuclear Regulatory Commission	Yes / No
US Department of Energy	Yes / No
US Coast Guard	Yes / No
Nine Mile Point Unit #1	Yes / No
Oswego County Emergency Management Office	Yes / No
Oswego County Sheriff	Yes / No
Oswego Hospital	Yes / No
Upstate Medical Center	Yes / No
Oswego Fire Department Ambulance	Yes / No
General Electric	Yes / No
Other (Specify) _____	

DRILL REPORT4. Communications

- a. Shall the JAFNPP Radio System be used for communications?
Yes / No
- b. Should a news release be prepared?
Yes / No
- c. Activation of Joint News Center?
Yes / No
- d. Activation of Public Notification System/EBS?
Yes / No

5. Drill/Exercise Elements

- a. Will key emergency response positions be filled by alternate?
Yes / No
- b. Is a contaminated medical injury to be involved?
Yes / No

If yes, (1) Onsite response by First Aid Team Yes / No
 (2) Offsite response Yes / No

(Circle Agencies Involved)

Oswego Hospital
Upstate Medical Center
Oswego Fire Department Ambulance

- c. Will the exercise involve a simulated fire?
Yes / No

(1) Onsite response Yes / No
(2) Offsite response Yes / No

(Circle Agencies Involved)

Oswego Fire Department
Scriba Volunteer Fire Department
Volney Volunteer Fire Corporation
Alcan Fire Department
Minetto Volunteer Fire Department

DRILL REPORT5. Drill/Exercise Elements (Continued)

d. Will the Security Force response be tested?
Yes / No

- (1) Sabotage/Bomb
- (2) Intruder
- (3) Accountability

Yes / No
Yes / No
Yes / No

6. Radiological Release

Yes / No

a. Meteorological capabilities.

- (1) Will real-time meteorology be used?
- (2) Will fixed meteorology be used?

Yes / No
Yes / No

b. Dose Assessment.

- (1) Will dose projection be made using computerized model?
- (2) Will dose projection be made using manual calculator overlay wheel?
- (3) Will field monitoring teams be dispatched?
- (4) Will dose projections warrant protective action recommendations?

Yes / No
Yes / No
Yes / No
Yes / No

c. Post Accident Sampling.

- (1) Are simulated samples of stack iodine/particulate sample required?
- (2) Should a simulated reactor coolant sample be taken?

Yes / No
Yes / No

d. Environmental.

- (1) Should environmental media be collected?
- (2) Should sampling devices be collected from environmental stations?

Yes / No
Yes / No

7. Attached is a copy of the scenario used for this drill.

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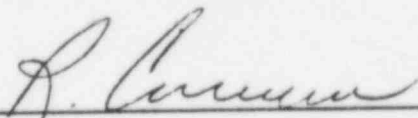
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: SAP-2

TITLE: EMERGENCY EQUIPMENT INVENTORY*

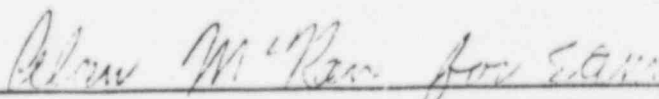
PORC REVIEW: Meeting No. 86-003 Date 1-8-86

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Rev. No. 6

Date: 12/85

FORM SAP-2.1

Fire Cabinet Inventory Checklist
Quarterly

Location:

- ___ 1. Turbine Building, el 272', Near Radwaste w/6 individual lockers
 ___ 2. Turbine Building, el 272', Radiation Protection Hallway
 with 6 individual lockers
 ___ 3. Reactor Building, el 272', Under Northeast Stairs
 with 4 individual lockers on 326' el.
 ___ with 6 individual lockers on 272' el.

<u>Item/Equipment/Min.Quantity</u>	<u>Condition/Serial #/Remarks</u>	<u>Verified By/Date</u>
1. Scott Pak II - 2	_____	_____
2. Spare Air Cylinder - 4	_____	_____
3. Coveralls - 2 pr	_____	_____
4. Cotton Hoods - 2	_____	_____
5. Rubber Gloves - 2 pr	_____	_____
6. Rubber Boots - 2 pr	_____	_____
7. Raincoats - 2	_____	_____
8. Rainpants - 2 pr	_____	_____
9. Fire Axe - 1	_____	_____
10. Wrecking Bar - 1	_____	_____
11. Portable Hand Light - 1	_____	_____
12. Fire Resistant Gloves -	_____	_____
2 pr	_____	_____
13. Fire Resistant Suits - 1	_____	_____
with hoods	_____	_____
14. Inventory Checklist	_____	_____
Form SAP-2.1	_____	_____
15. Individual Brigade	_____	_____
Lockers	_____	_____
Fire Helmet - 1 ea	_____	_____
Gauntlet - 1 ea	_____	_____
Coats, Turnout - 1 ea	_____	_____
Boots, Turnout - 1 pr ea	_____	_____
Hand Lantern - 1 ea	_____	_____
Scott Pak II - 1 ea	_____	_____
(326' Rx. Bldg. only)	_____	_____
Spare Air Cylinder - 1 ea	_____	_____
(326' Rx. Bldg. only)	_____	_____

ITEMS REPLACED:

BY/DATE:

Emergency Planning CoordinatorDate

FORM SAP-2.9

Security Building Kit Inventory Checklist
QuarterlyKit Location: Main Gate Security Bldg., Storeroom

<u>Item/Equipment/Min.Quantity</u>	<u>Condition/Serial #/Remarks</u>	<u>Verified By/Date</u>
1. Coveralls - 8 pr	_____	_____
2. Booties - 8 pr	_____	_____
3. Hoods - 8	_____	_____
4. Cloth Gloves - 8 pr	_____	_____
5. Rubbers - 8 pr	_____	_____
6. Masking Tape 2" - 1 roll	_____	_____
7. Resp. w/Cartridges - 8	_____	_____
8. Spare Resp. Cartridges - 8	_____	_____
9. Scott Pak II - 7	_____	_____
10. Spare Air Cylinders - 7	_____	_____
11. TLDs - 25	date: _____	_____
12. Inventory Checklist Form SAP-2.9	_____	_____
13. Rubber Gloves - 2 boxes	_____	_____
14. Respiratory Filters - 8	_____	_____
15. Control TLD -	_____	_____

ITEMS REPLACED:

BY/DATE:

Emergency Planning CoordinatorDate

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NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

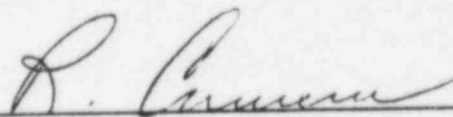
EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: SAP-8

TITLE: SIREN SYSTEM FALSE ACTIVATION

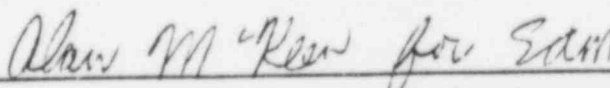
PORC REVIEW: Meeting No. N/A Date 12/85

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Resident Manager

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Radiological and Environmental
Services Superintendent

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Date 12/85

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAP-8

SIREN SYSTEM FALSE ACTIVATION

1.0 PURPOSE

This procedure provides guidelines for handling a spurious or inadvertent (Oswego County) Siren System Activation. This procedure is for use by the JAFNPP Control Room and/or plant administrative staff. This procedure is applicable to all personnel at the James A. FitzPatrick Nuclear Power Plant.

2.0 REFERENCES

- 2.1 Oswego County Spurious Siren System Activation (Draft)
- 2.2 Nine Mile Point Unit I Siren System False Activation Procedure (Draft)
- 2.3 Oswego County Emergency Broadcast System Procedures.

3.0 RESPONSIBILITIES

- 3.1 Shift Supervisor shall initiate this procedure during non-regular business hours.
- 3.2 During regular business hours, personnel receiving initial information shall contact the Superintendent of Power or Emergency Planning Coordinator to initiate this procedure.

4.0 PROCEDURE

- 4.1 In the event a telephone call or "RECS" hotline call notifies the switchboard or Control Room that sirens have been activated or a member of the plant staff hears a siren, perform the following:
 - 4.1.1 Get name, address, and phone number of the caller(s).
 - 4.1.2 Ask caller(s) for information that may be useful in determining the location of the siren(s) that has (have) been activated. (Refer to Figure SAP-8.1.)

NOTE: The sirens located in Scriba and New Haven are also used by the local fire departments. If these sirens are suspected of going off, request the Sheriff (step 7.3) to confirm this with the Oswego County Fire Control Dispatch.

- 4.1.3 Determine if the siren(s) is (are) currently sounding, and if so, how long it (they) has (have) been sounding.
- 4.1.4 Determine if a maintenance crew is required to turn off a siren. Record any other information provided by the caller.
- 4.2 If a maintenance crew is required to service a siren, contact the Nine Mile Point Control Room, Unit I and provide the information above. Nine Mile Point Control Room Unit I staff will contact maintenance crew after receiving proper authorization from Oswego County.
- 4.3 Use the Radiological Emergency Communications System (RECS) to contact the Oswego County Sheriff's Office to provide the information recorded above.
- 4.4 Contact the following individuals and notify them of events which have taken place:
 - 4.4.1 Supervision
 - 4.4.2 Emergency Planning Coordinator - Nicholas Avrakotos:
Office - 315/342-3840 Ext. 412
Home - 315/342-5257
 - 4.4.3 JAFNPP Public Information Officer - Frederick Chase:
Office - 315/342-3840 Ext. 218
Home - 315/342-3049
 - 4.4.4 WPO Nuclear Operations Duty Officer:
Beeper - 212/396-7007
ECC Marcy - 315/797-8271

5.0 FIGURES, FORMS AND ATTACHMENTS

5.1 Figure SAP-8.1 Siren Locations (Map 6)