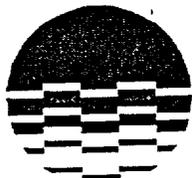


DISTRIBUTION CONTROL LIST

Document Name: EMER PLAN

CC_NAME NAME	DEPT	LOCATION
1 PLANT MANAGER'S OFFICE	UNIT 3 (UNIT 3/IPEC ONLY)	45-3-B
2 EP/TRAINING ADMINISTRATOR	TRAINING (ALL EP'S)	#48
3 RES DEPARTMENT MANAGER	RES (UNIT 3/IPEC ONLY)	45-4-A
4 REFERENCE LIBRARY	REC/TRN (UNIT 3/IPEC ONLY)	BLDG/17
9 JOINT NEWS CENTER	EMER PLN (ALL EP'S)	EOF
10 SHIFT MGR. (LUB-001-GEN)	OPS (UNIT 3/IPEC ONLY)	IP3
11 CONTROL ROOM & MASTER	OPS (3PT-D001/6 (U3/IPEC)	IP3 (ONLY)
14 EOF	E-PLAN (ALL EP'S)	EOF
16 AEOF/A.GROSJEAN (ALL EP'S)	E-PLAN (EOP'S ONLY)	WPO-12D
19 NUC ENGINEERING LIBRARY	DOC (UNIT 3/IPEC ONLY)	WPO/7A
21 TSC	RECORDS	45-3-F
22 RESIDENT INSPECTOR	US NRC (UNIT 3/IPEC ONLY)	45-2-B
23 SILK DAVID	NRC (ALL EP'S)	OFFSITE
24 SILK DAVID	NRC (ALL EP'S)	OFFSITE
25 DOCUMENT CONTROL DESK	NRC (ALL EP'S)	OFFSITE
28 AVRAKOTOS N	J A (UNIT 3/IPEC ONLY)	OFFSITE
29 E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
30 E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
31 BARANSKI J (VOLUME I ONLY)	ST. EMERG. MGMT. OFFICE	OFFSITE
32 SUTTON A - (VOLUME I ONLY)	DISASTER & EMERGENCY	WESTCHESTR
33 LONGO N (VOLUME I ONLY)	EMERGENCY SERVICES	ROCKLAND
34 GREENE D (VOLUME I ONLY)	DISASTER & CIVIL DEFENSE	ORANGE
35 RAMPOLLA M (VOLUME I ONLY)	OFFICE OF EMERG MANAGE	PUTNAM
41 SIMULATOR	TRAIN (UNIT 3/IPEC ONLY)	48-2-A
107 QA MANAGER	QA (UNIT 3/IPEC)	TRL #2A
319 C.STELLATO (NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
354 L.GRANT (LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
376 E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
424 J.CHIUSANO (OPS INSTR)	(UNIT 3/IPEC ONLY)	#48
510 L.GRANT (LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
511 L.GRANT (LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
512 C.STELLATO (NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
513 C.STELLATO (NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
517 PLANT MANAGER'S OFFICE	ADMIN/ (UNIT 2/IPEC ONLY)	IP2
518 DOCUMENT CONTROL	UNIT 2 (UNIT 2/IPEC ONLY)	IP2
520 CONTROL ROOM (UNIT 2)	OPS (UNIT 2 & IPEC ONLY)	IP2
521 SIMULATOR	TRAIN (UNIT 2/IPEC ONLY)	IP2
522 NRC RESIDENT	US NRC (UNIT 2/IPEC ONLY)	IP2
523 ROBERT VOGLE (UNIT 2)	TRAIN/LIB (ALL EP'S)	TODDVILLE
524 JOHN MCCANN (UNIT 2)	NUC SAFETY/LIC (ALL EP'S)	IP2

A045



Entergy

Indian Point 3

AP-18.2
Revision 10

Attachment 1
Page 1 of 1

		CONTROLLED DOCUMENT TRANSMITTAL FORM	
TO: DISTRIBUTION		DATE 3/13/2003	TRANSMITTAL NO: 27749
FROM: IP3 DOCUMENT CONTROL GROUP			EXTENSION: 2038
The Document(s) identified below are forwarded for use. In accordance with AP-18.2, please review to verify receipt, incorporate the document(s) into your controlled document file, properly disposition superseded, void, or inactive document(s). Sign and return the receipt acknowledgement below within fifteen (15) working days.			
AFFECTED DOCUMENT : EMERGENCY PLAN PROCEDURES: IPEC			
DOC #	REV #	TITLE	INSTRUCTIONS
<p>*****FOLLOW ATTACHED INSTRUCTIONS*****</p> <p>*PLEASE NOTE EFFECTIVE DATES*</p>			
RECEIPT OF THE ABOVE LISTED DOCUMENT(S) IS HEREBY ACKNOWLEDGED. I CERTIFY THAT ALL SUPERSEDED, VOID, OR INACTIVE COPIES OF THE ABOVE LISTED DOCUMENT(S) IN MY POSSESSION HAVE BEEN REMOVED FROM USE AND ALL UPDATES HAVE BEEN PERFORMED IN ACCORDANCE WITH EFFECTIVE DATE(S) (IF APPLICABLE) AS SHOWN ON THE DOCUMENT(S).			
_____	_____	_____	_____
NAME (PRINT)	SIGNATURE	DATE	CC#
			25

27749

TO: Nuclear Regulatory Commission 25
FROM: IPEC Emergency Planning
SUBJECT: Emergency Planning Document Update

Date: 03/06/03

Please update your controlled copy of the documents listed below as specified with the copy(s) attached.

Please sign this memo indicating that you have completed the update as specified and return to:

Entergy Nuclear
Indian Point Nuclear Generating Station
Records and Documents Department
Broadway & Bleakley Aves.
Buchanan, NY 10511
Attn: Document Custodian

Document #	Document Name	New Rev. #/ Date	Old Rev. #/ Date	Instructions
IPEC	IPEC Emergency Planning Implementing Procedures			
TOC	Table of Contents	3/03	11/20/02	Replace old with new
IP-EP-115	Emergency Plan Forms	Rev 1 3/6/03	Rev 0 7/11/02	Replace old with new
IP-EP-250	Emergency Operations Facility	Rev 0 3/6/03		New
IP-EP-251	Alternate Emergency Operation Facility	Rev 1 3/6/03	Rev 0 7/11/02	Replace old with new
IP-EP-255	Emergency Operations Facility Management and Liaisons	N/A	Rev 2 11/20/02	VOIDED
IP-EP-260	Joint News Center	Rev 0 3/6/03		New
IP-EP-310	Dose Assessment	Rev 1 3/6/03	Rev 0 7/11/02	Replace old with new
IP-EP-410	Protective Action Recommendations	Rev 1 3/6/03	Rev 0 7/11/02	Replace old with new

Update completed as specified:

Signature of Controlled Copy Holder

Date

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Alternate Emergency Operations Facility (AEOF)

1.0 **PURPOSE**

Note:
Position Checklists provided in current Emergency Plan procedures for operations of the Emergency Operations Facility (EOF) are still required to be used by ERO members responding to the AEOF

- 1.1 The purpose of this procedure is to provide support information for the activation of the Alternate Emergency Operations Facility (AEOF).

2.0 **REFERENCES**

- 2.1 Current procedures on the operation of the "Emergency Operations Facility"

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

- 4.1 The Emergency Director is responsible for:
- 4.1.1 Ensuring continuity of notifications to New York State (NYS), County, and Federal authorities as required;
 - 4.1.2 Ensuring continuity of emergency classification, protective action recommendations and notifications during a move to the AEOF; and, coordinating and managing the Emergency Response Organization from this new location.
- 4.2 The EOF Manager is responsible for:
- 4.2.1 Ensuring the AEOF is made operational in accordance with this procedure;
 - 4.2.2 Ensuring minimum staffing is attained;
 - 4.2.3 Ensuring other EOF Staff members perform steps outlined in this procedure.

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5.0 **DETAILS**

- 5.1 EOF Manager shall follow steps in IP-EP-250 for activation and operation of the AEOF
- 5.2 Access to the AEOF
 - 5.2.1 The Alternate Emergency Operations Facility is located on the 12th floor of the AT&T building at 440 Hamilton Avenue, White Plains, NY. This is approximately a 25 mile drive southeast of the Emergency Operations Facility at Indian Point.
 - 5.2.2 The AT&T building is open from 7 a.m. to 5 p.m. Monday through Friday. To gain access to the building after hours designated personnel will use a key card and the side door.
 - 5.2.3 The AEOF is a dedicated facility that requires a minimum of setup.
- 5.3 Entry into this procedure is based on guidance provided in IP-EP-250, Emergency Operations Facility

6.0 **INTERFACES**

- 6.1 Unit 2 and Unit 3 Emergency Operations Facility Procedures
- 6.2 IP-EP-250, "Emergency Operations Facility"

7.0 **RECORDS**

None

8.0 **REQUIREMENTS AND COMMITMENTS**

None

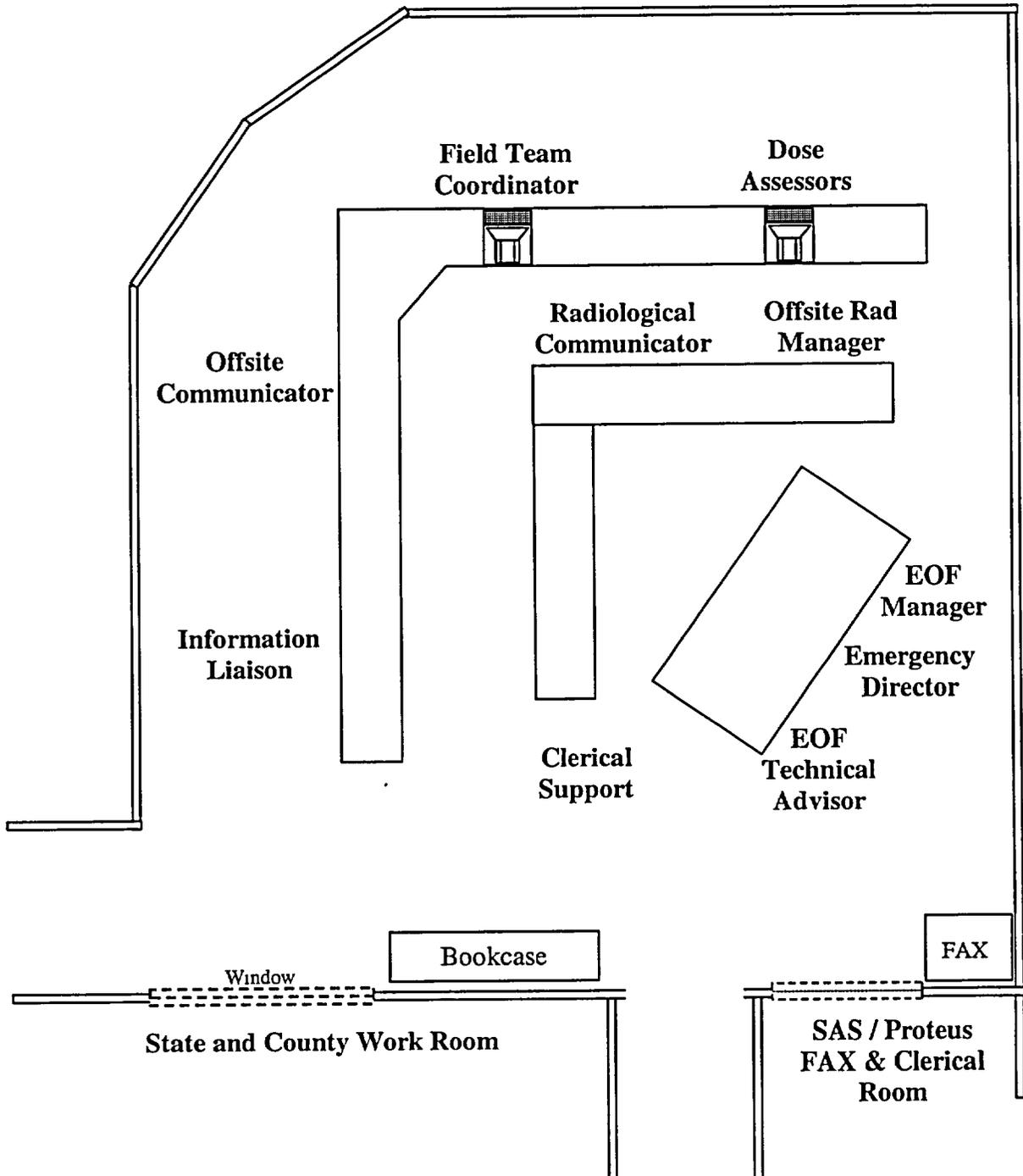
9.0 **ATTACHMENTS**

- 9.1 Layout of the AEOF
- 9.2 Instructions for Using the AEOF Radios
- 9.3 Telephone Reference Guide
- 9.4 AEOF Setup Checklist
- 9.5 Directions to the AEOF



Attachment 9.1
Layout of the AEOF
Sheet 1 of 2

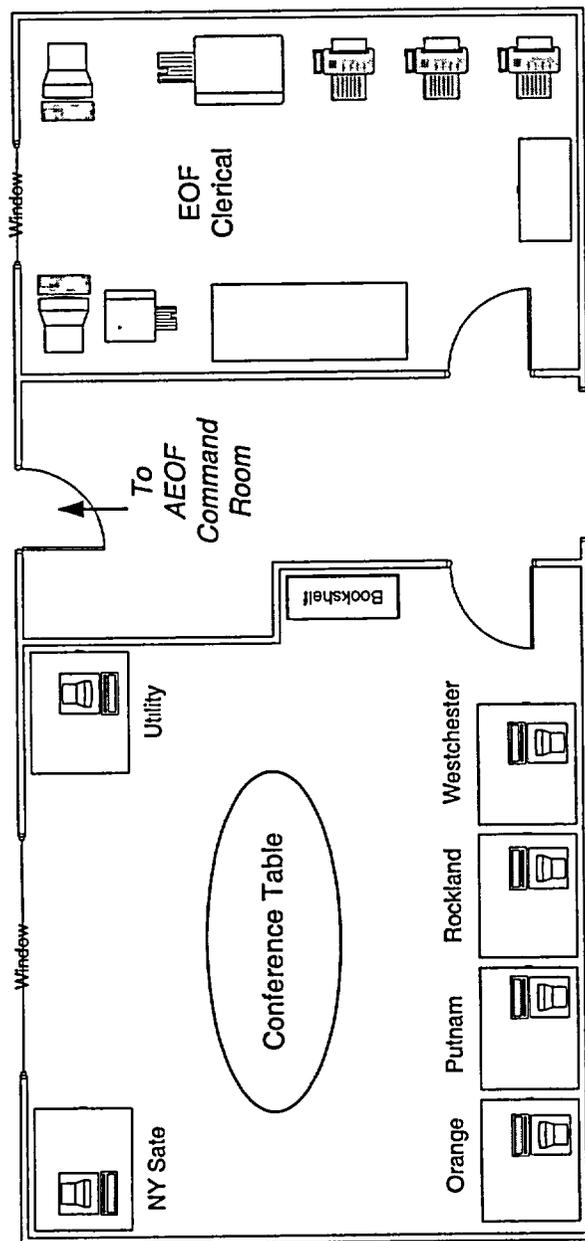
Command Center





Attachment 9.1
Layout of the AEOF
Sheet 2 of 2

State and County / Clerical Center



 IPEC EMERGENCY PLAN IMPLEMENTING PROCEDURES	NON-QUALITY RELATED PROCEDURE	IP-EP-251	Revision 1
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Attachment 9.2

Instructions for Using the AEOF Radios

Sheet 2 of 3

2.2 Controls and Indicators on Control Panel – Horizontal Panel

2.2.1. Channel Select Switches

The channel select switches (CH1 through CH3 – top row only) select channels for transmitter turn-on and monitor commands. Only one channel may be selected; depressing one channel select switch resets all other channel select switches. When a selection is made, receive audio for that channel is switched from the unselect speaker on the front panel to the select speaker on the control console.

2.2.2 F1-F2 Button

The F1-F2 button is used to select either of two frequencies of a two-frequency base station. A **FREQ 1** indicator lights when FQ is selected. A **FREQ 2** indicator lights when F2 is selected. **THIS BUTTON IS FOR CHANNEL 2 ONLY.**

2.3. Controls and Indicators on Front Panel – Vertical Panel

ALL BUTTONS ON THIS PANEL SHOULD NOT BE DEPRESSED.

2.4 Reception

The **CALL** indicator flashes whenever receive audio is present on the associated channel. If the channel is not selected, audio is heard in the unselect speaker at the right side of the front panel. If the channel is selected, audio is heard in the select speaker at the left side of the control panel. Adjust the volume of each speaker as desired using the **Unselect Volume** control on the front panel for the unselect speaker and **VOLUME** control on the control panel for the select speaker.

2.5 Transmission

To transmit, first select the desired channel by depressing the appropriate select switch (CH1, CH2, etc.) on the control panel. Only one channel may be selected for transmission. If the **BUSY** lamp is lit on any channel, an operator cannot transmit on that channel. After selecting the channel, listed to the select audio speaker and if a call is in progress, wait until the call has ended. There may be conversations on the channel, which can only be heard by actuating the **Monitor** button on the microphone. This will enable the operator to monitor the channel. If the channel is clear, the transmitter may be keyed by depressing the **TRANSMIT** switch.

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Attachment 9.2
Instructions for Using the AEOF Radios
Sheet 3 of 3

3.0 Instructions for use of Motorola Desk Top Controller

NOTE

This unit is for use on Channel 3 Frequency 1 (LOCAL GOVERNMENT RADIO) only.

3.1. To Answer a call

- 3.1.1 Lift handset off hook. Speaker is muted and received audio is heard in handset earpiece until handset is replaced on hook.
- 3.1.2 Press Push-to-Talk button on side of handset to talk. The TRANSMIT indicator will light during transmission.
- 3.1.3 Release Push-to-Talk button to listen.
- 3.1.4 Hang-up handset when call is terminated.

3.2 To Make A Call

- 3.2.1 Depress MONITOR button to check that channel is clear.
- 3.2.2 Lift handset off hook.
- 3.2.3 Press Push-to-talk button to talk. Note that TRANSMIT indicator lights.
- 3.2.4 Release Push-to-Talk button to listen.
- 3.2.5 When call is complete, hang-up handset.

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Attachment 9.3
Telephone Reference Guide
Sheet 1 of 3

1.0 Discussion

Each telephone has two telephone lines, an intercom function and a facility paging function.

Note:

Only two telephones in the facility are speakerphones. You may listen to others over the telephone speaker but they will not be able to hear you unless you use the handset.

- 1.1 PBX line (272-3xxx exchange) requires that you dial 9 to get an outside line. This line is the first line on the left.
- 1.2 Outside line (682-8xxx exchange) is a direct dial line to the outside calls. This line is the second line from the left.
- 1.3 Intercom System uses the On-Off button and a three-digit code to page or call another telephone number in the facility.
- 1.4 The Page button will access the facility public address system. This page network also covers the State/County area and the Clerical Support Area. It does not cover the NRC work area (in the EP Manager's office).

2.0 To Answer a Call

- 2.1 Pick up handset
- 2.2 Answer the call by pressing the line key with the flashing green LED

3.0 Making an Outside Call from the PBX line

- 3.1 Pick up the handset
- 3.2 Press the PBX line button and Dial 9
- 3.3 Listen for dial tone
- 3.4 Dial the desired number

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Attachment 9.3
Telephone Reference Guide
 Sheet 2 of 3

4.0 Making an Outside Call from the Outside line

- 4.1 Pick up the handset
- 4.2 Press the outside line button
- 4.3 Listen for dial tone
- 4.4 Dial the desired number

5.0 Placing a call on Hold and Retrieving the Call

- 5.1 Press the HOLD button during a call
- 5.2 Retrieve the call by pressing the LINE key with the flashing green LED

6.0 Transferring Calls

- 6.1 During a call depress the HOLD button
- 6.2 Dial the extension number to which the call will be transferred
- 6.3 When the recipient answers, announce the call and hang-up
- 6.4 If recipient does not want to answer call you can return to the caller by pressing the LINE key with the flashing green LED

7.0 Making a Conference Call (this will take both lines)

Only two other people and you can be on the conference call. This will require both telephone lines.

7.1 Adding an Outside line

- a. Press the HOLD button during a call
- b. Press the other line button
- c. Dial the party to be included in the conference (remember to dial 9 if using the PBX number)
- d. Press CONF button after the call is answered to connect all parties

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Attachment 9.3
Telephone Reference Guide
Sheet 3 of 3

7.2 Adding an Internal extension

- a. Press the HOLD button during a call
- b. Press the other line button
- c. Dial the extension number to be included in the conference
- d. Press CONF button after the call is answered to connect all parties

7.3 To End the Conference Call hang up the telephone

8.0 Using the Intercom function

8.1 Press the ON/OFF button so that the light illuminates

8.2 Dial the three digit number for the party you wish to reach

9.0 Using the Page function

9.1 Pick up the handset

9.2 Press the PAGE button

9.3 Address the entire facility (this does not cover the NRC work area)

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Attachment 9.5
Directions to the AEOF
Sheet 1 of 1

Directions to the AEOF:

1. Take US-9 South from Buchanan. (~7 miles)
2. Take NY-9A South towards Briarcliff Manor.
3. Stay on NY-9A South. (~5 miles)
4. Stay straight to go onto NY-100 South / Briarcliff Peekskill Parkway / NY-9A South
5. Take the RT-100 ramp towards RT-9 / Saw Mill River Parkway. (0.4 miles)
6. Keep left at the fork in the ramp.
7. Turn slightly left onto Broadway / NY-141.
8. Take the ramp towards Sprain Brook Parkway / Bronx River Pkwy.
9. Merge onto Taconic State Parkway South.
10. Take Sprain Brook Parkway South towards New York City.
11. Merge onto Sprain Brook Parkway South. (3.5 miles)
12. Take the I-287 East exit on the left towards White Plains.
13. Merge onto I-287 East. (2.0 miles)
14. Take exit number 6, RT-22, towards White Plains / North White Plains.
15. Turn right onto North Broadway / NY-22 South. (0.7 miles)
16. Turn right onto Hamilton Ave / NY-119 W.

Note: There is 3 separate AT&T buildings on Hamilton St. 360, 400 & 440 the AEOF is located in 440 Hamilton. In the evenings use door on side of building between 400 Hamilton and 440 Hamilton.

17. Park on the roof of the Sears parking deck, across the street from the AT&T building at 440 Hamilton.



IPEC
EMERGENCY PLAN
IMPLEMENTING
PROCEDURES

NON-QUALITY RELATED
PROCEDURE

IP-EP-115

Revision 1

REFERENCE USE

Page 1 of 30

CONTROLLED

COPY # 25

Emergency Plan Forms

Prepared by:

Al Lee
Print Name

Al Lee
Signature

3/3/03
Date

Approval:

Frank Inzirillo
Print Name

Frank Inzirillo
Signature

3/3/03
Date

Effective Date: 3/6/03

 IPEC EMERGENCY PLAN IMPLEMENTING PROCEDURES	NON-QUALITY RELATED PROCEDURE	IP-EP-115	Revision 1
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5.1 Use of Forms	3
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Emergency Plan Forms

1.0 PURPOSE

This procedure controls Forms used by the Emergency Response Organization during emergencies.

2.0 REFERENCES

NONE

3.0 DEFINITIONS

NONE

4.0 RESPONSIBILITIES

5.1 The Emergency Planning Department is responsible for maintaining forms used by the Emergency Response Organization in accordance with this procedure.

5.0 DETAILS

5.1 Use of Forms

5.1.1 The Implementing Procedure that calls for a form to be completed controls the actual use of forms.

5.1.2 Any needed instructions for form completion will either be on the form itself or in the procedure calling for its use.

5.2 Control of Forms

5.2.1 Forms are numbered sequentially as the need for them is defined by other implementing procedures.

5.2.2 Form numbers will be formatted as "Form EP-n Rev x", where n is the sequential number of the form and x is the current revision of the form.

5.3 Method of Placing Forms in this Procedure

5.3.1 Forms are attached as addendums to this procedure. They will appear formatted in the end use format. There will be no annotation on the addendums or actual forms showing addendum number or procedure page number.

 IPEC EMERGENCY PLAN IMPLEMENTING PROCEDURES	NON-QUALITY RELATED PROCEDURE	IP-EP-115	Revision 1	
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6.0 INTERFACES

Attachment 1, Current List of Effective Forms contains interfacing documents to each form.

7.0 RECORDS

Forms become official records when completed during a declared emergency.

8.0 REQUIREMENTS AND COMMITMENT CROSS-REFERENCE

None

9.0 ATTACHMENTS

Attachment 9.1 Current List of Effective Forms

Attachment 9.1
Current List of Effective Forms
 Sheet 1 of 2

Form Number	Current Revision	Form Title (number of pages)	Interfacing Procedures
EP-1	Rev. 0	NYS Radiological Emergency Data Form, Part 1 (1 page)	IP-EP-250 IP-1010 (Unit 2)
EP-2	Rev. 0	NYS Radiological Emergency Data Form, Part 2 (1 page)	IP-EP-250 IP-1010 (Unit 2)
EP-3	Rev. 0	CCR NUE Notification Checklist (2 pages, used back to back)	IP-EP-250 IP-1010 (Unit 2)
EP-4	Rev. 0	CCR Initial Notification Checklist – Alert/SAE/GE (2 pages, used back to back)	IP-EP-250 IP-1010 (Unit 2)
EP-5	Rev. 0	Upgrade / Update Notification Alert/SAE/GE Checklist (2 pages, used back to back)	IP-EP-250 IP-1010 (Unit 2)
EP-6	Rev. 0	Emergency Exposure Authorizations	IP-EP-250 IP-1023 (Unit 2)
EP-7	Rev. 0	EOF Staffing	IP-EP-250
EP-8	Rev. 0	Recovery Issues / Strategies Form	IP-EP-610
EP-9	Rev. 1	Essential Information Checklist	IP-EP-250
EP-10	Rev. 0	ERO Log Sheet	IP-EP-250
EP-11	Rev. 1	IPEC Manual Dose Assessment Worksheet / Estimating Containment Activity via R-25 / 26	IP-EP-310
EP-12	Rev. 0	Estimated Total Population Dose (8 pages)	IP-EP-620
EP-13	Rev. 1	IPEC Manual Dose Assessment Worksheet/ TEDE Whole Body Exposure Calculations and TODE Thyroid Exposure Calculations (2 pages)	IP-EP-310
EP-14	Rev. 0	EOF Check Point Sign-In Log (2 pages, used back to back)	IP-EP-250
EP-15	Rev. 0	(un-assigned)	
EP-16	Rev. 0	(un-assigned)	
EP-17	Rev. 0	IP-2 Manual Determination of Release Rate	IP-EP-310
EP-18	Rev. 0	IP-3 Manual Determination of Release Rate	IP-EP-310
EP-19	Rev. 0	IPEC Manual Dose Assessment Worksheet/Back Calculating Release Rate from Field Data	IP-EP-310
EP-20	Rev. 1	Emergency Director Turnover Sheet	IP-EP-250
EP-21	Rev. 0	Media Briefing Worksheet	IP-EP-260
EP-22	Rev. 0	Media Briefing Issues Form	IP-EP-260

**New York State
Radiological Emergency Data Form
Part II - Radiological Assessment Data**

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

Message transmitted at: Date: _____ Time: _____ Location / Facility transmitted from: _____

16. General release information:

- A. Event Release started Date _____ Time: _____
- B. Event Release expected to end Date: _____ Time: _____
- C. Event Release ended: Date: _____ Time: _____
- D. Reactor Shutdown: N/A OR Date: _____ Time: _____

Meteorological Data As of Date: _____ Time: _____

- E. Wind Speed _____ *meters/second* At elevation: _____ *meters*
- F. Wind Direction: _____ *degrees* At elevation: _____ *meters*
- G. Stability class (Pasquill): A B C D E F G

17. Atmospheric release information: As of Date _____ Time _____

- A. Release from: Ground Elevated D. Noble gas release rate: _____ *Ci/sec*
- B. Iodine/Noble gas ratio: _____ E. Iodine release rate _____ *Ci/sec*
(Assumed OR Actual)
- C. Total release rate: _____ *Ci/sec* F. Particulate release rate _____ *Ci/sec*

18. Waterborne release information: As of Date _____ Time _____

- A. Volume of release _____ *gallons* C. Radiolnuclides in release: _____
- B. Total concentration: _____ *µCi/ml* D. Total activity released _____ *Ci*

19. Dose calculations (based on a release duration of _____ hours)

Calculation is based on (circle one):

- A. Inplant measurements B. Field Measurements C. Assumed source term

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

DISTANCE	Xµ/Q	DOSE	
		TEDE (Rem)	TODE (Rem)
Site Boundary			
2 Miles			
5 Miles			
10 Miles			
____ Miles			

20. Field measurement of dose rates or surface contamination/deposition:

Mile/Sector OR Mile/Degrees	Location OR Sampling Point	Time of Reading	Dose Rate (mR/hr) OR Contamination (µCi/m ²)

Emergency Director Review and Approval: _____

**INDIVIDUAL EMERGENCY
EXPOSURES AUTHORIZATION**

NAME: _____ SOCIAL SECURITY NO.: _____

AGE: _____

Reason for exposure in excess of 5 Rem: (include tasks to be performed)

	<u>ESTIMATE OF PLANNED DOSE</u>	<u>AUTHORIZED EMERGENCY DOSE</u>
WHOLE BODY	_____ REM	_____ REM
EXTREMITY	_____ REM	_____ REM
THYROID	_____ REM	_____ REM

I have volunteered to perform the task(s) during which I will receive the emergency Exposure, and I understand the potential consequences of the proposed emergency from the attached summary.

Individual to Receive Exposure: _____ Date: _____
(Signature)

EPM/POM Or Emergency Director Approval: _____ Date: _____
(Signature)

WARNING
Emergency worker exposure limits are **NOT TO BE APPLIED** to minors or Fertile women

Emergency Exposure Guidelines:

1. All Emergency Exposures shall be authorized by the Emergency Director or Emergency Plant Manager.
2. All individuals may be authorized up to 5 Rem emergency exposure for a given emergency event. Historical occupational exposure is not totaled into this limit.
3. Procedures allow for the Emergency Director or Emergency Plant Manager to give a blanket authorization of up to 5 Rem emergency exposure for Alert or higher classifications.
4. Any emergency exposure greater than 5 Rem Whole Body, 50 Rem Extremities or 50 Rem Skin of Whole Body, shall be authorized on a individual basis for a specific task.
5. All emergency exposures are voluntary. – For higher doses individuals over the age of 45 are preferable.
6. Individuals shall be briefed that these exposures may increase their chances of cancer during their lifetime.
7. Volunteers may be authorized up to 10 Rem to protect valuable property.
8. Volunteers may be authorized up to 25 Rem for life saving or the protection of large populations.
9. Individuals may volunteer to receive greater than 25 Rem to save a life.
10. For any expected or actual Thyroid Exposure > 25 Rem CDE, the issuance of KI should be considered.

EFFECTS FROM HIGH LEVELS OF RADIATION EXPOSURE

Radiation injury depends on numerous factors such as the type of radiation, the parts of the body exposed, the rate and duration of exposure, the number of exposures, and the age and sex of the irradiated person. There are short and long term effects from high levels of radiation exposure.

Short Term Effects:

Whole Body Effects:

15 to 50 Rem – No symptoms, blood test may show some slight changes.

50 to 200 Rem – Some nausea, vomiting, and slight decrease in blood count, no deaths expected.

200 to 450 Rem – Most have nausea, vomiting, and feel flu symptoms. Most have hair loss, infection likely, 10-50% deaths.

450 to 600 Rem – Flu, bleeding from mouth and throat, infections likely, 50-90% deaths.

600 to 1000 Rem- Symptoms worse than above, 90-100% deaths.

Radiation Injury to the Skin:

Less than 1000 Rem - First degree thermal burn (similar to sunburn)
to 5000 Rem - Blisters form and break open
to 5000 Rem - Similar to scalding or chemical burn
Over 5000 Rem - Ulceration and major skin damage

Potential Long Term Effects: Based on information from the National Research Council (BEIR V).

Cancer Probability: The normal chance of contracting fatal cancer for a group of people with no radiation exposure in the United States is 20%. If this group of people were exposed to 100 Rem, the chance of any person contracting fatal cancer would increase to 28%.

Genetic Effects: A 100 Rem exposure to radiation is estimated to increase the chance of a genetic effect from 0.25% for the average person with no radiation exposure to 0.5%

Fertility Effects: An exposure to the gonads of 250 Rem may cause reduced fertility, and an exposure of 600 Rem may cause permanent sterility.

Cataracts: (Cloudiness or darkening in the lens of the eyes.) 200 Rem to the eyes may cause cataracts (ICRP 41).

EOF Staffing

No.	Positions	1 st SHIFT	2 nd SHIFT
1*	Emergency Director		
1*	ED Technical Advisor		
1*	Offsite Radiological Manager		
1*	Offsite Communicator		
1	EOF Manager		
2**	Dose Assessor		
1	Radiological Communicator		
1	Field Team Coordinator		
6	Field Monitoring Team Members		
1	Admin & Logistics Manager		
3	EOF Clerical Staff		
1	Lead Offsite Liaison		
1	State Liaison		
1	Westchester County Liaison		
1	Rockland County Liaison		
1	Orange County Liaison		
1	Putnam County Liaison		
1	Equipment Operator		
1	Information Liaison		

* Minimum Staffing for facility activation

** Only one Dose Assessor required if determination is made there is limited offsite radiological concerns for event.

Essential Information Checklist

Affected Unit: <input type="checkbox"/> Unit 2 <input type="checkbox"/> Unit 3 <input type="checkbox"/> Both		Status of Unaffected Unit:			
Emergency Classification: <input type="checkbox"/> Unusual Event _____ <input type="checkbox"/> Alert _____ <input type="checkbox"/> Site Area Emergency _____ <input type="checkbox"/> General Emergency _____ Last Offsite Notification Completed _____		Time: _____ EAL #: _____ Reactor: <input type="checkbox"/> At Power <input type="checkbox"/> Tripped RCS: Temp: _____ °F Pressure: _____ PSIG RVLIS / Pressurizer Level: _____ Subcooling: _____			
Method of Core Cooling: <input type="checkbox"/> S/G <input type="checkbox"/> Safety Injection <input type="checkbox"/> RHR					
Electrical Power Supply: <input type="checkbox"/> 138 KV <input type="checkbox"/> 13.8 KV <input type="checkbox"/> # _____ Diesel Generators					
Event Description: _____ _____ _____ _____					
Major Equipment Problems: _____ _____ _____					
Current Priorities:			High	Med	Low
<input type="checkbox"/> No Release <input type="checkbox"/> Release <input type="checkbox"/> Liquid <input type="checkbox"/> Gaseous Release Status: <input type="checkbox"/> In Progress <input type="checkbox"/> Expected <input type="checkbox"/> Filtered <input type="checkbox"/> Unfiltered <input type="checkbox"/> Monitored <input type="checkbox"/> Unmonitored <input type="checkbox"/> Controlled <input type="checkbox"/> Uncontrolled		Fission Product Barrier Status			
		Barrier	Intact	Challenged	Lost
		Fuel Clad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		RCS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Wind Speed: _____ Wind Direction From: _____			
Date / Time This Checklist was Completed: _____ / _____		Other: _____ _____ _____			

IPEC Manual Dose Assessment Worksheet

Estimating Containment Activity via R-25 / 26

Radiological Data

R-25 / 26 Reading		Rem/hr
Dose Conversion Factor (from table below)		($\mu\text{Ci/cc}$) / (R/hr)
Time after Shutdown (hrs.)	Dose Conversion Factor ($\mu\text{Ci/cc}$) / (R/hr)	
	< 1000 Rem/hr (Gap Release)	> 1000 Rem/hr (Fuel Overheat / Melt Release)
0	0.04	0.03
4	0.12	0.07
8	0.17	0.1
12	0.2	0.13
16	0.22	0.14
20	0.25	0.17
24	0.27	0.18

Vapor Containment Activity Calculation

	x		x	7.4 E+10 cc	=	
R-25 / 26 Reading (R/hr)		Dose Conversion Factor		Containment Volume		Total VC Activity (μCi)

	x		=	
R-25/26 Reading (R/hr)		Dose Conversion Factor		Release Concentration ($\mu\text{Ci/cc}$)

IPEC Manual Dose Assessment Worksheet
Estimating Containment Activity via R-25 / 26

Containment Data		
Containment Pressure		psig
Estimated Leak Rate (see table below)		(cc/sec) – cm ²
Estimated Leak Area		Cm ² (leak area = πr^2)

Leak Rate per Cm²			
VC Pressure	Leak Rate (cc/sec)	VC Pressure	Leak Rate (cc/sec)
1.0	8.34E+03	18.0	1.93E+04
1.5	9.96E+03	20.0	1.95E+04
2.0	1.12E+04	22.5	1.97E+04
2.5	1.22E+04	25.0	1.99E+04
3.0	1.31E+04	27.5	2.01E+04
4.0	1.44E+04	30.0	2.03E+04
5.0	1.55E+04	32.5	2.04E+04
6.0	1.63E+04	35.0	2.06E+04
7.0	1.69E+04	37.5	2.07E+04
8.0	1.74E+04	40.0	2.08E+04
9.0	1.78E+04	42.5	2.10E+04
10.0	1.81E+04	45.5	2.11E+04
12.0	1.86E+04	47.5	2.12E+04
14.0	1.89E+04	50.0	2.13E+04
16.0	1.91E+04		

Vapor Containment Release Rate Calculation							
	×		×		×	1.0E-06 =	
VC Activity (μ Ci/cc)		Leak Rate (from Table)		Leak Area (Cm ²)		Conversion Factor	VC Release Rate (Ci/sec)

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	Ref. TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
1-1					0	
1-2					55	
1-3					0	
1-4					20	
1-5					335	
1-6					350	
1-7					5,425	
1-8					5,935	
1-9					2,345	
1-10					990	
				SECTOR TOTALS:		
2-1					0	
2-2					40	
2-3					135	
2-4					140	
2-5					1,450	
2-6					1,065	
2-7					825	
2-8					695	
2-9					2,280	
2-10					1,370	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and X_u/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
3-1					0	
3-2					4,480	
3-3					8,945	
3-4					3,520	
3-5					5,315	
3-6					3,660	
3-7					4,020	
3-8					1,175	
3-9					635	
3-10					1,455	
				SECTOR TOTALS:		
4-1					40	
4-2					2,715	
4-3					3,035	
4-4					1,990	
4-5					2,095	
4-6					2,725	
4-7					2,715	
4-8					5,140	
4-9					5,920	
4-10					4,475	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
5-1					65	
5-2					505	
5-3					0	
5-4					230	
5-5					140	
5-6					235	
5-7					1,590	
5-8					1,155	
5-9					4,165	
5-10					3,450	
				SECTOR TOTALS:		
6-1					170	
6-2					375	
6-3					260	
6-4					730	
6-5					260	
6-6					675	
6-7					1,145	
6-8					415	
6-9					1,040	
6-10					1,740	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Ratio Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
7-1					555	
7-2					2,100	
7-3					980	
7-4					705	
7-5					420	
7-6					5,150	
7-7					3,340	
7-8					2,505	
7-9					2,010	
7-10					6,945	
				SECTOR TOTALS:		
8-1					105	
8-2					1,835	
8-3					1,295	
8-4					635	
8-5					85	
8-6					0	
8-7					0	
8-8					95	
8-9					5,020	
8-10					5,955	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and X_u/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
9-1					465	
9-2					695	
9-3					25	
9-4					110	
9-5					1,110	
9-6					3,535	
9-7					3,090	
9-8					3,710	
9-9					5,235	
9-10					5,545	
				SECTOR TOTALS:		
10-1					150	
10-2					1,210	
10-3					1,145	
10-4					1,845	
10-5					8,260	
10-6					4,440	
10-7					2,345	
10-8					2,690	
10-9					6,320	
10-10					9,115	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
11-1					0	
11-2					25	
11-3					1,505	
11-4					2,485	
11-5					2,220	
11-6					3,785	
11-7					2,830	
11-8					1,010	
11-9					3,045	
11-10					3,705	
				SECTOR TOTALS:		
12-1					10	
12-2					345	
12-3					125	
12-4					295	
12-5					160	
12-6					185	
12-7					80	
12-8					20	
12-9					155	
12-10					565	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sheet 7 of 8

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
13-1					0	
13-2					280	
13-3					200	
13-4					0	
13-5					0	
13-6					0	
13-7					0	
13-8					70	
13-9					440	
13-10					55	
				SECTOR TOTALS:		
14-1					0	
14-2					80	
14-3					65	
14-4					0	
14-5					25	
14-6					45	
14-7					20	
14-8					620	
14-9					320	
14-10					2,045	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

ESTIMATED TOTAL POPULATION DOSE

Sector/Zone	TLD mrem	Zone Corr. Factor (1)	Interpreted mrem (2)	Modifier (3)	Population (4)	Est. WB Rem
15-1					0	
15-2					20	
15-3					105	
15-4					180	
15-5					45	
15-6					0	
15-7					20	
15-8					305	
15-9					25	
15-10					1,055	
				SECTOR TOTALS:		
16-1					0	
16-2					70	
16-3					0	
16-4					95	
16-5					1,635	
16-6					235	
16-7					0	
16-8					35	
16-9					25	
16-10					0	
				SECTOR TOTALS:		

- (1) Zone in question correction factor (Attachment 2 procedure IP-EP-620 or calculated from formula at bottom of Attachment 2 and Xu/Q values)
- (2) Multiply TLD mrem by Zone Correction Factor
- (3) If no evacuation, modifier is 1.0
- (4) 1990 Census

Manual Dose Assessment Worksheet		
TEDE Whole Body Exposure Calculations		
Date:	Time	Name:

Meteorology						
Wind Direction (from):		Downwind Sector:		WS = Wind Speed (m/sec):		
Pasquill Category: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G						
TEDE – Whole Body Exposure					Release Duration (RD): hrs	
Distance	NGRR (Ci/sec)	Xu/Q (from tables)	$\frac{1}{WS}$ (M/sec)	K1 ⁽¹⁾ + Constant ⁽²⁾	Dose Rate(DR) (mrem/hr)	Dose (mrem) (DR x RD)
Site Boundary		X X	$\frac{1}{\square}$	X (+) = =		
2 Mile		X X	$\frac{1}{\square}$	X (+) = =		
5 Mile		X X	$\frac{1}{\square}$	X (+) = =		
10 Mile		X X	$\frac{1}{\square}$	X (+) = =		

- (1) Obtain K1 value from table below.
- (2) Constant for MSL & SGBD is 3.3E+05, for all others use 3.3E+03 (Constant includes Iodine CEDE)

K1 Whole Body @ Time After Shutdown for Noble Gas DDE		K2 Thyroid For Iodine CDE	
TAS = _____ hours.			
4.7E+5	0 – 1.5 Hours	Iodine Mix	8.0E+8
2.8E+5	1.5 – 2.5 Hours	I-131	2.6E+9
2.3E+5	2.5 – 3.5 Hours	I-132	1.5E+7
2.0E+5	3.5 – 4.5 Hours	I-133	4.4E+8
1.7E+5	4.5 – 6.5 Hours	I-134	2.6E+6
1.2E+5	6.5 – 12.5 Hours	I-135	7.6E+7
5.8E+4	> 12.5 Hours		

NOTE:
 Particulate Dose Conversion Factor (DCF) for TEDE is 2.7E+07. This DCF should be used applied during dose assessments performed in the EOF or AEOF only if significant particulates are identified in the release (E.G., FSB Accident). Control Room Staff need not consider particulates.

IPEC Manual Dose Assessment Worksheet

TODE Thyroid Exposure Calculations

Date: _____ Time _____ Name: _____

Meteorology

Wind Direction (from): _____ Downwind Sector: _____ WS = Wind Speed (m/sec): _____

Pasquill Category: A B C D E F G

NOTES:

For **Less Than 24 hours** use Iodine Mix K2 (8.0 E+8)
 For **Greater Than 24 hours**, only use I-131 K2 value when using isotopic analysis. (2.6 E+9)

Isotope I-131 (or Total Mix)		TODE – Thyroid Exposure		Release Duration (RD)= <input style="width: 50px;" type="text"/>	
NGRR _____ X K1 _____ = A _____			RR _(I-131 or Total) _____ X K2 _____ = B _____		
Distance	Xu/Q (from tables)	$\frac{1}{WS}$ (m/sec)	A + B (above)	Dose Rate (mrem/hr)	Dose (mrem) (DR X RD)
Site Boundary	X	$\frac{1}{\text{[]}}$	X (+) =	=	
2 Mile	X	$\frac{1}{\text{[]}}$	X (+) =	=	
5 Mile	X	$\frac{1}{\text{[]}}$	X (+) =	=	
10 Mile	X	$\frac{1}{\text{[]}}$	X (+) =	=	

EOF Check Point Sign In Log

EOF Registration Assistant: <small>(print name)</small>		Date:
---	--	--------------

Print Name	Time In / Out	Time In / Out	Organization
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____
			<input type="checkbox"/> Indian Pt. FFD* Yes: <input type="checkbox"/> No: <input type="checkbox"/> <input type="checkbox"/> Other _____

* If NO, THEN report to EOF Manager for further evaluation.

EOF Check Point Sign In Log

EOF Check Point Instructions:

- 1.0 Set up a EOF Checkpoint at the entrance to the EOF.

NOTES:

IF there is any question if an individual should be allowed to enter the EOF **THEN** request clearance from the Emergency Director or the EOF Manager.

Individuals entering the EOF during emergencies must be screened in accordance IPEC Fitness for Duty procedures. The Emergency Director may authorize individuals not meeting these requirements into the EOF.

- 1.1 Have all individuals entering EOF complete sign in log.
- 1.2 Request the Admin & Logistics Manager draft someone to take sign in log around to individuals who may have entered facility before check point was set up.

- 2.0 Allow only the following personnel into the EOF:

- A. Indian Point Emergency Response Organization Personnel, as listed in the Emergency Telephone Directory,
- B. Indian Point Corporate Officers,
- C. State and County Officials,
- D. Federal Officials from the Nuclear Regulatory Commission and Federal Emergency Management Agency;
- E. Individuals authorized by the Emergency Director or the EOF Manager.

NOTE:

IF individuals are only going to another room within the Buchanan Service Center (offices across the hall or men's rest room) **THEN** it is not necessary to log them in and out each time they leave the EOF.

- 3.0 Maintain a "EOF Check Point Sign in Log" complete with names of all personnel within the EOF.

IP-2 Manual Determination of Release Rate

Determine Noble Gas & Radioiodine Release Rates

Date: _____ Time: _____ Name: _____

Plant Vent Release Rate Calculations (use only one vent monitoring method)

R-27 Wide Range	X	X	4.7E-04	=	
	(µCi/cc)	(Plant Vent CFM)*	(Constant)		(NGRR Ci/sec)
R-44 Low / Mid Range	X	X	4.7E-04	=	
	(µCi/cc)	(Plant Vent CFM)*	(Constant)		(NGRR Ci/sec)
Vent Contact Reading	X	X	X	4.7E-04	=
	(mR/hr)	(Conv. Factor)	(Plant Vent CFM)*	(Constant)	(NGRR Ci/sec)
Time After Shutdown Conversion Factors for Contact Reading	TAS (hr)	Factor	TAS (hr)		Factor
	0 - 2	2.8E-04	6 - 8		4.9E-04
	2 - 4	3.4E-04	8 - 12		6.1E-04
	4 - 6	4.1E-04	12 - 24		7.6E-04
Plant Vent Chemistry Sample	X	X	4.7E-04	=	
	(µCi/cc)	(Plant Vent CFM)*	(Constant)		(NGRR Ci/sec)
Air Ejector (AE)					
Air Ejector R-45	X	X	4.7E-04	=	
	(µCi/cc)	(AE CFM)**	(Constant)		(NGRR Ci/sec)
Main Steam Line (MSL)					
R-28, R-29 R-30, R-31	X	2.7E-03	X	X	4.9 E-06 =
	(CFM)	(MSL Conv Factor)	(lbm/hr)***	(Constant)	(NGRR Ci/sec)
Steam Generator Blowdown (SGBD)					
Chemistry Sample	X	X	6.3E-05	=	
	(µCi/cc)	(GPM)**	(Constant)		(NGRR Ci/sec)
Total Noble Gas Release Rate: Add Plant Vent + AE + MSL + SGBD			Total NGRR Ci/sec		

Determine Radioiodine Release Rate (RR) In Curies/Second

1. MSL NG RR + SGBD NG RR =	X	1.0E-02	=	
2. Plant Vent NG RR + AE NG RR =	X	1.0E-04	=	
Total Radioiodine Release Rate (Add 1 + 2 to Obtain)	Total IRR (Ci/sec) =			

* If actual flow rate is unavailable, use 70,000 cfm

** If actual flow rate is unavailable, use 20 cfm

*** Steam Generator Atmospheric Flowrate	3.50 E+5 lbm / hr / atmospheric
Steam Generator Safety Flowrate	7.60 E+5 lbm / hr / safety
#22 Auxiliary Feedwater Pump	2.5 x 10 ⁴ lbm / hr

IP-3 Manual Determination of Release Rate

Determine Noble Gas & Radioiodine Release Rates

Date: _____ Time: _____ Name: _____

Plant Vent Release Rate Calculations (use only one vent monitoring method)

R-27 Wide Range	X	1.0E-06	=	
	<small>($\mu\text{Ci}/\text{sec}$)</small>	<small>($\text{Ci}/\mu\text{Ci}$)[*]</small>		<small>(NGRR Ci/sec)</small>
R-14 Low / Mid Range	X		X	4.7E-04 =
	<small>($\mu\text{Ci}/\text{cc}$)</small>	<small>(Plant Vent CFM)[*]</small>	<small>(Constant)</small>	<small>(NGRR Ci/sec)</small>
Vent Contact Reading (Contact / 6 Ft)	X	X	X	4.7E-04 =
	<small>(mR/hr)</small>	<small>(Conv Factor)</small>	<small>(Plant Vent CFM)[*]</small>	<small>(Constant)</small> <small>(NGRR Ci/sec)</small>
Time After Shutdown Conversion Factors for Contact Reading	TAS (hr)	Contact Factor 6 ft		TAS (hr)
	0 - 2	6.0E-04	2.5E-03	6 - 12
	2 - 4	1.2E-03	3.8E-03	12 - 24
	4 - 6	1.6E-03	5.5E-03	24 - 2 Wk
Plant Vent Chemistry Sample	X	X	4.7E-04 =	
	<small>($\mu\text{Ci}/\text{cc}$)</small>	<small>(Plant Vent CFM)[*]</small>	<small>(Constant)</small>	<small>(NGRR Ci/sec)</small>
Air Ejector (AE)				
Air Ejector R-15	X	X	4.7E-04 =	
	<small>($\mu\text{Ci}/\text{cc}$)</small>	<small>(AE CFM)^{**}</small>	<small>(Constant)</small>	<small>(NGRR Ci/sec)</small>
Main Steam Line (MSL)				
R-62A, R-62B R-62C, R-62D	X	X	3.2 E-06 =	
	<small>($\mu\text{Ci}/\text{cc}$)</small>	<small>(lbm/hr)^{***}</small>	<small>(Constant)</small>	<small>(NGRR Ci/sec)</small>
Total Noble Gas Release Rate: Add Plant Vent + AE + MSL + SGBD			Total NGRR Ci/sec	

Determine Radioiodine Release Rate (RR) In Curies/Second

1. MSL NG RR =	•	X 1.0E-02 =	
2. Plant Vent NG RR + AE NG RR =	=	X 1.0E-04 =	
Total Radioiodine Release Rate (Add 1 + 2 to Obtain)		Total IRR (Ci/sec) =	

* If actual flow rate is unavailable, use 70,000 cfm

** If actual flow rate is unavailable, use 20 cfm

*** Steam Generator Atmospheric Flowrate 6.30 E+5 lbm / hr / atmospheric
 Steam Generator Safety Flowrate 5.50 E+5 lbm / hr / safety

IPEC Manual Dose Assessment Worksheet
Back Calculating Release Rate from Field Data

Administrative Data																
Field Reading Location																
Field Reading Mileage	Miles															
Field Reading Sector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Meteorology	
Wind Speed (at time of release)	meters/sec
X_{μ} / Q	

Radiological Data	
Field Reading (clsd window or Reuter Stokes)	mrem / hr
Noble Gas DCF (from table below)	(mr/hr) / (μ Ci/cc)
Time after Shutdown (hrs.)	Dose Conversion Factor (mr/hr) / (μ Ci/cc)
0 - 1.5	4.70 E+5
1.5 - 2.5	2.80 E+5
2.5 - 3.5	2.30 E+5
3.5 - 4.5	2.00 E+5
4.5 - 6.5	1.70 E+5
6.5 - 12.5	1.20 E+5
> 12.5	5.80 E+4

Release Rate Calculation								
(x)	÷	(x)	=	_____
Field Reading (mr/hr)	Wind Speed (m/sec)			X_{μ} / Q	Noble Gas DCF			NGRR (Ci/sec)

Turnover Sheet

Date:

Time:

Outgoing :

Relieving:

Discuss the following items:

1. Emergency Classification: GE SAE Alert Unusual Event
EAL:

2. Initiating Event:

3. Current Status of:

A. Personnel Safety:

B. Plant Safety:

C. Release of Non-Essential Personnel:

D. Accountability:

Missing Persons:

Search and Rescue:

E: Radiological Conditions:

F. WPO/JNC Actions:

G. OSC/TSC Status:

H. Offsite Actions (ie: schools, facility activation, PARs, etc.)

5. Status of Offsite Notifications:

None

NYS / Counties

NRC (headquarters and Residents)

INPO

ANI

6. Corrective Actions:

Teams Out:

7. Actions Underway:

Priorities:

8. Actions that need to be Initiated:

9. Prognosis:

Media Briefing Worksheet

Date: _____		Briefing #: _____	
Time: _____		Briefing Announced: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Reason for Briefing: <input type="checkbox"/> Initial Briefing <input type="checkbox"/> Emergency Classification Change <input type="checkbox"/> EAS Broadcast <input type="checkbox"/> Periodic Update / Other			
	Points to be Covered	Order	
Entergy			
Westchester County			
Rockland County			
Putnam County			
Orange County (confirm if via PictureTel or teleconference)			
State of NY			
Public Inquiry Feedback			
Media Monitoring Feedback			
Graphic Changes Needed:			
Graphics / Visual Requests:			

JNC STAFFING FORM

Position	1 st Shift Name (print)	Time Arrived	Time Departed	2 nd Shift Name (print)	Time Arrived	Time Departed
JNC Director						
Company Spokesperson						
JNC Technical Advisor						
Technical Briefer						
Agency Liaison						
Support Services Manager						
Media Room Manager						
Media Room Liaison						
JNC Writer						
JNC Documenter						
Audiovisual Coordinator						
AV / Graphics Staff (2 minimum for activation, may include Audiovisual Coordinator)						

Date: _____

Shaded positions entail functions that are required for activation

JNC STAFFING FORM

Position	1 st Shift Name (print)	Time Arrived	Time Departed	2 nd Shift Name (print)	Time Arrived	Time Departed
Public Inquiry Coordinator						
Media Monitoring Staff						
Media Referral Staff Member(s)						
Public Inquiry Staff (as required)						

Date: _____

Shaded positions entail functions that are required for activation

JNC STAFFING FORM

Position	1 st Shift Name (print)	Time Arrived	Time Departed	2 nd Shift Name (print)	Time Arrived	Time Departed
Support Services Staff						
Registration Coordinator						
Registration Coordinator						
IT Representative						
Radiological Advisor						
JNC Access Control						
IP Communications Representative						
Government Liaison Rep						
Government Liaison Rep						
Government Liaison Rep						

Date: _____

Shaded positions entail functions that are required for activation

Emergency Summary Sheet

Indian Point Energy Center

Time: _____

Date: _____

1. This is a Drill

This is an Actual Event

2. **Emergency Classification:**

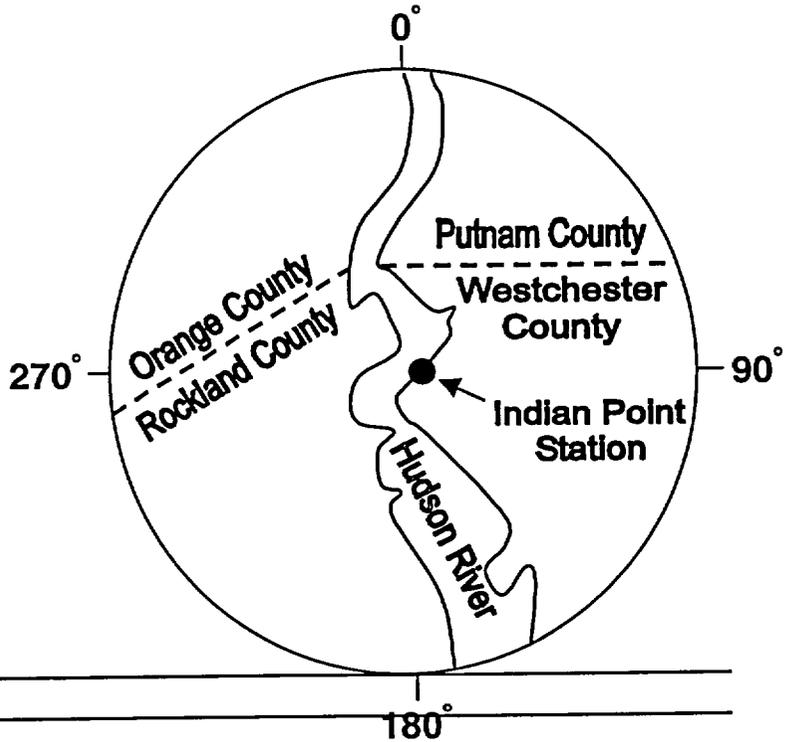
Unusual Event

Alert

Site Area Emergency

General Emergency

3. **Event Description:**



4. **Radiological Conditions:**

- Release of Radioactive Materials due to the classified event. No Release
- Release **BELOW** federally approved operating limits (Technical Specifications)
- To Atmosphere To Water
- Release **ABOVE** federally approved operating limits (Technical Specifications)
- To Atmosphere To Water
- Unmonitored Release – Being Evaluated

5. **Meteorological Conditions:**

Wind Speed: _____ MPH Wind Direction (from): _____

General Weather Conditions: _____

Written Statement Distribution Checklist

Follow each step below as assigned. Some steps are concurrent, as noted by the numbering. Support Services Manager is to confirm all steps are completed at conclusion.		Statement Number:	
Step #	JNC Position Responsible	Detail Description	Completed By (Print) and Time
1	Support Services Manager	<p>Obtain "APPROVED WRITTEN STATEMENT/NEWS RELEASE" from JNC Writer and start distribution process:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Have Company Spokesperson initial, notify Documenter of approval time <input type="checkbox"/> Start a Written Statement Distribution Checklist and Fax Distribution Sheet (in Position Binder and file cabinet) <input type="checkbox"/> Record Statement Number above <input type="checkbox"/> Give Original statement with Distribution Checklist and Fax Distribution sheet to Support Services Staff to make initial copies. 	
2	Assigned Support Services Staff Person	<ul style="list-style-type: none"> <input type="checkbox"/> Make 2 copies of statement <input type="checkbox"/> Provide Support Services Staff in fax/copy room with 2 copies (one for further copying and one for fax distribution described below) <input type="checkbox"/> Provide original initialed copy back to Support Services Manager 	
3a	Support Services Staff assigned to Copy area	<p><i>Make 41+ copies of final written statement/news releases and coordinate distribution with other Support Services Staff as follows:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> 16 Copies to Public Inquiry Coordinator <input type="checkbox"/> 4 Copies to Media Monitoring Room Personnel <input type="checkbox"/> 8 Copies to Entergy Rooms A/B <input type="checkbox"/> 12+ Copies to the Media Room Liaison for media (coordinate number needed with Media Room Liaison) <input type="checkbox"/> Post 1 Copy on Bulletin Board near JNC Writer <input type="checkbox"/> Upon completion, provide this Distribution Checklist to Support Services Manager 	

Written Statement Distribution Checklist

Follow each step below as assigned. Support Services Manager is to confirm all steps are completed.		Statement Number:	
3b	Support Service Staff in Fax/Copy Room	<p>Concurrently, ensure statement is faxed to locations indicated on the Fax Distribution Form. DO NOT SEND FAX DISTRIBUTION FORM IN OUT-GOING FAX TRANSMISSION, Include Fax Cover Sheet</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete fax distribution to media on one fax machine <input type="checkbox"/> Complete fax distribution to other emergency facilities and other Entergy locations on another fax machine (follow Fax Distribution Form) <input type="checkbox"/> Review Fax Confirmation sheets to ensure they state that all transmissions were successfully completed (the text of the confirmation will read OK) <p>Upon completion, provide fax confirmation sheet(s) to Support Services Manager</p>	
4	Support Services Manager	Provide original (initialed) statement; fax confirmation(s); and this Distribution Checklist to JNC Documenter for log keeping	

Information Distribution Guide

(Follow the priority order noted)

Type of Information	Recipient (follow order for distribution, if possible)	Distribution Completed By (Print)
Plant Status, including Forms and plant parameters (received via fax or from/via JNC Technical Advisor)	Utility Room A & B <input type="checkbox"/> JNC Technical Advisor (& Radiological Advisor) <input type="checkbox"/> Company Spokesperson <input type="checkbox"/> JNC Director <input type="checkbox"/> Agency Liaison <input type="checkbox"/> JNC Documenter <input type="checkbox"/> State/County PIOs (Radiological Data Forms, Part 1 and 2 ONLY)	
EAS Statements (provided by State or via Agency Liaison)	ALL Locations/All positions <input type="checkbox"/> Public Inquiry Room & Media Monitoring Room (<i>20+ copies</i>) <input type="checkbox"/> Entergy Rooms A & B (<i>9+ copies</i>) <input type="checkbox"/> State, County and Federal Work Rooms <input type="checkbox"/> Media Briefing Room (at assigned time provided by State or Agency Liaison)	
Written Statements, including news releases	Follow Written Statement Distribution Checklist form	
All Other Information Received (via fax or otherwise)	Request distribution instructions from the Support Services Manager and/or JNC Director	

**PUBLIC INQUIRY - MEDIA REFERRAL -
MEDIA MONITORING FORM**

Type of call: (Public Inquiry) (Professional Inquiry) (Media Inquiry) (Media Monitor Report)

Date of call/broadcast: _____ Time of call/broadcast: _____

Name of responder/monitor: _____

Media Name/Location: _____

Caller's/Reporter's name: _____ Phone: (____)____-_____

Question(s) asked/Inaccurate Information: _____

Response given/Correct Information and Source: _____

Is call back required: (___) Yes (___) No Call Back Number (____)____-_____

If yes, call back completed at: _____ By: _____

Was the call referred: (___) Yes (___) No If yes, to whom? _____

Further action required: (___) Yes (___) No

Was this action completed? (___) Yes (___) No By: _____

Reported to Public Inquiry Coordinator at: _____

Public Inquiry Coordinator Notes: _____

Return completed form to Public Inquiry Coordinator:

**Joint News Center
Fax Distribution Cover Sheet**

FROM: _____

DATE: _____ TIME: _____

Number of Pages (including cover): _____

WIRE SERVICES

AP/NYC

AP/WESTCHESTER

CNN

REUTERS AMERICA

GANNET SUBURBAN NEWS/WHITE PLAINS

BLOOMBERG NEWSWIRE

NEW YORK TIMES NEWS SERVICE

IP EOF OR IP AEOF

ENERGY MEDIA RELATIONS

LOCAL OFFICIALS

Other

Individual Exposure Tracking Log

Name: _____			TLD # _____	
			Employee #: _____	
Location / Team / Times	Available Exposure (mrem)	Time of Reading	Dosimeter Reading	Emergency Exposure (mrem)

Team: _____				
Time Out: _____				
Time In: _____				

Team: _____				
Time Out: _____				
Time In: _____				

Team: _____				
Time Out: _____				
Time In: _____				

Team: _____				
Time Out: _____				
Time In: _____				

Team: _____				
Time Out: _____				
Time In: _____				

NOTES:

1. Use this form to track individual's exposure of ERO members dispatched from EOF/OSC/TSC and
2. Initial Exposure Limit will be 1000 mrem for duration of emergency. ED or EPM may authorize more exposure.
3. If Form is filled transfer Name, TLD # and remaining available exposure to new form and staple this completed form to it.

MONITORING TEAM SAMPLE DATA

Team Name: _____ Date: _____

Sample Location:

Radiation Field Measurements (may be recorded on separate form):

Ion Chamber, Model #: _____ Serial #: _____ Time: _____

@ 3 in. above ground:

@ 3 ft. above ground:

Opened Window (OW) (mR/hr): _____ Opened Window (OW) (mR/hr): _____

Closed Window (CW) (mR/hr): _____ Closed Window (CW) (mR/hr): _____

(OW-CW) X 2 (mrad/hr): _____

Air Sampling:

Air Sampler, Model #: _____ Serial #: _____

Particulate Filter: _____ Iodine (C): _____ Iodine (AgZ): _____

Sampling Start: Time (HH:MM): _____ Flow (CFM): _____

Sampling Stop: Time (HH:MM): _____ Flow (CFM): _____

Duration (MM) _____

Average Flow (CFM): _____

Sample Volume (CF): _____

Air Sample Counting:

Count Rate Meter, Model #: _____ Serial #: _____ Time: _____

Part Filter, Bkgd (CPM): _____ Gross (CPM): _____ Net (CPM): _____

Iodine (C), Bkgd (CPM): _____ Gross (CPM): _____ Net (CPM): _____

Iodine (AgZ), Bkgd (CPM): _____ Gross (CPM): _____ Net (CPM): _____

Determination of Radioactive Airborne Concentrations

$$\mu\text{Ci/cc} = \frac{A = \text{Net CPM} \times 1.0\text{E-}09}{B = 2.2 \times \text{Vol} \times \text{Eff.} \times \text{CCF}}$$

Where: Vol⁽¹⁾ is in liters (Liters = 2.832 x FT³)
 Efficiency⁽²⁾ is 0.1 for particulate, 0.2 for iodine
 CCF⁽³⁾ is .95 for Charcoal, 1.0 for AgZ / Paper

Sample Location:					<input type="checkbox"/> Particulate	<input type="checkbox"/> Iodine
Sample Time:				Team:		
Sample Net CPM	Constant		A ↓			
X		1.0E-09	=			
Sample Volume in Liters ⁽¹⁾	Efficiency ⁽²⁾	Constant	CCF ⁽³⁾	B ↓		
X	X	2.2	X	=		
$\mu\text{Ci/cc} = A / B =$			$\mu\text{Ci/cc}$			

Calculated by: _____

Time: _____

Sample Location:					<input type="checkbox"/> Particulate	<input type="checkbox"/> Iodine
Sample Time:				Team:		
Sample Net CPM	Constant		A ↓			
X		1.0E-09	=			
Sample Volume in Liters ⁽¹⁾	Efficiency ⁽²⁾	Constant	CCF ⁽³⁾	B ↓		
X	X	2.2	X	=		
$\mu\text{Ci/cc} = A / B =$			$\mu\text{Ci/cc}$			

Calculated by: _____

Time: _____

Sample Location:					<input type="checkbox"/> Particulate	<input type="checkbox"/> Iodine
Sample Time:				Team:		
Sample Net CPM	Constant		A ↓			
X		1.0E-09	=			
Sample Volume in Liters ⁽¹⁾	Efficiency ⁽²⁾	Constant	CCF ⁽³⁾	B ↓		
X	X	2.2	X	=		
$\mu\text{Ci/cc} = A / B =$			$\mu\text{Ci/cc}$			

Calculated by: _____ Time: _____

MEDIA INQUIRY LOG

DATE: _____ TIME: _____

NAME OF REPORTER: _____

AFFILIATED WITH: _____

PHONE NUMBER: _____

INQUIRY: _____

RESPONSE: _____

RESPONSE PROVIDED BY: _____

COMMENTS: _____

Courtesy Call Guide

1. EVENT SUMMARY (from IP Communications Representative)

Indicate Emergency Classification Level (ECL), EAL/Time

Unusual Event

Alert

Site Area Emergency

General Emergency

Plant Status/Information/Radiological Conditions (notes):

2. Script for Courtesy Calls

"Hi, my name is _____."

I'm representing the Indian Point Energy Center as a Government Liaison Representative.

I'm calling to inform you that....(provide the event information obtained from the IP Communications Representative)....

This is all the information that I have at this point. Entergy will be issuing a news release regarding the event (give timeframe, e.g. within the next 30 minutes).

Should I continue to call you at this number if I need to contact you again?"

Name of GLR: _____

Time Calls Completed: _____

JNC TALKING POINTS

BRIEFING SUMMARY/TALKING POINTS

Indian Point Energy Center declared a _____ at _____ (time). The event was declared as a result of _____.

PLANT STATUS/EVENT INFORMATION:	RESPONSE (SITE, CORPORATE):
RADIOLOGICAL CONDITIONS:	EMPATHY:

QUESTIONS REQUIRING FOLLOW-UP:

RUMORS TO ADDRESS:



CONTROLLED

COPY # 25

Emergency Operations Facility

Prepared by:

Al Lee

Print Name

M.L. Miele for
Signature

3/3/03

Date

Approval:

Frank Inzirillo

Print Name

Frank Inzirillo
Signature

3/3/03

Date

Effective Date: 3/6/03

This procedure excluded from further LI-100 reviews.



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Emergency Operations Facility

1.0 PURPOSE

To describe the activation and operation of the Emergency Operations Facility (EOF)

2.0 REFERENCES

2.1 Indian Point Energy Center Emergency Plan

3.0 DEFINITIONS

NONE

4.0 RESPONSIBILITIES

- 4.1 The Emergency Directory (ED) is responsible for overall command and control of the emergency response, including classifications; notifications, PARs and ensuring all resources are available to mitigate emergency conditions.
- 4.2 The EOF Manager is responsible for overseeing operations of the EOF and assisting the ED in performance of key duties.
- 4.3 The Technical Advisor is responsible for analyzing data from the plant and providing technical advise to the EOF Staff and tracking EALs based on plant data.
- 4.4 The Offsite Radiological Manager is responsible for overseeing operations of the Dose Assessment, Field Team Monitoring and all radiological controls for Entergy Personnel outside the Protected Area Fence.
- 4.5 Dose Assessors are responsible for monitoring plant data for possible releases and performing dose projections based on any actual or potential releases.
- 4.6 The Radiological Communicator is responsible for radiological communications between the plant and the EOF and the EOF to offsite groups responding to an emergency at the site.
- 4.7 The Field Team Coordinator primary responsibility is tracking any offsite plume using the Offsite Monitoring Teams.
- 4.8 The Offsite Communicator is responsible for making required communications to offsite authorities.

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- 4.9 The Admin & Logistics Manager oversees EOF support staff and provides for support from Entergy personnel not part of ERO or outside organizations which may be called on to provide material support to the site.
- 4.10 The EOF Clerical Staff is responsible for providing administrative support to the EOF Staff and signing personnel in an out of the EOF
- 4.11 The State and County Liaisons are responsible for reporting to their assigned offsite EOC and providing support to the EOC staff.
- 4.12 The Lead Offsite Liaison is responsible for keeping the State and County Liaisons informed of onsite conditions and providing information on EOC operations to the EOF staff.
- 4.13 The EOF Equipment Operator is responsible for assisting EOF staff in operation of EOF computer systems and other equipment as necessary.

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5.0 DETAILS

- 5.1 The Emergency Director (ED) shall follow the instructions outlined in Attachment 9.1, Emergency Director Checklist.
- 5.2 The EOF Manager shall follow the instructions outlined in Attachment 9.2, EOF Manager Checklist.
- 5.3 The EOF Technical Advisor shall follow the instructions outlined in Attachment 9.3, Technical Advisor (TA) Checklist
- 5.4 The Offsite Radiological Manager shall follow the instructions outlined Attachment 9.4, Offsite Radiological Manager Checklist
- 5.5 The Dose Assessor shall follow the instructions outlined in Attachment 9.5, Dose Assessor Checklist.
- 5.6 The Radiological Communicator shall follow the instructions outlined Attachment 9.6, Radiological Communicator Checklist.
- 5.7 The Field Team Coordinator shall follow the instructions outlined in Attachment 9.7, Field Team Coordinator. Checklist
- 5.8 The Offsite Communicator shall follow the instructions outlined in Attachment 9.8, Offsite Communicator. Checklist
- 5.9 The Admin & Logistics Manager shall follow the instructions outlined in Attachment 9.9, Admin & Logistics Manager Checklist.
- 5.10 The EOF Clerical Staff shall follow the instructions outlined in Attachment 9.10, EOF Clerks. Checklist
- 5.11 The Lead Offsite Liaison shall follow the instructions outlined in Attachment 9.11, Lead Offsite Liaison Checklist.
- 5.12 The State and County Liaison shall follow the instructions outlined in Attachment 9.12, State and County Technical Liaison Checklist
- 5.13 The EOF Equipment Operator shall follow the instructions outlined in Attachment 9.13, EOF Equipment Operator Checklist.

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6.0 INTERFACES

- 6.1 IP-EP-310, Dose Assessment
- 6.2 IP-EP-410, Protective Action Recommendations
- 6.3 IP-EP-251, AEOF
- 6.4 IP-EP-510, Meteorological, Radiological & Plant Data Acquisition
- 6.5 IP-EP-520, Modular Emergency Assessment & Notification System (MEANS)
- 6.6 IP-EP-620, Estimation of Total Population Exposure

7.0 RECORDS

Any logs or forms completed by members of the ERO during an actual declared emergency are permanent quality records.

8.0 REQUIREMENTS AND COMMITMENTS

NONE

9.0 ATTACHMENTS

- 9.1 Attachment 9.1, Emergency Director Checklist
- 9.2 Attachment 9.2, EOF Manager Checklist
- 9.3 Attachment 9.3, Technical Advisor Checklist
- 9.4 Attachment 9.4, Offsite Radiological Manager (ORM) Checklist
- 9.5 Attachment 9.5, Dose Assessor Checklist
- 9.6 Attachment 9.6, Radiological Communicator Checklist
- 9.7 Attachment 9.7, Field Team Coordinator Checklist
- 9.8 Attachment 9.8, Offsite Communicator Checklist
- 9.9 Attachment 9.9, Admin & Logistics Manager
- 9.10 Attachment 9.10, EOF Clerical Staff Checklist
- 9.11 Attachment 9.11, Lead Offsite Liaison Checklist
- 9.12 Attachment 9.12, State and County Liaison Checklist
- 9.13 Attachment 9.13, EOF Equipment Operator Checklist
- 9.14 Attachment 9.14, EOF Layout
- 9.15 Attachment 9.15, Directions to the Westchester Fire Training Center



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PROCEDURES

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REFERENCE USE

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Attachment 9.1
Emergency Director Checklist
Sheet 1 of 9

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Upon arrival at the EOF review facility status boards, EDDS/PICS/SPDS and any other available sources to become familiar with current plant status.
- C. Obtain a briefing from the acting ED (if the EOF has not been activated, either the SM or EPM/POM will be the acting ED in the Control Room):
 - 1. Use an Essential Information Checklist (Form EP-9) to document the briefing.
 - 2. IF completed NYS Radiological Emergency Data Forms are not present in the EOF THEN Request the CR to fax copies of all forms used to make offsite notifications to the EOF for your review.
- D. IF the emergency affects both units, THEN obtain a briefing from both CR's. Assign EOF staff appropriately to fill their assigned positions.

1.2 Assume the position of Emergency Director.



- A. IF the EOF has NOT been activated THEN:
 - 1. IF an EOF Manager is NOT yet present THEN
 - (a) Ensure individuals are filling the EOF positions as they become available.
 - (b) IF additional personnel are needed THEN call or direct someone to call additional individuals using the Emergency Telephone Directory.



Attachment 9.1

Emergency Director Checklist

Sheet 2 of 9

Initial Responsibility/Activity (cont.)

Notes

2. **WHEN** there is sufficient EOF staff present to assume the following emergency functions:
 - EOF Technical Advisor to assess plant conditions and recommends emergency classifications.
 - Offsite Radiological Manager to perform dose assessment and formulate protective action recommendations (PARs)
 - Offsite Communicator to make notifications to offsite authorities

THEN declare the EOF activated, announce facility activation within the facility and record activation time in the ED ERO Log.
3. Use a Emergency Director Turnover Sheet (Form EP-20) to perform a formal turnover with the acting ED in the Control Room:
 - Coordinate the official time of turnover to ensure it will not interfere with or delay required emergency classification, offsite notifications or issuance of PARs.
 - Once the determination has been made to formally turnover ED responsibilities, make an announcement to EOF personnel that the EOF is operational and that you are now the Emergency Director.
4. Inform, or direct the EOF Manager to inform, the following individuals that you have assumed the duties of Emergency Director and that the EOF is operational.
 - (a) Emergency Plant Manager (EPM – Unit 2) or Plant Operations Manager (POM – Unit 3)
 - (b) Shift Manager (CR)
 - (c) Company Spokesperson or JNC Director (if activated) via the Information Liaison
 - (d) White Plains Office (directly or through the Recovery Support Group Manager via the Emergency Telephone



Attachment 9.1
Emergency Director Checklist
Sheet 3 of 9

Initial Responsibility/Activity (cont.)

Notes

5. Direct EOF Manager or Offsite Communicator to notify Offsite Agencies of the time that the EOF was operational:
 - (a) NRC via ENS
 - (b) NYS and 4 Counties
- B **IF** relieving another Emergency Director in the EOF **THEN** perform a formal turnover with the current Emergency Director:
 1. Review the Emergency Director's activity log
 2. Obtain briefing form current ED on the emergency and any actions the have been competed or are in progress using a Turnover Sheet (Form EP-20) to document the turnover.
 3. Once the formal turnover is complete direct the EOF Manager to inform the EOF, TSC, CR, OSC, Security, JNC and WPO that you are now the Emergency Director.

2.0 Continuous Responsibility/Activity

Notes

2.1 Maintain personnel accountability in the EOF

- A. Direct EOF personnel required to temporarily leaving the EOF area to inform the EOF Manager before leaving the work area.
- B. If you leave the area, assign the EOF Manager to fulfill your responsibility. Upon your return, obtain a briefing from the EOF Manager on any events that have occurred while you were away.

2.2 Maintain a Log:

- A. Maintain or direct an EOF Clerk or designee to maintain a log using an ERO Log Sheet (Form EP-10), or equivalent.
- B. Log when you assume the duties of Emergency Director (and EOF activation if not previously done).
- C. Log significant decisions and important details used to make decisions (emergency classification changes and protective actions recommendations).

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Notes

- D. Log all significant communications with other members of the ERO and communications with individual's offsite.
- E. **IF** you have assigned someone to maintain the ED log **THEN** periodically review the log for accuracy.

2.3 Classify Emergency Conditions. (non-delegable)



- A. Review plant conditions with the Emergency Plant Manager (EPM) or Plant Operations Manager (POM) and ED Technical Advisor.
- B. Review offsite radiological data with the ORM and EOF Manager.
- C. Compare current information and recommendations with the thresholds on the EAL Wall Chart or Emergency Classification Procedure and if necessary the EAL Technical Basis Document.
- D. Solicit recommendation for change of classification from the EPM/POM.
- E. Escalate or Terminate the emergency classification when appropriate.
- F. If not already communicated, then notify the EPM/POM and the EOF Staff when and at what time the new emergency classification is made.
- G. **IF** the emergency is classified as a Site Area Emergency or higher **THEN** direct release of onsite non-essential personnel. Consider this action at the Alert classification.
- H. **IF** the emergency is classified as a Site Area Emergency or higher **THEN** ensure accountability is completed within 30 minutes of the sounding of the site assembly alarm. Authorize search & rescue for any missing persons. Consider having Security establish security controls for the EOF.
- I. **IF** conditions have stabilized **THEN** review procedure IP-EP-610, Emergency Termination and Recovery for termination and entry into Recovery.



Attachment 9.1

Emergency Director Checklist

Sheet 5 of 9

Continuous Responsibility/Activity (cont.)

Notes

2.4 Make Protective Action Recommendations (PARs) (non-delegable)



NOTE:

Protective Action Recommendations (PARs) are to be made only at the General Emergency classification.

- A. Assess, with the assistance of the ORM and EOF Manager, the appropriate PAR per IP-EP-410, Protective Action Recommendations.
- B. Reevaluate the adequacy of PARs when plant conditions, dose projections, meteorological, or environmental conditions change.
- C. PARs shall be transmitted to offsite authorities within 15 minutes of the GE declaration and/or with the decision to revise the PAR using the offsite notification methods.

2.5 Direct initial notification of emergency classification and/or PARs to offsite authorities (State, local and NRC) (non-delegable)



NOTE:

Offsite notifications to State and local authorities (completion of the roll call) must be completed within 15 minutes of making an emergency declaration or PAR. Notification of the NRC shall be done as soon as possible after state and local authorities have been notified and must be completed within 1 hour.

- A Direct the EOF Manager to ensure a NYS Radiological Emergency Data Form Part I (form EP-1) is being completed.
- B Review and approve (sign) the completed NYS Radiological Emergency Data Form Part I (form EP-1)(non-delegable).
- C Direct the EOF Manager to have the Offsite Communicator transmit data on the form to the State and Local authorities and the NRC and report to you when task is complete.



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Emergency Director Checklist

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Continuous Responsibility/Activity (cont.)

Notes

2.6 Direct periodic update notification to offsite authorities

A. Direct the EOF Manager to ensure completion of a NYS Radiological Emergency Data Form Parts I (EP-1) and if applicable, Part II (EP-2), at the following frequencies:

1. When there has been a release or significant change in release rates and/or meteorological conditions. (Part I within 15 minutes & Part II within 30 minutes) **OR**
2. When there has been a significant change in plant conditions/classifications (Part I within 15 minutes). **OR**

NOTE:

When onsite conditions are stable time period for periodic updates may be extended with concurrence from offsite authorities.

3. Approximately every 30 minutes when conditions are static.

B. Review and approve the completed NYS Radiological Emergency Data Form Part I (form EP-1)(non-delegable).

C. Direct the EOF Manager to have Offsite Communicator transmit data on the form to State and Local authorities and the NRC and report to you when task is complete.

D. Ensure Part II (form EP-2) of form is faxed to State and Counties.

2.7 Periodically meet with offsite representatives present in the EOF (State, Local, FEMA and NRC)

A. Coordinate with the Lead Offsite Liaison to ensure representatives are kept current on:

1. emergency events
2. current plant conditions
3. emergency response activities currently underway
4. offsite radiological release status, dose assessment and PARs

B. Conduct periodic briefing of offsite representatives as deemed appropriate.



Attachment 9.1

Emergency Director Checklist

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Continuous Responsibility/Activity (cont.)

Notes

2.8 Review and approve/concur Entergy news releases



- A. Maintain the EOF Information Liaison apprised of current emergency status and any significant events that may be of public interest.
- B. Ensure that the EOF Information Liaison obtains a copy of any news release prior to issue for your review and approval (prior to JNC activation) or technical concurrence (after JNC activation).
- C. Direct copies of news releases are given to offsite representatives in the EOF upon approval.
- D. Confer with the Company Spokesperson at the JNC, EOF Manager, Technical Advisor and ORM if there is any question as to the accuracy of the proposed news release prior to approval.

2.9 Conduct periodic facility briefings



- A. Coordinate with the EOF Manager to schedule the conduct of periodic facility briefings. Establish a briefing schedule of approximately every 30 minutes or as conditions change.
- B. Use an Essential Information Checklist (Form EP-9) as a guide for leading the briefings.
- C. Direct the ED Technical Advisor and the ORM to participate in briefing facility personnel on current plant status and offsite radiological conditions respectively.
- D. **Emphasize** what the major tasks and priorities are during every briefing.
- E. Direct EOF staffs to review their procedure to ensure required actions are being performed.
- F. Periodically ensure the Company Spokesperson and the other facility managers are briefed on EOF activities.

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Continuous Responsibility/Activity (cont.)

Notes

2.10 Approve emergency radiation exposures and KI issuance for Entergy Workers

A. When requested by the ORM, approve emergency radiation exposures and/or issuance of KI for Entergy emergency workers outside the Protected Area Fence.

B. Authorize emergency exposures for all monitoring team personnel dispatched from the EOF and other EOF staff as required. Ensure this authorization is documented in the ED's Log Sheet.

C. Potassium Iodide should be issued for any projected or actual Thyroid Exposure > 25 Rem CDE.

2.11 Acquire and allocate Entergy and external resources as needed to support emergency response.

A. Review personnel, equipment and supply needs with the EPM/POM.

B. Make all Nuclear Organization resources available to supply needed items.

C. Direct the Admin & Logistics Manager to interface and coordinate with the Entergy Corporate organization to acquire needed equipment and resources that are not under the direct control of the Indian Point Nuclear Organization.

D. Request support from INPO and Federal authorities when needed.



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3.0 Closeout Activity

Notes

3.1 Terminate the emergency and enter the Recovery Phase.

- A. Refer to IP-EP-610, Termination and Recovery, for guidance on entry into Recovery Phase.
- B. Identify who will become the Recovery Manager.
- C. Notify the Recovery Manager of the intention to enter recovery.
- D. Terminate the emergency and officially enter the Recovery Phase.
- E. Formally turnover the emergency organization to the Recovery Manager
- F. Direct notification of the following locations that Indian Point has entered the Recovery Phase:
 - 1. The NRC via Emergency Notification System (ENS)
 - 2. State and Counties using a NYS Radiological Emergency Data Form – Part I, via the RECS
 - 3. All activated emergency response centers (CR, TSC/OSC and JNC)
- G. Ensure that a written summary of the event is provided to State and Counties per IP-EP-610, Termination and Recovery

3.2 Direct all Emergency Response Organization Managers to review documentation generated during the emergency.

- A. Verify all required documentation has been completed.
- B. Verify accuracy of documentation.
- C. Provide additional documentation such as summary reports or closeout reports that could assist in recovery of station.

3.3 Have ERO members provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.2
EOF Manager
Sheet 1 of 12

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.

A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).

1. Ensure EOF set-up is complete: ED PA system is operational and EOF positions are ready to perform their functions. Obtain Control Room official time (time on their clock) and note any difference between CR time and EOF time (satellite clock) in you log (for example + 5 min.).

B. Upon arrival at the EOF review facility status boards, EDDS, SPDS OR PICS information and any other available sources to become familiar with current plant status, if available.

C. Obtain briefing from the Emergency Director

1. Use an Essential Information Checklist (Form EP-9) to document briefing items.
2. Request any additional information on current status of emergency response.

D. If the emergency affects both units, assist the ED in assigning the appropriate EOF staff to fill their assigned positions.

1.2 Assume the position of EOF Manager.

A. IF the EOF has NOT been activated THEN:

1. IF the NYS Radiological Emergency Data Form Part I (form EP-1) (Part II if required) completed by the CR are not available in the EOF THEN. Request CR fax copies to EOF.
2. Review notification forms, noting time next notification is due.
3. WHEN the following minimum staff is available THEN inform the ED that you are ready to activate the EOF.
 - (a) Offsite Radiological Manager (ORM)
 - (b) Offsite Communicator
 - (c) Technical Advisor
4. Complete or direct Admin & Logistics Manager to complete EOF Staffing Form (EP-7) and verify full EOF Staffing.



Attachment 9.2
EOF Manager
Sheet 2 of 12

Initial Responsibility/Activity (cont.)

Notes

5. **IF** additional personnel are required **THEN**:
 - (a) **IF** it is during normal working hours **THEN** call or assign someone to call the Assembly Coordinator in the Energy Education Center or the Hall Monitor in the IPEC Training Center for additional personnel.
 - (b) **IF** the needed individuals are **NOT** available onsite **THEN** call or assign someone to call individuals at home using the Emergency Telephone Directory.
6. **WHEN** the EOF Emergency Director assumes ED responsibilities from the acting ED in the CR (or a new shift relieves current ED in EOF) **THEN**:
 - (a) Inform the following personnel that _____ (name) _____ is now the Emergency Director and that the EOF is operational.
 - (1) Emergency Plant Manager/Plant Operations Manager
 - (2) Shift Manager
 - (3) JNC director
 - (4) Recovery Support Group Manager via the Emergency Telephone Directory.
7. Ensure EOF Access Control is established:
 - (a) The Admin & Logistics Manager should assign an individual from the excess personnel reporting to the EOF or a clerk to be the EOF registration assistant. This individual will ensure emergency responders sign in and out of the EOF.
 - (b) Direct the EOF registration assistant to obtain permission from EOF Manager or Emergency Director for anyone not properly badged.

Attachment 9.2
EOF Manager
 Sheet 3 of 12

Initial Responsibility/Activity (cont.)

Notes

- 8. Ensure the Lead Offsite Liaison is coordinating the State and County Liaisons at the EOCs. Provide them with the following directions via the Lead Offsite Liaison:
 - (a) Direct that the Liaisons should provide technical assistance to EOC personnel and direct any other request to the EOF.
 - (b) Direct the Liaisons NOT to talk to the press and direct any media questions to the JNC.
- B. **IF** relieving another EOF Manager **THEN** perform a formal turnover with the current EOF Manager:
 - 1. Review the Emergency Director's activity log
 - 2. Obtain briefing from current EOF Manager on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
 - 3. Announcement to the EOF that you are now the EOF Manager.

2.0 Continuous Responsibility/Activity

Notes

2.1 Maintain personnel accountability in the EOF

- A. Direct EOF personnel to inform you and sign out at registration desk if they must temporarily leave the EOF.
- B. **IF** you are temporarily leaving the work area **THEN**
 - 1. Inform the Emergency Director if you are leaving the work area.
 - 2. Upon return, obtain a briefing from the Emergency Director on any events that have occurred while you were away.

2.2 Assist the Emergency Director in maintaining a Log

- A. A member of the EOF Clerical Staff may be assigned to maintain Log
- B. Use ERO Log Sheets (Form EP-10) to log information, or equivalent.



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Continuous Responsibility/Activity (cont.)

Notes

- C. Log when the Emergency Director assumed the duties of ED (and EOF activation if not previously done).
- D. Log when you assumed the duties of EOF Manager.
- E. Log significant decisions and important details used to make decisions. (Emergency classification changes and protective actions recommendations shall be logged)
- F. Log significant communications with other members of the ERO and all communications with individuals' offsite.

2.3 Keep the ED informed of changing conditions that may cause a change in the Emergency Classification.

- A. Review plant data with ED Technical Advisor.
- B. Review offsite radiological data with ORM.
- C. Compare current information and recommendations with the thresholds on the EAL Wall Chart or Emergency Classification Procedure and if necessary the EAL Technical Basis Document.
- D. Inform the ED of any possible changes in the Emergency Classification.

2.4 Evaluate the need to release all Non-Essential Personnel and recommend release to ED if conditions warrant.

- A. Check with the EPM on conditions within the Protected Area and the ORM on conditions outside the Protected Area.
- B. Release of non-essential personnel should occur at a Site Area Emergency, if radiological plume direction does not preclude.
- C. **IF** conditions exist at an Alert that could warrant release **THEN** consider release of non-essential personnel from site. Ensure Westchester EOC is notified via the Offsite Communicator.



Attachment 9.2

EOF Manager

Sheet 5 of 12

Continuous Responsibility/Activity (cont.)

Notes

2.5 Assist the ED in determining the appropriate Protective Action Recommendations to Offsite Authorities.



NOTE:

Protective Action Recommendations (PARs) shall only be made at the General Emergency Classification

- A. Support the Dose Assessment team on the assessment of PAR's per IP-EP-410, Protective Action Recommendations.
- B. Update Protective Action Board when PARs have been initiated and revised.
- C. Support the Dose Assessment team on the reevaluation of PARs when plant conditions, dose projection, meteorological, or environmental measurements change.
- D. Once the ED makes or changes a PAR it shall be transmitted to offsite authorities using a NYS Radiological Emergency Data Form, Part I (form EP-1), within 15 minutes of the decision to make the PAR.

2.6 IF the ED changes the emergency classifications THEN ensure notification of State and Local authorities (first response to roll call) be completed within 15 minutes.



NOTE:

The MEANS Computer program may be used to print NYS Radiological Emergency Data Forms.

- A. Ensure the Offsite Communicator is provided the information needed to complete the NYS Radiological Emergency Data Form Part I (Form EP-1).
- B. Acquire & review the completed Part 1 Form.
- C. Have the ED review and approve the completed Part 1 Form (The ED approval is non-delegable).



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EOF Manager
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Continuous Responsibility/Activity (cont.)

Notes

- D. Direct Offsite Communicator to transmit data on form to State and Local authorities and report to you when task is complete
- E. Direct transmittal of data to NRC as soon as possible but no later than 1 hour (classification, EAL#, time of event and brief description).

2.7 Direct periodic updates to offsite authorities be prepared



NOTE:

Completion and transmittal of Part II of the NYS Radiological Emergency Data Form (EP-1) may not be needed if there has been no significant release of radioactive materials.

- A. Ensure offsite notification of a NYS Radiological Emergency Data Form Part I within 15 min. (Part II, if required within 30 min) for the following criteria:
 - 1. When there has been a release or significant change in release rates, which would affect classification change or PAR change and/or meteorological data effecting a PAR change.
 - 2. When there has been a significant change in plant conditions, which would affect a classification change.
- B. Approximately every 30 minutes if conditions are static.
- C. Present completed form to the ED for review and approval. (The ED's Approval is non-delegable.)
- D. Direct Offsite Communicator to:
 - 1. Transmit, via RECS (and fax), data on the Part I form
 - 2. Fax the Part II Form (if required) to State and Local authorities
 - 3. Notify NRC of event classification, EAL #, time of event and brief description.
 - 4. Report to you when tasks are complete.

2.8 Brief Offsite Representatives arriving at EOF



- A. Brief or ensure the Lead Offsite Liaison is briefing offsite representatives present at the EOF (State, Local, FEMA and NRC)



Attachment 9.2
EOF Manager
Sheet 7 of 12

Continuous Responsibility/Activity (cont.)

Notes

B. Upon their arrival at the facility, offsite representatives should be briefed on:

1. Emergency events
2. Current plant conditions
3. Emergency response activities currently underway
4. Offsite radiological release status
5. Dose assessment and PARs

C. Coordinate with ED and ORM the periodic meetings of offsite representatives as deemed appropriate.

2.9 Assist the ED in periodic facility briefings

- A. Coordinate with the Emergency Director to schedule the conduct of periodic facility briefings. Establish a briefing schedule of approximately every 30 minutes or as conditions change.
- B. Use FormEP-9, Essential Information Checklist as a guide for leading the briefings.
- C. Direct the ED Technical Advisor and the ORM to participate in briefing facility personnel on current plant status and offsite radiological conditions respectively.
- D. **Emphasize** what the major tasks and priorities are.

2.10 IF additional resources are need to support emergency response THEN assist, and or direct the Admin & Logistics Manager to assist in making request to Federal agencies or other non-Entergy organizations.

2.11 Arrange for second Shift

A. **IF** it is a Unit 3 event **THEN**:

1. Request the ED establish a relief time.
2. Direct Emergency Response Facilities to prepare rosters for second shift.





Attachment 9.2
EOF Manager
Sheet 8 of 12

Continuous Responsibility/Activity (cont.)

Notes

2.12 Relocation of the EOF to AEOF



- A. **IF** radiological conditions are present **THEN** perform an organized relocation of the EOF to the AEOF.

NOTE:

Evacuation may be performed at rates below those listed in the ORM Checklist based on plant conditions and response needs.

- Discuss relocation with the ORM.
 - Consider radiological exposures listed in the ORM checklist, actual and forecasted meteorological conditions.
- B. **IF** plant conditions warrant, **THEN** consider starting relocation to the AEOF.
- C. **IF** time permits **THEN** have a relief shift report to the AEOF and perform turnover prior to evacuation of EOF:
1. Have relief team begin set up of the AEOF. Direct them to set up facility in accordance with procedure IP-EP-251, Attachment 9.4, AEOF Setup Checklist.
- D. Determine the speed at which the relocation of personnel should occur giving consideration to the following items:
1. Consider the impact of immediate relocation vs. projects in progress.
 2. Current radiological conditions within the EOF and the Plant.
 3. Radiological conditions en route.
 4. The adequacy of response from the alternate location.
- E. With the assistance of the ORM, determine if contamination controls are needed when leaving the EOF. Items to consider:
1. Are personnel going to become contaminated reaching their vehicles



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Continuous Responsibility/Activity (cont.)

Notes

2. Are personnel going to become contaminated in route to the AEOF.
 3. What steps are needed to prevent contamination of the AEOF
 4. IF time allows THEN consider arranging for a bus to relocate personnel. (this will minimize movement of potentially contaminated vehicles outside the Emergency Planning Zone)
- F. Direct the ORM to:
1. Determine radiological controls needed to safely transfer personnel to the AEOF.
 2. Consider contamination control measures needed to prevent contamination of AEOF.
 3. IF EOF Staff members are or will be potentially contaminated THEN:
 - a. Send personnel to the Westchester County Fire Training Center for monitoring and decontamination. (Attachment 9.6 of procedure IP-EP-251 contains directions to center).
 - b. Inform Westchester County of decision to have Indian Point ERO members decontaminated at center and arrange for expeditious processing of personnel.
 4. Individuals should be decontaminated prior to arrival at AEOF.
 5. Transfer offsite radiological assessment responsibilities:
 - a. To a qualified ORM located at the AEOF

OR

 - b. Back to the Control Room.
- G. Direct the EOF staff to relocate to the AEOF as follows:
1. Instruct clerical personnel to make and distribute copies of Attachment 9.5 of procedure IP-EP-251, Directions to the AEOF, to EOF Staff members, Federal, State and Local representatives in the EOF.



Attachment 9.2

EOF Manager

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Continuous Responsibility/Activity (cont.)

Notes

2. Direct EOF Staff to wear their ID badges enroute to the AEOF and show them to authorities if necessary to transit through evacuated areas.
 3. **IF** it was determined that contamination controls are needed, **THEN** brief EOF Staff members to go to the Westchester Fire Training Center for decontamination AND inform the AEOF staff of the required actions.
 4. **IF** between 7 a.m. to 5 p.m., Monday through Friday, **THEN** responding emergency personnel should enter through the main entrance to 440 Hamilton.
 5. **IF** it is during non-working hours **THEN** responding emergency personnel should enter through the side door.
- H. **IF** communications systems are still functional **THEN** notify the following locations that the EOF is being relocated to the AEOF:
1. Offsite authorities verifying they have the telephone numbers they can use to maintain communications.
 2. The Joint News Center
 3. The Technical Support Center
 4. The Operational Support Center
 5. The Control Room
 6. The Emergency Planning Staff Member at the AEOF
- I. Coordinate evacuation of the EOF with the ED and the EPM/POM transferring ED responsibilities back to the EPM/POM if another ED cannot assume responsibilities at the AEOF.
- J. Direct copies of Directions to the AEOF, Attachment 9.6 of Procedure IP-EP-251, Alternate Emergency Operations Facility, Have directions distributed to AEOF be provided to EOF Staff.
- K. Request that the EPM/POM announce the decision to evacuate and ensure relief shift is made aware of re-location.



Attachment 9.2
EOF Manager
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Continuous Responsibility/Activity (cont.)

Notes

1. Inform the POM, TSC Manager and OSC Manager of the relief time and that they are to inform ERO members prior to releasing them and have their staffs contact relief personnel not currently onsite.

B. **IF** it is a Unit 2 event **THEN** the OSC Accountability Clerk will be establishing relief rosters. Work with ED and EPM to establish relief time.

3.0 Closeout Activities

Notes

3.1 Termination of the emergency and entry into the Recovery Phase. (The ED is responsible for directing entry into the Recovery Phase)



A. Refer to IP-EP-610, Termination and Recovery, for guidance on entry into Recovery Phase.

B. Assist the ED in formulation of a recovery plan.

C. Notify the following locations that Indian Point has entered the Recovery Phase:

1. The NRC via Energy Notification System (ENS)
2. State and Counties using information on a NYS Radiological Emergency Data Form Part I, via the RECS
3. All activated emergency response centers (CR, TSC/OSC and JNC)
4. Entergy Corporate

3.2 Ensure that a written summary of the event is provided to State and Counties per IP-EP-610, Termination and Recovery.



3.3 Direct EOF Staff to return all equipment to proper storage locations.



3.4 Review all documentation the EOF Staff maintained during the emergency:



A. Ensure logs, forms and other documentation is complete.



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Closeout Activities (cont.)

Notes

B. Ensure all temporary procedures used and/or developed are properly

C. documented for use by Recovery Organization so that necessary actions can be taken for plant operations.

3.5 Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.





Attachment 9.3
EOF Technical Advisor (TA)
Sheet 1 of 4

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14)

NOTE:

If needed see attachment 9.13, EOF Equipment Operator for guidance on starting systems.

- B. Upon arrival at EOF review facility status boards, EDDS/PICS/SPDS information and any other available sources to become familiar with current plant status.

- C. Confer with the Emergency Director and EOF Manager on emergency status.

1.2 Assume the position of EOF TA.



A. IF initial activation THEN:

1. Confer with the Emergency Director and EOF Manager on emergency status.
2. Contact the TSC or Control Room to obtain information on the status of the affected unit(s) via the affected unit(s) EOF/TSC/OSC/CR dedicated phone line.
3. Inform the Emergency Director and EOF Manager when you are prepared to assume TA duties.

B. IF relieving another TA THEN perform a formal turnover with the current TA:

1. Review the current TA activity log.
2. Obtain briefing form current TA on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.

C. Inform the Emergency Director that you are now the TA.



Attachment 9.3
EOF Technical Advisor (TA)
Sheet 2 of 4

2.0 Continuous Responsibility/Activities

Notes

2.1 IF you are temporarily leaving the work area THEN



- A. Inform the EOF Manager (or ED) you are leaving the work area.
- B. Upon return, obtain a briefing from the EOF Manager on any events, which have occurred while you were away.

2.2 Maintain a Log



NOTE:

Logging items on an Easel or use of an auto log system may take the place of the TA's individual log.

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of Emergency Director Technical Advisor.
- C. Log significant decisions, important details used to make decisions and any equipment operability issues.

2.3 Obtain and Monitor Plant Data:



- A. Monitor plant data and operations information on the affected units EOF/TSC/OSC/CR dedicated phone line.
- B. Monitor plant data on the Emergency Data Display System (EDDS), Plant Information Computer System (PICS), Safety Parameter Display System (SPDS) and other plant information systems. Print out hard copies. After review, provide to clerical staff for copying.
- C. Continuously compare conditions with the Emergency Action Level threshold values on the EAL Wall Chart or Emergency Classification procedure and notify the Emergency Director immediately of any changes that may require a classification change.
- D. Advise ED on the following items:
 - 1. Any significant change in the condition of the plant;
 - 2. Any observable trends in plant data;
 - 3. Major Operator actions being undertaken;
 - 4. Any condition which may effect the emergency classification.



Attachment 9.3
EOF Technical Advisor (TA)
Sheet 3 of 4

Continuous Responsibility/Activities (cont.)

Notes

- E. Advise the Offsite Radiological Manager of any observed changes in plant radiological data. Provide a copy of affected units radiological data form (U2 42C or U3 31 B).
- F. **IF** any of the EOF plant data computer systems are not functioning **THEN** inform the EOF Equipment Operator of malfunctions.

2.4 Maintain Plant Status Chronology on easel pad.

- A. Enter major information on plant status or changes to plant status obtained from CR or TSC.
- B. **WHEN** easel sheet gets full **THEN**:
 - 1. Have Clerical Staff transcribe information onto log sheet, place sheet with TA logs.
 - 2. Have Clerical Staff hang completed easel sheet on the wall between upper and lower levels of EOF.

2.5 Assist ED in interpreting plant data

- A. Provide technical advice on plant operating procedures.
- B. Provide recommendations for emergency classification.

2.6 Assist Emergency Director in conduct of briefings

- A. Assist the ED in preparations for facility briefings.
- B. When directed by the ED, provide summary briefings of plant conditions to EOF Staff and/or offsite authorities present in the EOF.

2.7 Assist Offsite Radiological Manager in determining release point.





Attachment 9.3
EOF Technical Advisor (TA)
Sheet 4 of 4

3.0 Closeout Activities

Notes

3.1 Return all equipment to its proper storage locations.

3.2 Review all documentation the ED Technical Advisors maintained during the emergency:

A. Ensure logs, forms and other documentation are complete

B. Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase

3.3 Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.4
Offsite Radiological Manager
Sheet 1 of 8

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Upon arrival at the EOF review facility status boards, EDDS/PICS/SPDS information and any other available sources to become familiar with current plant and radiological status.
- C. Confer with the Emergency Director (ED) and EOF Manager on emergency status. An Essential Information Checklist (Form EP-9) may be used for a status review.

1.2 Assume the position of Offsite Radiological Manager.



- A. **IF** the EOF has **NOT** been activated **THEN**:

NOTE:

Offsite Dose Assessment and Radiological Monitoring responsibilities may be transferred to the Offsite Radiological Manager before the EOF is fully activated.

1. **WHEN** the following staff is available **THEN** inform the EOF Manager or the ED that you are ready to assume responsibilities for offsite dose assessment and offsite monitoring.
 - (a) Field Team Members (4)
 - (b) Field Team Coordinator
2. **WHEN** ready to assume dose assessment and offsite (outside Protected Area) monitoring responsibilities from the CR **THEN** contact the CR and formally assume these responsibilities.
3. Notify the ED / EOF Manager that you have assumed these responsibilities.
4. **IF** additional personnel are required to perform offsite radiological assessments **THEN** inform the EOF Manager to direct callout of needed personnel.
5. Direct a Dose Assessor to disarm (or disarm IAW steps in Dose Assessor checklist) the EOF Halon Fire Protection System.

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Offsite Radiological Manager
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Initial Responsibility/Activities (cont.)

Notes

- 6. **IF** the CR performed offsite dose assessment calculations and made a Protective Action Recommendation **THEN**:
 - (a) Obtain and review NYS Radiological Emergency Data Form Part I and Part II
 - (b) Verify or have a Dose Assessor verify dose assessment calculations.
 - (c) Evaluate Protective Action Recommendations.
 - (d) Notify the ED or CR if there are any discrepancies.
- B. **IF** relieving another Offsite Radiological Manager **THEN** perform a formal turnover with the current Offsite Radiological Manager:
 - 1. Review the current Offsite Radiological Manager activity log.
 - 2. Obtain briefing from current Offsite Radiological Manager on the emergency and any actions that have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
- C. Inform the EOF Manager that you are now the Offsite Radiological Manager.

2.0 Continuous Responsibility/Activities

Notes

2.1 IF there is or has been a release of radioactive materials **THEN** direct a Dose Assessor (or perform step IAW steps in Dose Assessor checklist) to place the EOF ventilation in the internal recirculation mode.

2.2 Ensure habitability in the EOF

- A. **IF** there is a potential for surface or airborne contamination within the EOF **THEN**:
 - 1. Suspend eating and drinking until you ensure EOF food and drinking water supplies are safe for consumption.
 - 2. Determine the survey and radiological controls needed for the EOF based on plant conditions and whether there has been a release or not.



Attachment 9.4

Offsite Radiological Manager

Sheet 3 of 8

Continuous Responsibility/Activities (cont.)

Notes

3. **IF** additional support is needed to maintain EOF Radiological Controls **THEN** request an HP Technician to assist with radiological controls.

B. **IF** the following conditions are present **THEN** inform the EOF Manager and/or the ED that relocation of EOF Personnel to the AEOF should be considered.

- Exposure rates > 80 mRem/Hr TEDE **OR** 400mRem/Hr TODE
- Projected Whole Body Dose for a 12 hour period is > 1 Rem TEDE **OR** Thyroid Dose >5 Rem TODE
- Elevated airborne concentrations.

Relocation may be performed at rates below those listed based on plant conditions and response needs.

2.3 Maintain personnel accountability in the EOF



A. If you leave the area, inform the EOF Manager. Upon your return, obtain a briefing from the EOF Manager on any events that have occurred while you were away.

2.4 Maintain a Log



A. Use Form EP-10, ERO Log Sheet to log information.

B. Log when you assumed the duties of Offsite Radiological Manager.

C. Log significant decisions, important details used to make decisions and any equipment operability issues.



Attachment 9.4
Offsite Radiological Manager
Sheet 4 of 8

Continuous Responsibility/Activities (cont.)

Notes

2.5 Develop and provide recommendations for EAL and classification level changes based on radiological considerations to the ED.



- A. Compare dose projection and field survey results with EAL criteria to determine the impact on the existing classification level.
- B. Review Radiological data forms (U2 42C or U3 31B) to evaluate any plant radiological changes.
- C. Notify the ED of any EALs affected by changes in radiological conditions.

2.6 Develop and provide recommendations for offsite PARs based on radiological considerations to the ED.



- A. Notify the ED of any changes in radiological conditions, which may affect the PAR.
- B. Use procedure IP-EP-410, Protective Action Recommendations to determine proper PAR.
- C. Document PARs whenever a General Emergency is declared.
- D. Review PARs whenever radiological or meteorological conditions change significantly.

2.7 Coordinate and direct the dose assessment and offsite monitoring efforts.



- A. Supervise the activities of the Dose Assessors, Field Team Coordinator, Radiological Communicator and the Field Monitoring Teams.
- B. Ensure the Health Physics Network (HPN) is manned when requested by the NRC.
- C. Determine the periodicity of dose projection calculations.
 - 1. Direct a Dose Assessor to perform offsite dose projections using IP-EP-310 Dose Assessment.



Attachment 9.4

Offsite Radiological Manager

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Continuous Responsibility/Activities (cont.)

Notes

2. Direct a Dose Assessor to obtain and track Offsite Radiation Monitoring System (formally Reuter-Stokes) readings, using IP-EP- 510 Meteorological & Radiological Data Acquisition System.
- D. Analyze dose assessment and environmental information to determine any actual or potential offsite consequences of the event.
- E. Support the Field Team Coordinator in determining monitoring activities of Field Monitoring Teams;
 1. Determine anticipated plume track based on meteorological data.
 2. Ensure initial offsite sample points are based on plumes expected path or are expanded based on actual readings in the field
 3. Determine special instructions to be provided to monitoring teams:
 - (a) **IF** the expected thyroid dose is greater than 25 Rem **THEN** consider issuing KI.
 - (b) Team tracking efforts should be directed to limit their exposure to less than 5 Rem for the entire emergency.
 4. Teams should not go into radiation fields greater than 1 Rem/hr without providing them with specific directions.
 5. Direct the Field Team Coordinator to:
 - (a) Direct Monitoring Teams to survey anticipated plume path.
 - (b) Brief teams on expected doses, plume path and any special instructions or safety precautions (such as use of KI, respirators, or protective clothing).
 6. **IF** required **THEN** arrange for environmental monitoring to be performed to confirm dose projections and track any offsite radioactive plume.



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Offsite Radiological Manager
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Continuous Responsibility/Activities (cont.)

Notes

- F. Compare projected doses with actual readings taken by field monitoring teams.
- G. Determine which ERPAs are affected by any release and verify proper PARs have been issued.
- H. Conduct periodic briefings with the ED and the EOF Manager to discuss the status of offsite radiological information and assessments.
- I. Compare dose assessment and offsite monitoring efforts with state and NRC personnel responsible for environmental monitoring.

2.8 Evaluate and direct the requirements for offsite emergency exposure.

A. **IF** EOF staff must receive exposure or potential exposures **THEN** initial exposure limits will be set as follows:

- 1. Individuals will remain within their 10CFR20 occupational dose limits.

OR

- 2. Request the ED authorize emergency exposures up to 1 Rem TEDE for all monitoring team personnel dispatched from the EOF and remainder of staff as required. This authorization shall be documented in the ED's ERO Log Sheet.

B. **IF** emergency measures require additional exposure **THEN** request the ED to raise the emergency exposure limit 1 Rem at a time up to 5 Rem.





Attachment 9.4

Offsite Radiological Manager

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Continuous Responsibility/Activities (cont.)

Notes

- C. Emergency exposures beyond 5 Rem shall be authorized on an individual basis. Request the ED authorize these exposures using Form EP-6, Emergency Exposure Authorization. General guidelines (more details are listed on authorization form).
1. ERO members may receive up to 5 Rem TEDE (per event) for any required emergency activities.
 2. ERO members may be authorized emergency exposures up to 10 Rem TEDE to protect vital equipment.
 3. ERO members may be authorized emergency exposures up to 25 Rem TEDE to save a life.
- D. Individuals may volunteer to receive greater than 25 Rem TEDE to save a life.
- E. Request authorization for the issuance of KI for any large exposures or expected large exposures (>25 REM CDE) to the thyroid.
- F. **IF** emergency workers are exposed to contamination or airborne activities **THEN** direct radiological evaluations and monitoring as needed. (bioassay, whole body counts, etc.).

NOTE:

When a release of radioactive materials outside the Protected Area has occurred or is about to occur, it is recommended that an HP Technician be available in the EOF at all times to assist with radiological controls, counting samples and processing samples for shipping to outside labs.

2.9 Contamination Controls

- A. **IF** a radiological release has occurred **THEN** track contamination onsite outside the Protected Area:
1. Use HP personnel from the OSC, called in or from other plants to survey site and monitor personnel and vehicles.
 2. Ensure contamination controls are established for the EOF and Security personnel working outside the Protected Area.
- B. **IF** needed **THEN** decontamination facilities can be set up at the EOF or the Westchester Fire Training Center.



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Offsite Radiological Manager

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Continuous Responsibility/Activities (cont.)

Notes

2.10 Assist Emergency Director in conduct of briefings

A. Assist the ED in preparations for facility briefings.

B. When directed by the ED provides summary briefings of plant conditions to EOF Staff and/or offsite authorities present in the EOF.

2.11 Initial Post Accident Environmental Sampling

NOTE:

After a radiological release preliminary sampling may be performed to aid in development of more extensive plan for environmental sampling.

1. Confer with Emergency Director and offsite radiological officials (State, County, NRC and/or FEMA) on need for sampling.
2. Confer with Environmental Monitoring personnel for sampling guidelines.

3.0 Closeout Responsibility/Activities

Notes

3.1 Direct staff to return all equipment to proper storage location

3.2 Determine the disposition of the field team sample media. Initiate isotopic analysis of these samples at either the onsite Chemistry Lab or offsite facilities.

3.3 Review all documentation the EOF Radiological Staff maintained during the emergency:

A. Ensure logs, forms and other documentation is complete.

B. Ensure all temporary procedures used and/or developed are properly documented for use by Recovery Organization so the necessary actions can be taken for continued plant operations.

3.4 Provide all documentation to the EOF Manager upon termination of the emergency and entry into the Recovery Phase



Attachment 9.5
Dose Assessor
Sheet 1 of 8

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Review facility status boards, EDDS, SPDS or PICS information and any other available sources to become familiar with current plant status.
- C. Confer with the Offsite Radiological Manager on emergency status.

NOTE:

There will normally be two Dose Assessors. Individuals shall work as team to perform required task in an efficient manner.

1.2 IF the EOF has not been activated THEN:



- A. **WHEN** directed by the Offsite Radiological Manager **THEN** places the EOF ventilation on internal recirculation **ELSE** ask the Offsite Radiological Manager if the action is required.
 - 1. Obtain the key to the EOF Electrical Equipment Room from the EOF key locker.
 - 2. Locate the EOF HVAC damper control system switches on the East wall of the EOF Electrical Equipment Room.
 - 3. Rotate all three (3) damper control knobs **CLOCKWISE** to close the dampers.
 - 4. Place the three (3) AC Unit control switches to the "OVERRIDE" (up) position
 - 5. Inform the Offsite Radiological Manager and log when you have placed ventilation system in recirculation and return key to Key Locker.
- B. **WHEN** directed by the Offsite Radiological Manager (ORM) **THEN** disarm the EOF Halon System **ELSE** ask the Offsite Radiological Manager if the action is required.
 - 1. Obtain the key to the FIKE Fire Suppression System control panel from the EOF key locker.



Attachment 9.5
Dose Assessor
Sheet 2 of 8

Initial Responsibility/Activities (cont.)

Notes

2. Open the upper compartment of the FIKE control panel located on the west wall of the EOF next to the key locker.
3. Toggle the module switch (the switch is located in the lower left corner of the panel.) from the "Armed" position to the "S1" position.

1.3 Operate the AMS-4

NOTE:

AMS-4 shall be started during EOF activation

1. Initial AMS-4 Start Up
 - (a) OPEN filter-housing cover, remove any existing filter media AND install a new charcoal filter paper (# 508 Carbon Impreg.) The "lined" side should face down.
 - (b) CLOSE and latch the filter housing cover.
 - (c) PLUG the AMS-4 in and turn on SW1 (power) and SW2 (pump) switches located in the back of the monitor.

NOTE:

IF beeping continues, THEN readjust filter paper and restart.

- (d) AFTER the AMS-4 has gone through the initial self test cycle (approximately 5 minutes), THEN VERIFY the "READY" light is on AND activity is displayed.
- (e) PRESS "2" on the keypad AND VERIFY that indicated flow rate is near the posted reference flow rate for charcoal filter. A low flow rate may indicate a flow blockage OR loaded filter paper.
- (f) PRESS "1" on keypad to display airborne concentration. Negative numbers indicate the current activity is less than the historical data.



Attachment 9.5
Dose Assessor
Sheet 3 of 8

Initial Responsibility/Activities (cont.)

Notes

2. Normal AMS-4 Operation

NOTE:

This instrument is calibrated to monitor Iodine gas and particulates.

- (a) CHECK periodically the AMS-4 flow rate by pressing "2" on the keypad. IF desired return to activity monitoring by pressing "1" on the keypad.
 - (b) IF the flow rate approaches 28320 cm³/min OR the "MIN FLOW FAIL" alarm activates THEN CHANGE the filter paper as per Section 3.
 - (c) IF the ASM-4 "DAC HOUR ALARM DETECTED" alarm activates THEN NOTIFY the ORM. The alarm set point is 60 DAC hrs, which is equivalent to 150 mRem.
 - (d) IF the "FILTER DOOR, OPEN OUT OF SERVICE" alarm activates THEN VERIFY that the filter housing is closed and latched.
 - (e) IF the gamma background in the area changes substantially THEN GO to Section 4 to set the Gamma Factor.
 - (f) WHEN finished monitoring with the AMS-4 THEN TURN off SW1 (Power), SW2 (pump).
3. Changing AMS 4 Filter Paper
- (a) TURN SW2 (pump) OFF.
 - (b) WHEN the audible alarm activates THEN PRESS "ALARM ACK."
 - (c) OPEN the filter housing cover AND WHEN the audible alarm activates press "ALARM ACK."
 - (d) REMOVE any existing filter media AND install a new charcoal filter paper (# 508 Carbon Impreg.) The "lined" side should face down.
 - (e) CLOSE and latch the filter housing cover.
 - (f) TURN on SW2 (pump) switch.
 - (g) WHEN the audible alarm activates THEN press "ALARM ACK."



Attachment 9.5
Dose Assessor
Sheet 4 of 8

Initial Responsibility/Activities (cont.)

Notes

- (h) PRESS "2" on the keypad AND verify that indicated flow rate is near the posted reference flow rate for charcoal filter. The low flow rate alarm set point is 28320 cm³/min. A low flow rate may indicate a flow blockage OR loaded filter paper.
- (i) RETURN to Section 2 for normal operations.
- 4. Gamma Factor Set
 - (a) VERIFY "READY" light is on. The AMS-4 front panel will NOT respond as expected if an alarm condition exists.
 - (b) PRESS "MENU".
 - (c) AT the prompt "password" type in "8435" THEN press "ENTER".
 - (d) PRESS "_" button until "Calibrate" appears in display.
 - (e) PRESS, "ENTER".
 - (f) PRESS "_" button until "Gamma Factor Count" appears in display.
 - (g) PRESS, "ENTER".
 - (h) WHEN "Calibration Mode Halts Normal Operation" displays THEN press "ENTER".
 - (i) WAIT until both Beta AND BKG counts are greater than 400 counts THEN observe "Factor = XX.XXX" (where XX.XXX is a number) on display AND press "ENTER".
 - (j) PRESS, "ENTER" to accept and update Gamma Factor value.
 - (k) PRESS "MENU" key twice.
 - (l) WHEN "READY" light appears AND airborne concentrations appears on top line of display THEN go to Section 2 for normal operation. (IF the flow rate appears THEN press "1" to display activity).



Attachment 9.5
Dose Assessor
Sheet 5 of 8

Initial Responsibility/Activities (cont.)

Notes

1.4 Assume the position of Dose Assessor

A. **IF** relieving another Dose Assessor **THEN** perform a formal turnover with the current Dose Assessor.

1. Review the current Dose Assessor activity log.

2. Obtain briefing from current Dose Assessor on the emergency and any actions that have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.

B. Inform the Offsite Radiological Manager that you are now the Dose Assessor.

2.0 Continuous Responsibility/Activities

Notes

2.1 Maintain a Log

A. Use Form EP-10, ERO Log Sheet to log information.

B. Log when you assumed the duties of Dose Assessor.

C. Log significant decisions, important details used to make decisions and any equipment operability issues.

2.2 Maintain personnel accountability in the EOF

A. **IF** you leave the area **THEN** notify the Offsite Radiological Manager. Upon your return, obtain a briefing from the Offsite Radiological Manager or other Dose Assessor on any events that have occurred while you were away.

2.3 Monitor Radiological Release Rates and Perform Dose Assessment Calculations

A. Perform a base line dose projection based on current readings (from PICS, EDDS, SPDS or Control Room) using MEANS and procedure IP-EP-310, Dose Assessment.

B. Monitor Plant Effluent Monitors for changes in Release Rates. Notify the ORM immediately of any change in release status.



Attachment 9.5
Dose Assessor
Sheet 6 of 8

Continuous Responsibility/Activities (cont.)

Notes

- C. Monitor meteorological data for changes, which may effect offsite dose projections or Protective Action Recommendations.
- D. **IF** there is a change in any parameter **THEN** recalculate dose projections using MEANS and procedure IP-EP-310, Dose Assessment and report results to ORM immediately.
- 2.4 Use MEANS program or procedure IP-EP-410, Protective Action Recommendations to calculate appropriate Protective Action Recommendation. Any change of PAR must be transmitted to offsite authorities within 15 minutes.**
- 2.5 IF there has been a release above technical specifications THEN complete "NYS Radiological Emergency Data Form, Part II" approximately every 30 minutes and submit it to the ED for review and transmittal. Provide to Offsite Communicator for offsite distribution.**
- 2.5 Maintain the MET Data Status Board**
- A. Use procedure IP-EP-510, Meteorological & Radiological Data Acquisition to retrieve weather predictions.
- B. Obtain the latest measured MET data from MR-DAS every 15 minutes.
1. Update the MET Data Status Board to display the correct data.
 2. Notify the Offsite Radiological Manager (ORM) of any significant changes in the meteorological data.
- C. Obtain weather predictions from MR-DAS and/or Weather Bureau
1. Update the MET Data Status Board to display the correct data.
 2. Notify the ORM of any significant changes in the weather forecast data.
- 2.6 Compare Dose Projections with Field Team Survey Results**
- A. Confer with Field Team Coordinator on survey points and reported readings.
- B. Update NYS Radiological Emergency Data Form Part II with Field Team Data



Attachment 9.6
Dose Assessor
Sheet 7 of 8

Continuous Responsibility/Activities (cont.)

Notes

- 2.7 **Monitor Offsite Monitoring System (formally Reuter-Stokes) data.**
- A. Obtain readings from MR-DAS.
- B. Inform the ORM of any reading greater than background.
- 2.8 **Periodically check readings of AMS-4 and ensure proper instrument operation.**
- A. **IF** there is a release **THEN** monitor the AMS-4 to identify any increase in the radiological levels in the EOF.
- B. Follow directions in section 1.2.C of this checklist to maintain AMS-4 operations.
- 2.9 **Confer with the Offsite Radiological Manager on the need to set up EOF Radiological Controls. When directed set up EOF entrance as follows:**
- A Set up stanchions, rope barricade, and frisker in the main hall entrance to EOF work area.
- B Set frisker alarm to two (2) times background.
- C Set up Step Off Pads (SOPs) at entrance.
1. Place a waste receptacle and clean shoe covers near the SOP location.
- D Post the door in the upper level EOF near the Clerks as "Emergency Exit Only"
- E Check to ensure door to West stairwell (to upper EOF) is locked to entrance from stairwell.



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3.0 Closeout Activities

Notes

3.1 Rarm the EOF Halon System

- A. Obtain the key to the FIKE Fire Suppression System control panel from the EOF key locker.
- B. Open the upper compartment of the FIKE control panel located on the west wall of the EOF next to the key locker.
- C. Toggle the module switch (the switch is located in the lower left corner of the panel.) from the "S1" (up) position to the "Armed" (down) position.

3.2 Return the EOF ventilation to normal.

- A. Obtain the key to the EOF Electrical Equipment Room from the EOF key locker.
- B. Locate the EOF HVAC damper control system switches on the East wall of the EOF Electrical Equipment Room.
- C. Rotate all three (3) damper control knobs COUNTER -CLOCKWISE half way to open the dampers.
- D. Place the three (3) AC control switches to the "NORMAL" (down) position.

3.3 Return all equipment used by Dose Assessors to its proper storage locations.

3.4 Review all documentation the Dose Assessors maintained during the emergency:

- A. Ensure logs, forms and other documentation is complete.
- B. Ensure any items, which need follow up investigations, are identified to be completed during the Recovery Phase.

3.5 Provide all logs and records to the Offsite Radiological Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.6
Radiological Communicator
Sheet 1 of 3

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Review facility status boards, EDDS, SPDS or PICS information and any other available sources to become familiar with current plant status.
- C. Obtain briefing from the Dose Assessor or the Offsite Radiological Manager.
 - 1. Review monitoring team data.
 - 2. Request any additional information on current status of emergency response.

1.2 Assume the position of Radiological Communicator



- A. **IF** it is the initial activation of position **THEN:**
 - 1. Establish communications with the affected unit:
 - (a) For Unit 2 contact the TSC Radiological Advisor.
 - (b) For Unit 3 contact the OSC Health Physics Team Leader.
 - 2. Establish communications with the Lead Accountability Officer (LAO).
- B. **IF** relieving another communicator **THEN** perform a formal turnover with the current Radiological Coordinator:
 - 1. Review the current Radiological Communicator activity log.
 - 2. Obtain briefing from current Radiological Communicator on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
- C. Inform the Offsite Radiological Manager and Dose Assessor(s) that you are now the Radiological Communicator.



Attachment 9.6
Radiological Communicator
Sheet 2 of 3

2.0 Continuous Responsibility/Activities

Notes

2.1 Maintain a Log

- A Use Form EP-10, ERO Log Sheet to log information.
- B Log when you assumed the duties of Radiological Communicator.
- C Log significant decisions, important details used to make decisions and any equipment operability issues.

2.2 Maintain personnel accountability in the EOF

- A. If you leave the area, notify the Offsite Radiological Manager. Upon your return, obtain a briefing from the Offsite Radiological Manager or other Dose Assessor on any events that have occurred while you were away.

2.3 Communicate Radiological Information to Security

- A Provide following information to Lead Accountability Officer (LAO):
 - 1. Provide information on onsite plant radiological conditions and/or hazards.
 - 2. Any areas in which movement of Security Personnel or non-ERO individuals should be restricted.
 - 3. Site access restrictions.
- B IF accountability has been called for THEN receive accountability status from LAO and report it to EOF Manager.

2.4 Provide Radiological Information to the NRC

- A If requested by the NRC via the Health Physics Network (HPN), then provide radiological information from the Part II Radiological Data Form completed by the Dose Assessor or if requested by the NRC use Form 361.
- B IF requested by the NRC, THEN continuously man the Health Physics Network (HPN) phone line.



Attachment 9.6
Radiological Communicator
Sheet 3 of 3

3.0 Closeout Activities

Notes

3.1 Return all equipment used by Radiological Communicator to its proper storage locations.

3.2 Review all documentation the Radiological Communicator maintained during the emergency:

A. Ensure logs, forms and other documentation are complete

B. Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase

3.3 Provide all logs and records to the Offsite Radiological Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.7
Field Team Coordinator
Sheet 1 of 5

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.

- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
 - B. Review facility status boards, EDDS, SPDS OR PICS information and any other available sources to become familiar with current plant status.
 - C. Obtain briefing from the Dose Assessor or the Offsite Radiological Manager.
- 3. Review monitoring team data.
 - 4. Request any additional information on current status of emergency response.

1.2 Assume the position of Field Team Coordinator.

A. IF it is the initial activation of position THEN:

- 1. Determine if there are 6 Field Monitoring Team members present (3 teams). IF additional personnel are needed THEN inform the Offsite Radiological Manager or EOF Manager and request additional personnel.
- 2. IF Field Team Members are reporting from unit 3 OSC THEN have Radiological Communicator call OSC for Field Team Member status.
- 3. Conduct a briefing with the members of the Field Monitoring Teams present in the EOF, informing them of plant conditions and expected radiological conditions outside the Protected Area Fence.

B. IF relieving another coordinator THEN perform a formal turnover with the current Field Team Coordinator:

- 1. Review the current Field Team Coordinator activity log.



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Field Team Coordinator

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Initial Responsibility/Activity (cont.)

Notes

2. Obtain briefing from current Field Team Coordinator on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.

C. Inform the Offsite Radiological Manager and Dose Assessor(s) that you are now Field Team Coordinator.

1.3 Initial Field Team Briefing

A. Prior to dispatching teams into the field brief them on the following:

1. Discuss Current Conditions

Emergency Classification: _____

Condition of Plant: _____

Wind Speed: _____ Wind Direction (from): _____

Release NOT In Progress Expected In Progress

2. Use of Potassium Iodide (KI):

Ensure all teams have KI Tablets prior to leaving the EOF and understand it is only to be used upon direction from Offsite Radiological Manager (ORM).

3. Team Designations:

Ensure each team knows how they are to be identified. (e.g., Site Perimeter Team, Mobile 1, Mobile 2)

4. Team Member Exposure Limits:

Ensure all Team members know their exposure limits.

Exposure limits will either be set at current occupational limits, in which case current individual yearly exposures must be obtained.

OR

Emergency Director may authorize 1 Rem (regardless of current exposure) Emergency Exposure to all team members. Check with ORM on which limits are to be used.



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Field Team Coordinator
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Initial Responsibility/Activity (cont.)

5. Communications

Discuss communication systems used (radio, cell phones)
Discuss what units / terminology will be used when reported
survey / sample results.

6. Radio "Dead Spaces"

Remind teams to use cell phones or other teams as alternative /
backup methods of communication should radio "dead spaces"
occur.

7. Dosimetry

Ensure teams have required dosimetry and remind them to
frequently check dosimetry and report results.

8. Synchronize Time

Have teams synchronize watches with EOF time.

9. Survey Expectations

Ensure teams are aware of survey expectations; defining
centerline and edge of plume, obtaining air samples, ground
samples, one meter readings etc.

10. Initial Team Destinations

Inform each team the location they are initially to report to.

2.0 Continuous Responsibility/Activities

2.1 Maintain a Log

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of Field Team Coordinator.
- C. Log significant decisions, important details used to make decisions
and any equipment operability issues.

Notes





Attachment 9.7
Field Team Coordinator
Sheet 4 of 5

Continuous Responsibility/Activities (cont.)

2.2 Transmit directions to the Offsite Teams



Note:

Teams should be designated as Mobile 1, 2 etc. and Site Perimeter Team

- A. Use the Radio or Cell Phones to communicate with teams.
- B. Confer with the Offsite Radiological Manager and/or Dose Assessors to determine the sample points and the expected whole body exposure rates based on dose projections.
- C. Enter selected sample point(s) and assigned team on Monitoring Team Radiation Field Survey Data (Form EP-30).
- D. Contact each team and direct them to the designated sample point providing following information:
 - 1. The expected dose rates.
 - 2. Methods of traversing the plume to keep their exposure as low as possible, such as going around plume or traveling through low field areas.
- E. Have teams verify instructions by repeating them back.

2.3 Receive and Record Offsite Monitoring Team Data



- A. Have teams state sample point for which data is being transmitted.
- B. Record survey data on Monitoring Team Radiation Field Survey Data and Monitoring Team Sample Data (Form EP-30 and Form EP-31).
- C. Verify numbers by repeating values back to the team.
- D. Inform the Offsite Radiological Manager or Dose Assessor immediately of survey and sample results.



Attachment 9.7
Field Team Coordinator
Sheet 5 of 5

Continuous Responsibility/Activities (cont.)

Notes

2.4 Determine Radioactive Airborne Concentrations



When Offsite Monitoring Teams report air sample results **THEN** determine airborne concentrations as follows:

- A. Use Form EP-32, Determination of Radioactive Airborne Concentrations to calculate $\mu\text{Ci/cc}$.
- B. Report concentration to Dose Assessor or Offsite Radiological Manager.

2.5 Maintain Onsite and Offsite Monitoring Team Exposure Records.



- A. **IF** any exposure rates are above background **THEN** obtain team member whole body exposure (dosimetry readings).
- B. **IF** any team members are receiving radiological exposures **THEN** record exposures on Individual Exposure Tracking Log (Form EP-29) periodically.

2.6 Keep Onsite and Offsite Teams informed of major changes in emergency status:



- A. Changes in emergency classification.
- B. Start or stop of any offsite releases of radioactive materials.

2.7 Obtain new sample locations and points from Offsite Radiological Manager or Dose Assessor.



Repeat above steps to continue plume tracking until Offsite Radiological Manager determines surveys and sampling are no longer necessary.

3.0 Closeout Responsibility/Activities

3.1 Return all equipment to proper storage locations.



3.2 Review all documentation Field Team Coordinators maintained during the emergency:



- A. Ensure logs, forms and other documentation is complete.
- B. Ensure any items, which need follow up investigations, are identified to be completed during the Recovery Phase.

3.3 Provide all logs and records to the Offsite Radiological Manager upon termination of the emergency and entry into the Recovery Phase.





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Attachment 9.8
Offsite Communicator
Sheet 1 of 4

1.0 Initial Responsibility/Activities

Notes

1.1 Initial Orientation.

- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Review facility status boards, EDDS, SPDS OR PICS information and any other available sources to become familiar with current plant status.
- C. Obtain briefing from the EOF Manager
 - 1. Request any additional information on current status of emergency response.

1.2 Assume the position of Offsite Communicator.

- A. **IF** it is the initial activation of position in the EOF **THEN**:
 - 1. Obtain copies of all NYS Radiological Emergency Data Forms that have been transmitted prior to activation.
 - 2. Call the effected Unit Control Room to:
 - (a) Determine and record other offsite notifications made. (NRC, INPO, ANI, Corporate)
 - (b) Determine and record the next time required notifications are due.
- B. **IF** relieving another communicator **THEN** perform a formal turnover with the current Offsite Communicator:
 - 1. Review the current Offsite Communicator activity log.
 - 2. Obtain briefing from current Offsite Communicator on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
 - 3. Determine the time the next notification updates are due to be transmitted.
- C. Inform the EOF Manager that you are now the Offsite Communicator.

Next Notifications
Due at Approx:



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Attachment 9.8
Offsite Communicator
Sheet 2 of 4

2.0 Continuous Responsibility/Activities

Notes

2.1 IF you are temporarily leaving the work area THEN

- A. Inform the EOF Manager you are leaving the work area.
- B. Upon return, obtain a briefing from the EOF Manager on any events, which have occurred while you were away.

2.2 Maintain a Log

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of Offsite Communicator.
- C. Log all communications that are not already documented on Forms.

2.3 Perform required notifications to Offsite Authorities.

NOTES:

1. Start notification of any change in classification within 15 minutes of the classification change.
2. The 15 min. requirement is met upon the first response to the roll call.

A. IF the emergency classification changes (upgrade, terminates, enters Recovery) THEN perform the following:

1. Complete or obtain a completed NYS Radiological Emergency Data Form Part 1 (Form EP-1) from ED or EOF Manager.
2. Ensure the ED has signed the NYS Radiological Emergency Data Form to indicate approval for transmittal.
3. Communicate the information on the completed form(s) to the offsite authorities per instructions on Alert/SAE/GE Upgrade/Update Notification Checklist (Form EP-5).



Attachment 9.8
Offsite Communicator
Sheet 3 of 4

Continuous Responsibility/Activities (cont.)

Notes

B. **IF** the emergency classification **DOES NOT** change **THEN** perform subsequent notifications as follows:

1. Subsequent notifications shall be made:
 - It has been approximately 30 minutes since the last form was transmitted.
 - The plant status has changed (Stable, improving or degrading)
 - There has been a change in the status of an actual or potential radiological release.
2. Complete or obtain a completed NYS Radiological Emergency Data Form Part 1 (Form EP-1) from EOF Manager or ED.
3. **IF** there is a change in radiological release data **THEN** ensure NYS Radiological Emergency Data Form Part II is completed.
4. Ensure the ED has signed the NYS Radiological Emergency Data Form(s) to indicate approval for transmittal.
5. Communicate the information on the completed Part I form to the offsite authorities per instructions on Alert/SAE/GE Upgrade/Update Notification Checklist (Form EP-5).
6. Provide the completed Part I and if required, Part II form(s) to the EOF clerks for copying and faxing.
7. Maintain status board of "next notification & next briefing".
8. Provide copied Part I and if required, Part II form(s) to the ED and Dose Assessor.

2.4 Perform Industry Group Notifications

A. Notify the following (phone numbers in Emergency Telephone Directory), document notifications in log:

- American Nuclear Insurers
- New York Public Service Commission



Attachment 9.8

Offsite Communicator

Sheet 4 of 4

Continuous Responsibility/Activities (cont.)

Notes

- INPO
- NEIL

B. Notify the EOF Manager which notifications were made or not made.

3.0 Closeout Activities

Notes

3.1 Return all equipment to proper storage locations.



3.2 Review all documentations Offsite Communicators maintained during the emergency:



A. Ensure logs, forms and other documentation are complete

B. Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.9

Admin & Logistics Manager

Sheet 1 of 4

1.0 Initial Responsibility/Activity

Notes

1.1 Initial Orientation.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Review facility status boards, EDDS, SPDS OR PICS information and any other available sources to become familiar with current plant status.
- C. Confer with the EOF Manager on emergency status.

1.2 Assume the position of Admin & Logistics Manager.



A. IF it is the initial activation of position THEN

- 1. Complete an EOF Staffing Form (EP-7) and verify full EOF Staffing, report-staffing status to EOF Manager (or ED).
- 2. Check staffing level of support staff:
 - (a) Should have 3 Clerical Support Personnel and 1 Equipment Operator.
 - (b) At least 2 clerical support personnel should staff the upstairs clerical area and 1 individual may be used as the EOF Registration Assistant. Also assign a Manager type individual to support the Registration Assistant.
 - (c) IF short of support staff THEN draft non-assigned ERO member to fill the Registration Assistant.
- 3. Ensure the EOF Clerical Staff and the EOF Equipment Operator are briefed and ready to support EOF emergency response
- 4. Inform the EOF Manager when you are ready to provide logistics support to the ERO.
- 5. Call an Entergy Recovery Support Manager (numbers listed in the Emergency Telephone Directory under Entergy Headquarters. Provide them with the following information:
 - A. Date/Time Event emergency was declared.
 - B. Brief Description of event
 - C. Phone number where you can be reached.
 - D. Any anticipated corporate support needed by the onsite ERO.



Attachment 9.9

Admin & Logistics Manager

Sheet 2 of 4

Initial Responsibility/Activity (cont.)

Notes

- B. **IF** relieving another Admin & Logistics Manager **THEN** perform a formal turnover with the current Admin & Logistics Manager:
1. Review the Admin & Logistics Manager activity log.
 2. Obtain briefing from current Admin & Logistics Manager on the emergency and any actions the have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
 3. Ensure you have an understanding of any outstanding request for outside support or materials.
- C. Inform the EOF Manager that you are now the Admin & Logistics Manager.

2.0 Continuous Responsibility/Activities

Notes

2.1 Process request from the Emergency Response Organization for outside assistance:

- A. Arrange to fulfill requests from the ED for any corporate or outside support needed.

2.2 IF the event is expected to last more than 4 hours THEN make arrangements for meals for the ERO.

2.3 IF the event has been classified at a Site Area Emergency or General Emergency THEN:

- A. Call in additional support staff, as necessary, to assist. Personnel from the following Indian Point Energy Center organizations:
1. Material Procurement / Purchasing – to assist in procurement of items needed to support the emergency response.
 2. Facilities – to provide additional office equipment, supplies, food and/or make arrangements for ERO berthing onsite.
 3. Nuclear Licensing – to assist in receiving and supporting the NRC Incident Response Team
 4. Other – such as additional clerical support to make phone calls or provide document-processing support.

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Admin & Logistics Manager
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Continuous Responsibility/Activities (cont.)

Notes

- B. As necessary support should be arrange through the Entergy Recovery Support Manager for the following areas (group titles are representative do not match actual titles):
1. Office Services group provides general office services such as: typing (machines and personnel), reproduction (Photostats and drawings), telephone dictation, office supplies, office furniture, mail delivery, photography services, facility and area maps, audio visual aids, graphics printing, and distribution service as required
 2. Finance group prepares payroll, controls accounts payable, and administers cash disbursements and expense accounts.
 3. Accommodations group provides lodging if necessary for emergency workers and makes arrangements for rental cars and travel on commercial and charter carriers.
 4. Human Resources group can assist for the human resource needs using existing Entergy personnel and non-Entergy personnel obtained through the New York Power Pool and the Institute of Nuclear Power Operations.
 5. Purchasing group, acts as purchasing agent to obtain the materials and services required by the Emergency Response Organization.
 6. Legal Group provides advice to the Emergency Director as to actions which may violate federal, state or local statutory and regulatory requirements concerning the operation of the Indian Point Station, OR jeopardize coverage of the insurance policies and indemnity agreements. The group also provides legal counsel to Entergy employees involved in the emergency
 7. Information Technologies group provides assistance to develop AND maintain computerized information processing systems.
 8. Central Stores group helps provide class/stock material.



Attachment 9.9
Admin & Logistics Manager

Sheet 4 of 4

Continuous Responsibility/Activities (cont.)

Notes

2.4 Continue to coordinate with Entergy organizations outside the ERO and other assistance to the ERO.

3.0 Closeout Activities

Notes

3.1 Return all equipment to proper storage locations.

3.2 Review all documentation maintained by Admin & Logistics Managers during the emergency:

A. Ensure logs, forms and other documentation are complete

B. Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.10
EOF Clerical Staff
Sheet 1 of 4

1.0 Initial Responsibility/Activities

Notes

1.1 Assume the position of EOF Clerical.



- A. Sign in on EOF staffing board and EOF Check Point Sign-In Log (Form EP-14).
- B. Obtain briefing from the Admin & Logistics Manager or the EOF Manager.
- C. **IF** relieving another clerk THEN perform a formal turnover with the current clerk:
 - 1. Review current emergency status
 - 2. Obtain briefing from current Clerical Staff on the emergency and any actions the have been completed or are in progress.
- D. Inform the Admin & Logistics Manager that you are now part of the EOF Clerical Staff.

2.0 Continuous Responsibility/Activities

Notes

2.1 IF assigned as the EOF Registration Assistant THEN:



NOTES:

IF there is any question if an individual should be allowed to enter the EOF THEN request clearance from the Emergency Director or the EOF Manager.

- A. Allow only the following personnel into the EOF:
 - 1. Indian Point Emergency Response Organization Personnel, as listed in the Emergency Telephone Directory.
 - 2. Entergy Corporate Officers.
 - 3. State and County Officials
 - 4. Federal Officials from the Nuclear Regulatory Commission and Federal Emergency Management Agency
 - 5. Individuals authorized by the Emergency Director or the EOF Manager.



Attachment 9.10
EOF Clerical Staff
Sheet 2 of 4

Continuous Responsibility/Activities (cont.)

Notes

NOTES:

IF individuals are only going to another room within the building or outside for a short period of time **THEN** it is not necessary to log them in and out each time they leave the EOF.

- B. Maintain an EOF Check Point Sign in Log, Form EP-14 complete with names of all personnel within the EOF.
- C. **IF** personnel had entered EOF without signing in prior to Registration Station being staffed **THEN:** request the Admin & Logistics Manager to assign someone to go around and have ERO members complete sign in log.

2.2 Process Plant Status Data

- A. **IF** the Emergency Data Display System (EDDS), Safety Parameters Display System (SPDS) or the Plant Information Computer System (PICS) is operating **THEN** perform the following:
1. Obtain computer printout of Forms 42a Unit 2 (31a Unit 3), 42b Unit 2 (31c Unit 3) and 42c Unit 2 (31b Unit 3) trend data screens every 15 minutes.
 2. Make and distribute copies of the updated forms to State and County representatives located upstairs in the EOF and two copies to the ED Technical Advisor.
 3. Telecopy forms to the following locations
 - State
 - County EOCs
 - JNC
- B. **IF** the Emergency Data Display System (EDDS) and/or Safety Display Parameter System (SPDS) or the Plant Information Computer System (PICS) is **NOT** operating **THEN** perform the following:
1. Inform the EOF Manager



Attachment 9.10
EOF Clerical Staff
Sheet 3 of 4

Continuous Responsibility/Activities (cont.)

Notes

2. Receive Forms 42a Unit 2 (31a Unit 3), 42b Unit 2 (31c Unit 3) and 42c Unit 2 (31b Unit 3) via telecopier from the affected Unit's TSC.
 3. Make and distribute copies of forms to EOF Staff, NRC, FEMA, State and County Representatives at the EOF.
 4. Telecopy forms (a, b & c) to the State and County EOCs and JNC.
- C. **IF** all of the following systems are **NOT** operating: EDDS, SPDS, Telecopiers and PICS Computer Terminals **THEN:**
1. Inform the EOF Manager that equipment necessary to obtain plant data in the EOF is not operating
 2. Call the TSC and obtain Forms 42a Unit 2 (31a Unit 3), 42b Unit 2 (31c Unit 3) and 42c Unit 2 (31b Unit 3).
 3. Distribute forms as specified in Step 2.2.B.3 above.

2.3 Process the NYS Radiological Emergency Data Form Parts I & II as follows:

- A. Receive form(s) from the Offsite Communicator, verifying that the form(s) are signed by the Emergency Director.
- B. Telecopy form(s) to NYS, Counties and JNC.
- C. Maintain Fax Report (printed from fax machine) as record.
- D. Make and distribute copies of form to NRC, FEMA, State and County representatives in the EOF.
- E. Return original form and 2 copies to Offsite Communicator.





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EOF Clerical Staff
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Continuous Responsibility/Activities (cont.)

Notes

2.4 Receive and distribute telecopies from outside sources as follows:

- A. Distribute to addressee if known.
- B. For any document containing radiological data distribute copies to Offsite Radiological Manager, FEMA, State and County representatives in the EOF.
- C. Maintain copies of all telecopies.

2.5 Copy Chronology Easel Pad as follows:

- A. Receive completed easel pad from EOF Technical Advisor.
- B. Transcribe the information from the easel pad and give transcript to the EOF Technical Advisor.
- C. Tape or hang the easel pad to the wall between the upper and lower levels of the EOF.

2.6 Perform accountability duty of the EOF as follows:

- A. Record the names of personnel stationed in the EOF.

3.0 Closeout Responsibility/Activities

Notes

3.1 Return all equipment to proper storage locations.

3.2 Review all documentation maintained during the emergency by the clerical staff to ensure it is complete and organized.

3.3 Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.11
Lead Offsite Liaison
Sheet 1 of 3

1.0 Initial Responsibility/Activities

Notes

1.1 Assume the position of Lead Offsite Liaison.



- A. Report to the Emergency Operations Facility (EOF)
- B. Sign in on the EOF staffing board and EOF Check Point Sign-In Log (Form EP-14)
- C. Obtain a briefing from the Emergency director

NOTE:

All Technical Liaisons may not be present when you assume your position. The State EOC is located in Albany and it may take 2 hours or more for individual to arrive.

D. Establish communications with State and County Technical Liaisons and ensure all liaisons are in place:

- 1. Using wireless phone located in the upstairs State and County work area call into State and County Liaison Conference Bridge (Phone number and password are listed in the Emergency Telephone Directory)
- 2. Inform State and County Technical Liaisons (Located at the Emergency Operations Centers (EOCs) on bridged conference call) that you are assuming Lead Offsite Liaison, List each Technical Liaison here:

(a) State EOC: _____

(b) Westchester County _____

(c) Rockland County _____

(d) Putnam County _____

(e) Orange County _____

3. Re-assign extra State and County Liaisons at one location to another location if needed.

E. Greet and/or contact State and County Representative as they arrive at the EOF and have them sign in on EOF Visitor Board and have them complete and don a nametag.



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Attachment 9.11
Lead Offsite Liaison
Sheet 2 of 3

Initial Responsibility/Activities (cont.)

Notes

- 1.2 **IF** relieving another Lead Offsite Liaison **THEN** perform a formal turnover with the current Lead Offsite Liaison:
 - A. Review current emergency status and plant conditions
 - B. Obtain briefing from current Lead Offsite Liaison on the emergency and any actions that have been completed or are in progress. Use Turnover Sheet (Form EP-20) as a guide.
 - C. Obtain briefing from State and County Liaisons located in the EOCs
 - D. Have off-going liaison introduce you to representatives in EOF.

1.3 Inform the EOF Manager that you are now the Lead Offsite Liaison

2.0 Continuous Responsibility / Activities

Notes

2.1 Maintain a Log

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of Lead Offsite Liaison.
- C. Log significant communications, important details on information provided to Offsite Representative and EOC Liaisons.

2.2 Ensure EOC Liaison Staffing

- A. **IF** all State and County Technical Liaisons are not present in EOCs within two hours of EOF activation **THEN** attempt to fill positions.

2.3 Provide technical assistance to the EOF State and County Representatives and to the State and County Technical Liaisons located at the EOCs.

NOTES:

When answering questions from offsite representatives:

- DO NOT:**
- 1) Express any opinions regarding the events
 - 2) Question or "double guess" ED decisions
 - 3) Provide any prognosis or guesses of where the event may go

- A. Request copies (from EOF Clerical Staff) of notification and data forms received from the plant and clarify the data received.

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Lead Offsite Liaison
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Continuous Responsibility /Activities (cont.)

Notes

B. Keep updated on plant and emergency conditions:

1. The Essential Information Checklist (Form EP-9) (complete form or acquire completed form from the EOF Staff) may be used to provide consistent information to State and County Liaisons located at EOCs.
2. Receive update on plant conditions from the Emergency Director Briefings.

C. Answer questions and provide clarification as needed from the State and County Representatives (in the EOF) and State and County Liaisons regarding plant systems and operations, and how they relate to the current conditions.

D. Be prepared to brief offsite representatives on basis for decisions made by the Emergency Director.

E. Request the Emergency Director, EOF Manager, ORM and/or Technical Advisor to the ED assist in keeping the offsite representatives located in the EOF updated.

2.4 Keep the EOF Manager informed of actions being taken at State and County Emergency Operations Centers.

A. Report when EOCs are activated.

B. Report Protective Actions the State or Counties are implementing.

3.0 Closeout Responsibility/Activities

Notes

3.1 Collect all materials (or copies of materials) you provided to the State and County Representatives in the EOF.

3.2 Review all documentation maintained during the emergency by the Lead Offsite Liaisons to ensure it is complete and organized.

3.3 Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.12
State and County Liaison
Sheet 1 of 3

1.0 Initial Responsibility/Activities

Notes

1.1 Assume the position of State or County Liaison.



NOTE:

IF more than one liaison arrives at an EOC **THEN** one individual should assume position and other individual(s) should stand by until all EOCs have been staffed and relief schedule established.

- A. Report to your assigned offsite Emergency Operations Center (EOC)
1. Show your Identification to EOC security and inform them of your purpose for being at the EOC.
 2. Inform the Emergency Operations Center Manager (title may vary for different EOCs) you have arrived.
 3. Contact Lead Offsite Liaison:
 - (a) Using wireless phone call into State and County Liaison Conference Bridge (Phone number and password are listed in the Emergency Telephone Directory)
 - (b) Inform the Lead Offsite Liaison of your arrival at the Emergency Operations Center and you are now the <location> Technical Liaison.
 4. **IF** the Lead Offsite Liaison is **NOT** available **THEN** contact the EOF Manager (via the Emergency Telephone Directory or Appendix C) and inform him/her of your arrival at <location>.
- B. **IF** relieving another State and County Liaison **THEN** perform a formal turnover with the current liaison:
1. Review current emergency status
 2. Obtain briefing from current State and County Technical Liaison on the emergency and any actions they have been completed or are in progress.
 3. Inform the Lead Offsite Liaison or EOF manager that you are now the State and County Liaison for _____ (location)
 4. Inform key members of the EOC staff you are now the liaison.



Attachment 9.12
State and County Liaison
Sheet 2 of 3

2.0 Continuous Responsibility/Activities

Notes

2.1 Maintain a Log

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of State or County Liaison
- C. Log significant communications, important details on information coming into the Emergency Operations Center.

2.2 Provide technical assistance to the Emergency Operations Center staff.

NOTE:

- DO NOT: Express any opinions regarding the events.
- DO NOT: Question or "second guess" ED decisions.
- DO NOT: Provide any prognosis or guesses of where the event may go.

- A. Request copies of notification and data forms received from the plant and clarify the data received.
- B. Use an Essential Information Checklist (Form EP-9) to document updates on emergency and plant conditions.
- C. Answer questions regarding plant systems and operations, and how they relate to the current conditions.
- D. Be prepared to brief EOC Staff on basis for decisions made by the Emergency Director.
- E. Be prepared to provide technical briefings to EOC staff regarding the sequence of events and the current plant status.
- F. Contact the Lead Offsite Liaison for clarification of any questionable or confusing data, or if any question of a "sensitive" nature has been posed.

2.3 Keep the Emergency Operations Facility informed of actions being taken at your assigned Emergency Operations Center.

- A. Inform the Lead Offsite Liaison of Protective Actions the State or Counties are implementing.

Attachment 9.12
State and County Liaison
Sheet 3 of 3

3.0 Closeout Responsibility/Activities

Notes

3.1 Collect all materials you provided to the EOC.

3.2 Review all documentation maintained during the emergency by the State and County Liaisons to ensure it is complete and organized.

3.3 Provide all logs and records to the Emergency Planning Manager upon termination of the emergency and entry into the Recovery Phase.



Attachment 9.13
EOF Equipment Operator
Sheet 1 of 7

1.0 Initial Responsibility/Activities

Notes

1.1 Assume the position of EOF Equipment Operator.



- A. Sign in on the Facility Sign-in Board and EOF Check Point Sign-In Log (Form EP-14).
- B. **IF** the EOF has not been previously activated **THEN** perform then assist EOF Staff in performing the following steps:
1. Start the EDDS computers (upstairs and downstairs) and ensure Forms 42A, 42B and 42C for U2 or Forms 31A, 31B and 31C for U3 are properly displayed on the overhead monitors.
 - (a) Start computer and turn on overhead monitors.
 - (b) Bypass network logon.
 - (c) Launch "Internet Explorer" from the windows desktop.
 - (d) From the "ProcessNet" screen select "logon" (no password required for guest logon).
 - (e) For U2, select EDDS for actual emergencies or EDDSIM for drill data. For U3, select CFMS for actual emergencies or Simulator for drill data.
 - (f) Select Historical "Form 42A (31A)" for monitor labeled Form 42A (31A).
 - (g) Adjust display-to-display entire form.
 - (h) Return to step 1 and repeat for Forms 42B (31C) and 42C (31B).
 - (i) Repeat for the EDDS terminal(s) located upstairs in the State and County work area.



Attachment 9.13
EOF Equipment Operator
Sheet 2 of 7

1.0 Initial Responsibility/Activities (cont)

Notes

2. **IF** not already started **THEN** Start Unit 2 PICS or Unit 3 SPDS:

(a) For U2 events, start the PICS computer in the EOF command room

(1) Turn on computer and monitor

(2) Log on to computer: User Name = "sds", Password = "sds:"

(3) Double click on "Plant PICS" icon (or "Simulator PICS" icon for drills.

(b) For Unit 3 events, start the SPDS computer in the EOF command room:

(1) POWERING UP SPDS:

(2) ENSURE the power is on for the RAMTEK (the display generator located under the Genicom printer), and the time display in the upper left hand corner of the PC screen is updating.

(3) ENSURE the power is on for the Terminal AND that the SECURITY/PRINTER screen (Page 101) is displayed. IF the screen is blank, THEN try adjusting the brightness control using the buttons found on the lower left side of the monitor.

(4) **IF** there is only a blank screen on the monitor, OR the date/time is frozen/wrong in the upper left corner of the screen, **THEN** do the following:

1. Reset the RAMTEK (the display generator located under the Genicom printer) as follows:

2. TURN the RAMTEK power switch (located on the upper right hand side of the display generator) OFF.

3. WAIT 15 seconds



Attachment 9.13
EOF Equipment Operator
Sheet 3 of 7

1.0 Initial Responsibility/Activities (cont)

Notes

4. TURN the RAMTEK power switch ON. The screen will start blinking immediately. Within one minute the screen should stop blinking and "INITIALIZING DISPLAYS" should appear in the middle of the screen. Approximately 4 1/2 minutes later, the SECURITY/PRINTER screen (Page 101) should appear.

(5) **IF** the above step does not power up the system, **THEN** contact the TSC (X 8710) and inform the CR.

1. LOGGING ON SPDS- Log-on as follows:

NOTE

Due to sticky keys, 2 or 3 attempts may be necessary.

a. EOF -Type EOF4, press RETURN

b. AEOF -For Level 4 logon, Type AEOF, press RETURN

OR

c. For Level 5 login, Type AEOF, press RETURN

2. ACCESSING AND USING SPDS

a. ENSURE power to screen printer (if equipped) (VGR 4000) is ON by pulling out power switch on the right side of the VGR case. Pull the drawer (on the left side of the case) completely out; the green copy light will come on.

b. ENSURE the Genicom printer is ON LINE (front right side light).

c. VERIFY that a primary or secondary printer light is blue (listed under the facility name in the right middle portion of the Terminal screen).



Attachment 9.13
EOF Equipment Operator
Sheet 4 of 7

1.0 Initial Responsibility/Activities (cont)

Notes

- d. GO to the Security/Printer screen
 - i. PRESS the PAGE key
 - ii. TYPE 101
 - iii. PRESS the EXEC key
 - e. **IF** the printer light is magenta in color, **THEN** do the following:
 - i. TYPE CP7 (EOF) or CP8 (AEOF).
 - ii. PRESS the ADDR key.
 - iii. TYPE 7 (EOF) or 8 (AEOF), and PRESS the VALUE ONE key.
 - iv. PRESS the EXEC key.
 - f. **IF** the printer is not available for output, **THEN** call Computer Services in the TSC (X 8710).
3. ACCESSING EP-FORMS #31A/#31B/#31C:
- a. TSC AND EOF: OBTAIN EP-Form #31a, "Plant Status Log (measurements)", EP-Form #31b, "Plant Status Log (rad. monitors)" and EP-Form #31c, "Plant Status Log (equipment)", as follows:
 - i. PRESS the DIALOGUE key.
 - ii. TYPE the Emergency Status function number, and press RETURN.
 - iii. (This entry selects Emergency Plant Status.)
 - iv. Optionally, TYPE a desired time interval for the report, then PRESS
 - v. the VALUE ONE key.
 - vi. Optionally, TYPE a different station number (on whose printer the



Attachment 9.13
EOF Equipment Operator
Sheet 5 of 7

1.0 Initial Responsibility/Activities (cont)

Notes

vii. report will print), then PRESS the VALUE TWO key.

viii. PRESS the EXEC key.

ix. (This entry selects EP-Forms #31a/b/c printout routine and they should begin to print.)

3. ACCESSING AND USING SPDS

OSC: TRANSMIT EP-Forms #31a "Plant Status Log (measurements)", EP-Form #31b, "Plant Status Log (rad. monitors)" and #31c, "Plant Status Log (equipment)" as follows:

(a) PRESS the DIALOGUE key.

(b) TYPE the Emergency Status function number and press RETURN.

(c) (This entry selects Emergency Plant Status.)

(d) TYPE desired time intervals in minutes (1-60).

(e) (Every 15 minutes is suggested.)

(f) PRESS the VALUE ONE key.

(g) PRESS the EXEC key.

(h) (This sets the automatic time interval for transmitting data.)

(i) STOP the automatic report output by pressing the STOP key.

(1) Print a page to Color and Black and white printers, to warm up printers and ensure print capabilities.

(j) Start the PICS computer in the NRC work area and set it up to display Forms 42A, 42B and 42C on the three monitors.

4. Start Unit 3 the SPDS computer in the EOF command room and ensure it properly prints to the printer.



Attachment 9.13
EOF Equipment Operator
Sheet 6 of 7

1.0 Initial Responsibility/Activities (cont)

Notes

- C. **IF** relieving another EOF Equipment Operator **THEN** perform a formal turnover with the current operator:
1. Review current emergency status
 2. Obtain briefing on the emergency and any actions the have been competed or are in progress.
 3. Inform the Admin & Logistics Manager that you are now the EOF Equipment Operator.

2.0 Continuous Responsibility/Activities

Notes

2.1 Maintain a Log

- A. Use Form EP-10, ERO Log Sheet to log information.
- B. Log when you assumed the duties of EOF Equipment Operator
- C. Log significant equipment problems identified and actions taken to correct these problems.

2.2 Maintain personal accountability

- A. Inform the Admin & Logistics Manager if you are leaving the EOF for any reason.

2.3 Assist EOF Staff with any computer problems, which may arise during the event.

- A. Provide Technical Support on operations of EOF computer systems
- B. Obtain additional resources (IT Support, more equipment, network access, etc.) as needed



Attachment 9.13
EOF Equipment Operator
Sheet 7 of 7

3.0 Closeout Responsibility/Activities

Notes

3.4 RESTORING THE FACILITY:

- A. ENSURE Security/Printers screen is in the sign-off mode.
- B. B. PUSH buttons on lower left side of the monitor to darken the screen brightness.
- C. C. THEN PRESS the STOP key.

3.5 LOGGING OFF SPDS:

- A. PRESS the PAGE key.
- B. TYPE 101.
- C. PRESS the EXEC key.
- D. D. WHEN the SECURITY/PRINTERS screen is displayed,

3.1 Return all EOF equipment to stand by.

3.2 Review all documentation maintained during the emergency by the EOF Equipment Operator to ensure it is complete and organized.

3.3 Provide all logs and records to the Admin & Logistics Manager upon termination of the emergency and entry into the Recovery Phase.

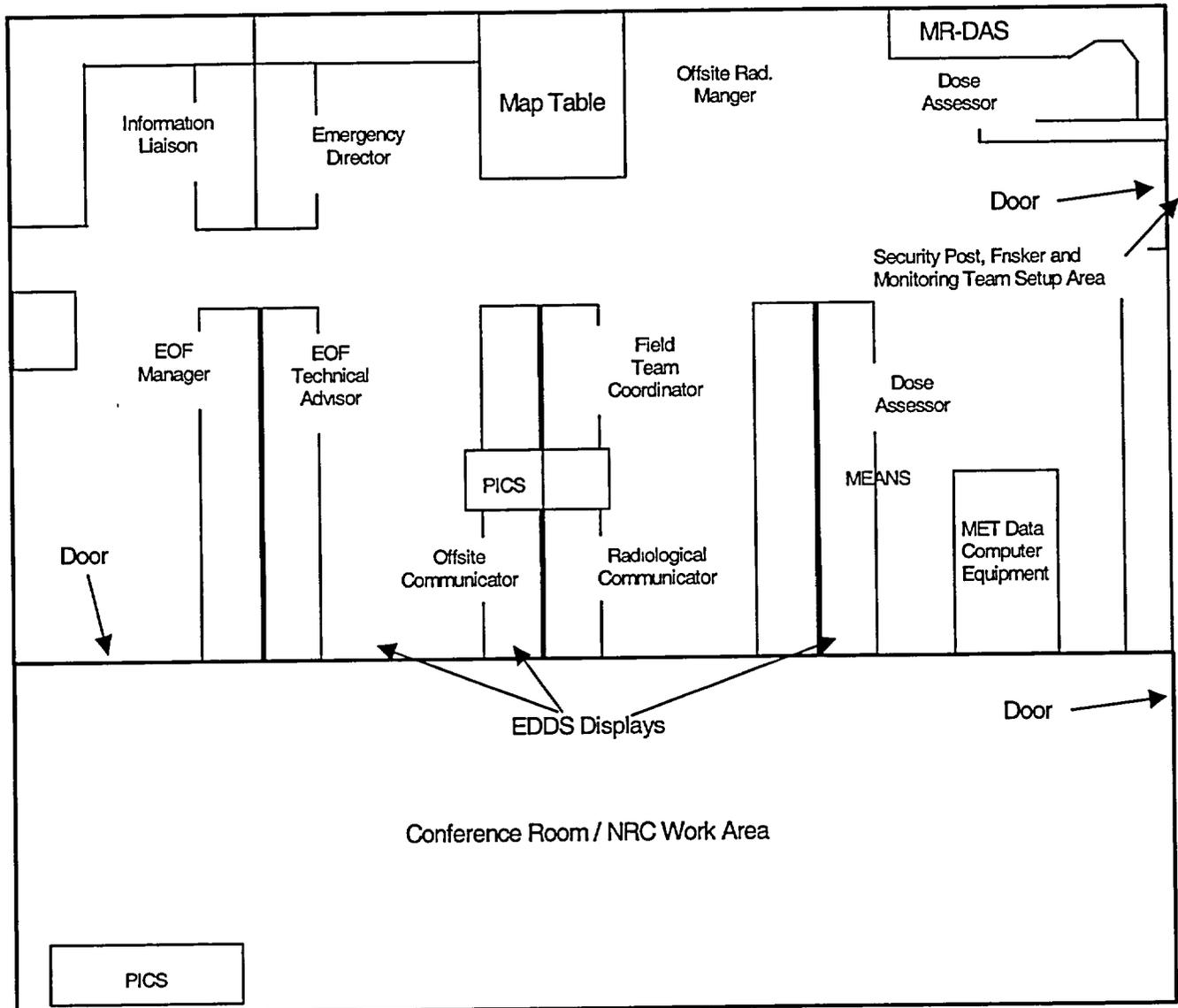


Attachment 9.14

EOF Layout

Sheet 1 of 2

Lower Level Work Area



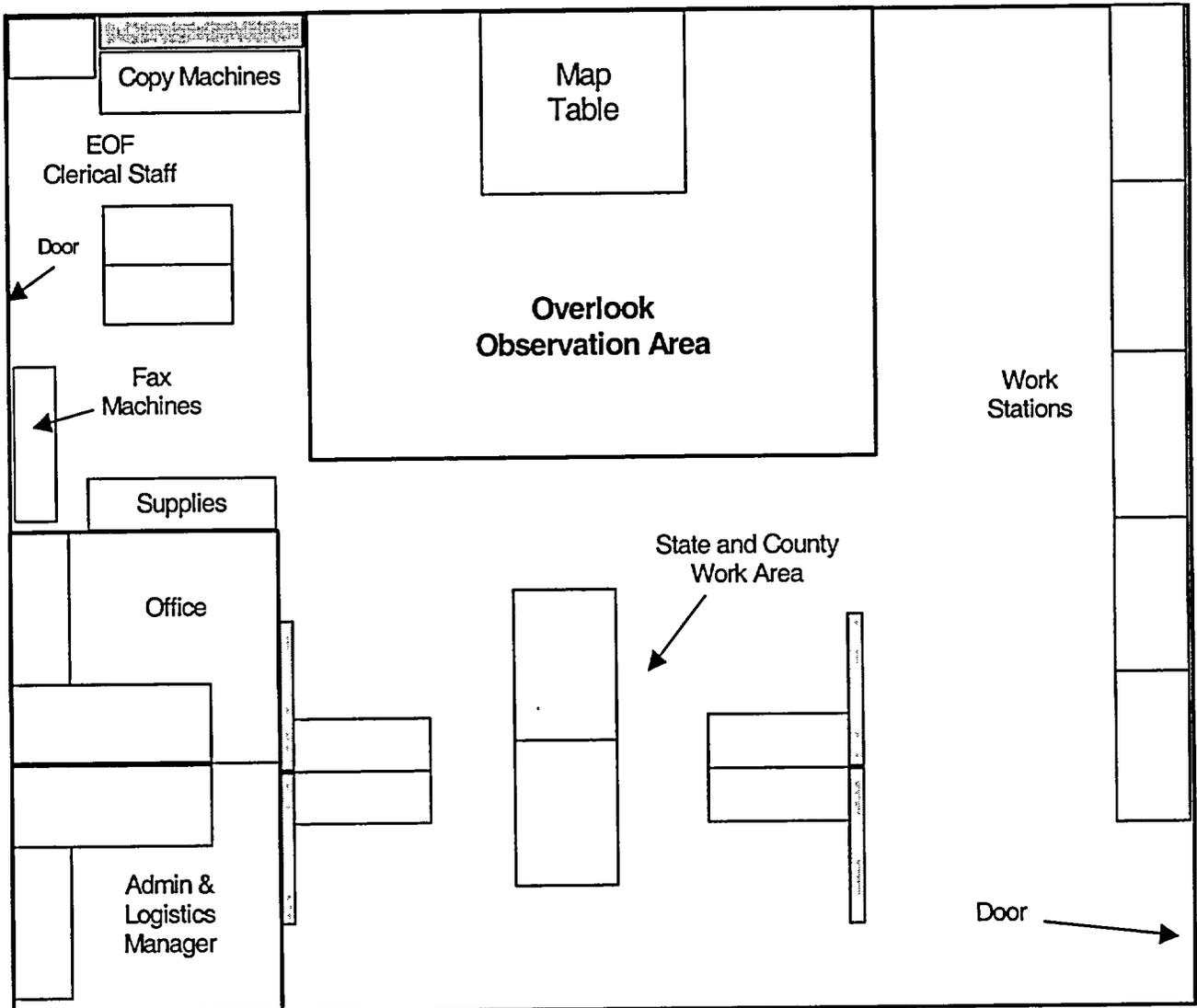


Attachment 9.14

EOF Layout

Sheet 2 of 2

Upper Level Work Area



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Attachment 9.15
Directions to Westchester Fire Training Center
Sheet 1 of 1

1. Route 9 South to Route 9A South
2. Take 9A South approximately 12 miles – past Westchester County Police Headquarters.
3. Stay on 9A to Dana Road (road past “Topps”)
4. Make a LEFT onto Dana Road.
5. Fire Training Center is 2nd driveway on RIGHT.



Entergy Nuclear Operations, Inc.
Indian Point 3 NPP
P.O. Box 308
Buchanan, NY 10511
Tel 914 736 8000

IP-EP-255 Rev. 2

IS VOID

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Modular Emergency Assessment & Notification System (MEANS)

1.0 PURPOSE

- 1.1 To describe the use of the Modular Emergency Assessment and Notification System (MEANS).
- 1.2 To describe administrative procedures used to update Emergency Action Level Computerized Information System (EALCIS) module data.

2.0 REFERENCES

- 2.1 MEANS Version 4.0 User Manual Indian Point Station, Operations Support Services, Inc.
- 2.2 IP-EP-320, Dose Assessment
- 2.3 IP-EP-410, Protective Action Recommendations
- 2.4 Unit 2 and Unit 3 Emergency Classification Procedures

3.0 DEFINITIONS

3.1 System Description and Terms

The MEANS computer program for the Indian Point 2 Station is a graphical software application designed to operate within the Microsoft Windows® environment. Application operation and system requirements are dictated by Microsoft Windows® protocols.

The MEANS program, when launched, presents the user with a command switchboard which allows operation and interaction among the three emergency planning notification, assessment and information applications:

- New York State Radiological Emergency Data Forms (INForms)
- Dose Assessment and Protective Action Recommendations (DAPAR)
- Emergency Action Level Computerized Information System (EALCIS)

In addition to furnishing a rapid mechanism for switching between the applications, MEANS provides the interface to save and import meteorological, dose projection and protective action recommendation information¹ and the EAL brief non-technical

¹ Dose projection and protective action recommendation data imported onto the emergency data forms is calculated by the DAPAR application in accordance with the methodologies of IP-EP-310 and IP-EP-410 respectively.

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descriptions onto the notification forms eliminating the need for redundant or additional data input. The interface flow diagram (figure 2-1) illustrates the basic application interactions.

This procedure contains detailed information for operating and understanding the MEANS Interface, the applications and the EALCIS administration application. It is not required nor intended to be used as a step-by-step instruction when using the MEANS interface however, the user must be familiar with basic computer operations within the Microsoft Windows® environment, dose assessment and protective action recommendations in order to operate the program effectively.

A brief description of the purpose and an illustration of each of the application's windows are provided by this procedure. Since users are not constrained to operating the application in any step order, a table is used to describe information and functions for the objects (such as buttons, fields and graphs) contained in MEANS. Information and functions include descriptions, options, units and limits as applicable.

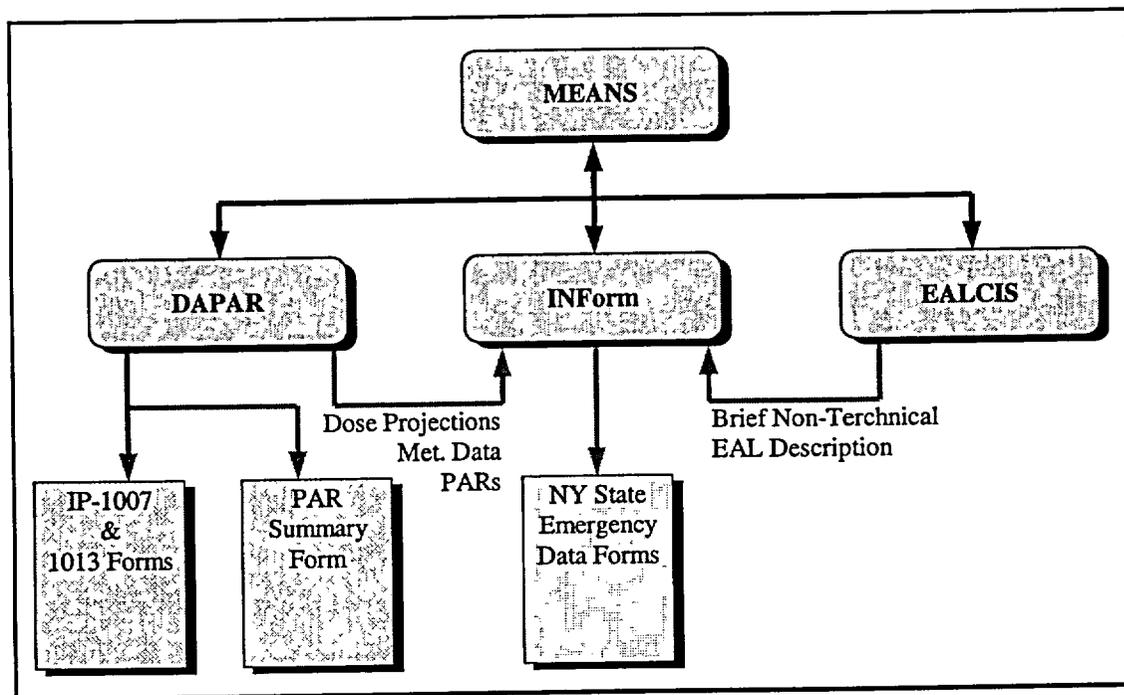


Figure 2-1: MEANS Interface Flow Diagram

A menu bar is provided to allow the user to quit the program from any point. Additionally, the application version and serial number can be obtained from the menu bar. A description of the function for each control is provided at the bottom of the application window (within the status bar) whenever the control has the focus.

The table in Attachment 9.6, MEANS Window Summary, provides details for most windows presented in the program.

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4.0 RESPONSIBILITIES

- 4.1 Individuals assigned to perform dose assessment or make offsite notifications during emergency will operate the MEANS program.
- 4.2 Personnel assigned to the Emergency Planning Department are responsible for performing administrative task to maintain the accuracy of the EAL portions of the MEANS program.

5.0 DETAILS

5.1 General MEANS Operations

- 5.1.1 Upon startup, the program opens to the MEANS interface (Main switchboard). The window directs program flow and provides for the sharing and transfer of information between the modules applications. Once an application's button is selected, the switchboard is hidden and the program module is opened for input. The user can return to the main switchboard by exiting the application. All of the user entered information is retained when switching between the applications.
- 5.1.2 Selecting the 'Emergency Data Forms' button opens the initial notification forms application to allows rapid completion of the New York State Radiological Emergency Data Forms, Parts 1 and 2.
- 5.1.3 Selecting the 'Dose Assessment and PARs' button opens the DAPAR application. Dose projection and assessment is performed from effluent information related to a monitored release and is based on the hand calculation methodologies of IP-EP-310, "Dose Assessment", and IP-EP-410, "Protective Action Recommendations". Up to seven multiple release points can be entered simultaneously during a single session.
- 5.1.4 The 'Emergency Action Levels' button opens an interactive database which provides the criteria, conditions, definitions, tables, references, and technical bases of the EALs.

5.2 Part I of the NYS Radiological Emergency Data Form

To complete Part I of the NYS Radiological Emergency Data Form go to Attachment 9.1, MEANS User Guide #1, NYS Radiological Emergency Data Form (Part I)

5.3 Part II of the NYS Radiological Emergency Data Form

To complete Part II of the NYS Radiological Emergency Data Form go to Attachment 9.2, MEANS User Guide #2, NYS Radiological Emergency Data Form (Part II)

5.4 Dose Assessment

To perform Dose Assessment and Protective Action Recommendations

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(DAPAR) go to Attachment 9. 3, User Guide #3, DAPAR

5.5 Review of Emergency Action Level Information

To use the Emergency Action Level Computerized Information System go to Attachment 9.4, Use of MEANS for EAL Information Functions.

5.6 System Administration

To perform administrative functions on the Emergency Action Level Computerized Information System go to Attachment 9.5, System Administration **NOTE:** Only authorized personnel shall make changes to EAL Data.

6.0 INTERFACES

6.1 IP-EP-310, Dose Assessment

6.2 IP-EP-410, Protective Action Recommendations

6.3 Unit 2 and Unit 3 Emergency Action Level Procedures

7.0 RECORDS

During actual emergencies calculations performed and reported to offsite authorities will be captured and maintained by the Emergency Planning Department.

8.0 REQUIREMENTS AND COMMITMENT CROSS-REFERNERCE

None

9.0 ATTACHMENTS

9.1 MEANS User Guide #1 NYS Radiological Emergency Data Form (Part I)

9.2 MEANS User Guide #2 NYS Radiological Emergency Data Form (Part II)

9.3 MEANS User Guide #3 DAPAR

9.4 Use of MEANS for EAL Information Functions

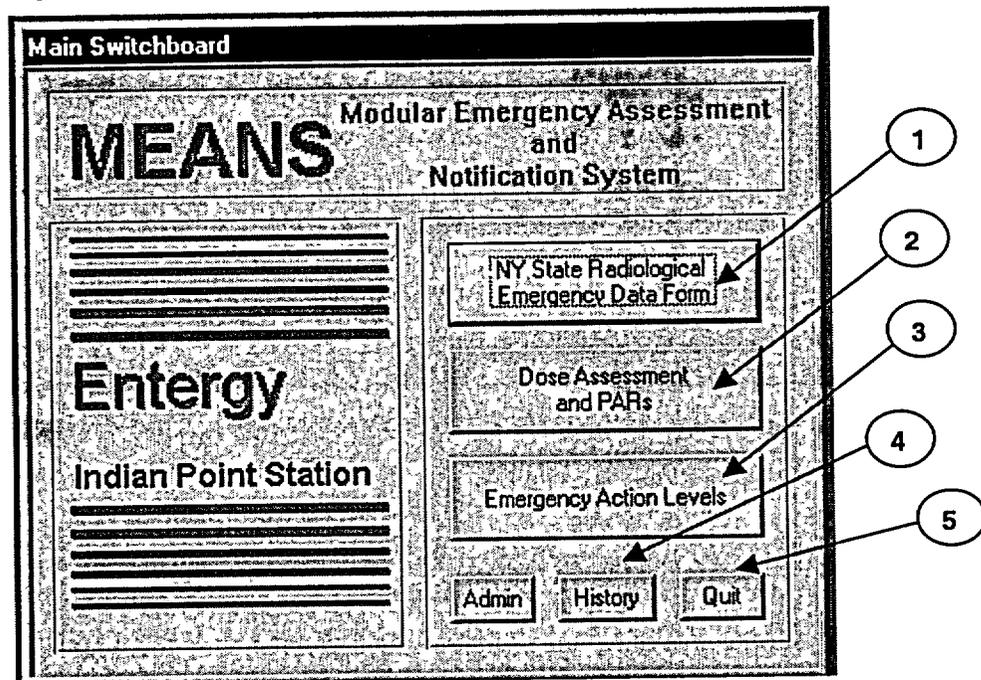
9.5 System Administration

9.6 MEANS Window Summary

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Attachment 9.1
MEANS User Guide #1
NYS Radiological Emergency Data Form (Part I)
 Sheet 1 of 5

- 1.0 IF the MEANS program is NOT running THEN start the MEANS program by one of the following:
 - 1.1 Double clicking icon on desktop
 - 1.2 Selecting MEANS from the start memo
 - 1.3 Locating MEANS program on the Drive "C".
- 2.0 The following window will open:



- 3.0 Description of Choices (buttons) on Main Switchboard:
 - 3.1 Button 1 – Opens up the NYS Radiological Emergency Data Form Input Screen. (INForm)
 - 3.2 Button 2 – Opens up DAPAR input screens to perform Dose Assessments.
 - 3.3 Button 3 – Opens up Database of Emergency Action Levels (EAL), which allows review of EAL Descriptions and Technical Basis.
 - 3.4 Button 4 – Opens up access to historical notification and dose assessment forms. Forms are stored when the "print/save" button is pressed from within the modules to print forms. (Note: Forms are only stored when "Print/Save is selected for options 1 &2) Copies of historical forms can be printed from this window.

Attachment 9.1
MEANS User Guide #1
NYS Radiological Emergency Data Form (Part I)
 Sheet 2 of 5

- 3.5 Button 5 -- Closes program.
- 3.6 The Admin button is used by Emergency Planning Staff to edit EAL information.

NOTE:

IF there is a radiological release in progress **THEN** go to DAPAR module first, perform dose assessments, export data and load data into NYS Radiological Emergency Data Forms.

4.0 Press **Button 1** and the following window will open:

5.0 To complete Part 1 of the NYS Notification Form perform the following steps:

NOTES:

Fields on the form can be selected with the mouse cursor or by tabbing between fields.

Pressing "Exit" will take you back to Main Switchboard keeping all information entered.

Pressing "Reset" will clear all fields to allow user to start over.

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Attachment 9.1
MEANS User Guide #1
NYS Radiological Emergency Data Form (Part I)
 Sheet 3 of 5

- 5.1 DO NOT enter a transmission time at this time. (This time should be entered by communicator when message is transmitted to offsite agencies.)
- 5.2 Select "*RECS*" or "*Other*" for method to be used to transmit data. Normally this will be via RECS.
- 5.3 Click on the drop down button in the "*This Is:*" field and select "*NOT and Exercise*" or "*An Exercise*"

NOTES:

If you choose an EAL # corresponding to a General Emergency, the program will automatically request entry of met data so that it can supply the default Protective Action Recommendations. It will also automatically select "*PARs Issued.*" The program will not allow you to choose PARs unless a General Emergency has been declared.

The program will automatically enter a "*Brief Event Description.*" This description may be reviewed and/or edited by selecting the "*Description*" tab at the top of the window.

- 5.4 Enter the EAL # (x.x.x) and press enter or tab. The program will choose the proper classification based on the EAL number entered. Verify that the proper classification and description was selected.
- 5.5 Enter the date and time the emergency was classified.
- 5.6 Click on the drop down button to enter the "*Reactor Status*" and if the reactor is shutdown, date and time it was shutdown.
- 5.7 Click on the drop down button to select "*Stable*", "*Improving*" or "*Degrading*" from the "*Conditions are:*" drop down button.
- 5.8 Click on the drop down button to select the proper release data from the "*Release Status:*" drop down button.

NOTES:

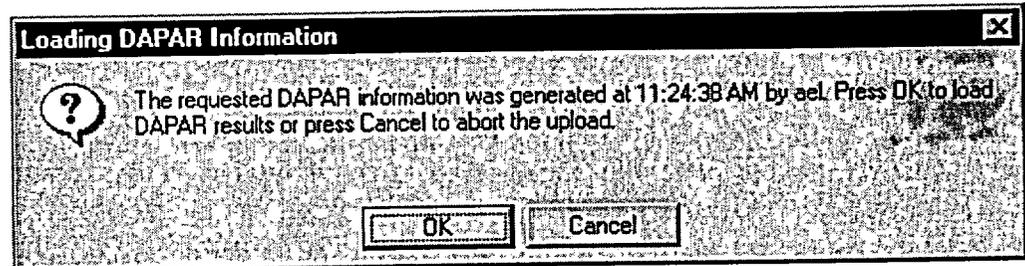
Met Data and Radiological Data may be imported from the DAPAR section of MEANS **ONLY** if a release to atmosphere is selected in the "Release Status" field and it has been previously been exported. See instructions for performing Dose Assessment on how data is exported.

The program will not allow issuing of a Protective Action Recommendation unless there is a General Emergency

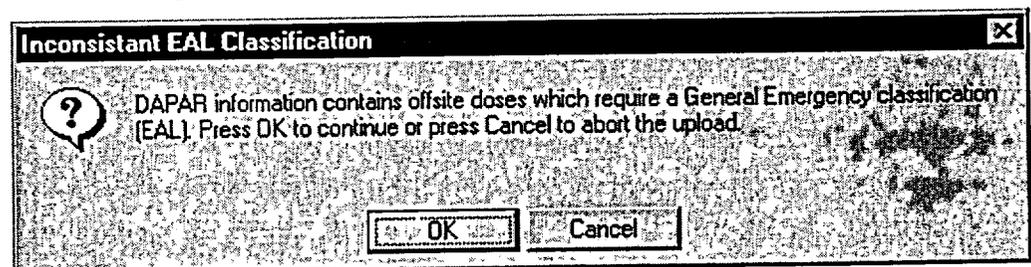
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Attachment 9.1
MEANS User Guide #1
NYS Radiological Emergency Data Form (Part I)
 Sheet 4 of 5

- 5.9 To import directly from the DAPAR module perform the following:
- 5.9.1 Data must be exported from DAPAR prior to importing it into Part II, see Attachment 3 for guidance on exporting data.
 - 5.9.2 Radiological Data cannot be imported UNLESS, "A release is selected on Part I of the form.
 - 5.9.3 IF the data has been exported AND a release has been selected THEN the "Load DAPAR" button will become active and pressing it will provide the following prompt:



- 5.9.4 Verify that the time matches data you wish to import and press "OK" to import data.
- 5.9.5 **IF** the DAPAR dose projections require a PAR **THEN** you will receive the following prompt:



- 5.10 **IF** there is no radiological release **THEN** Enter the wind speed, wind direction from, and the stability class into Met Data.

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Attachment 9.1
MEANS User Guide #1
NYS Radiological Emergency Data Form (Part I)
 Sheet 5 of 5

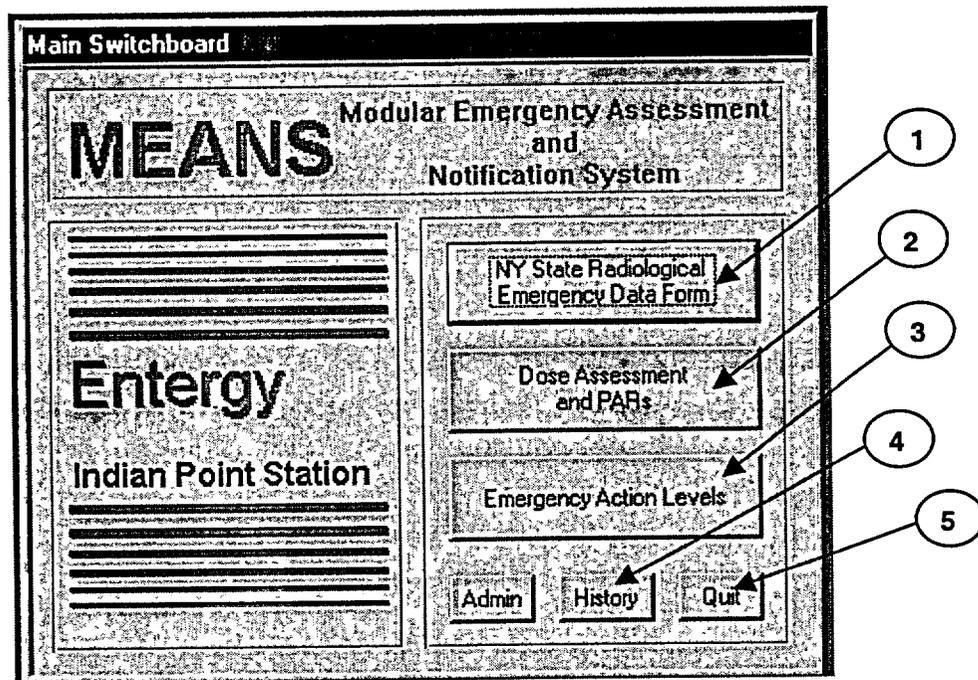
- 6.0 IF there is a need to change the description THEN select the "Description Tab" to open the following window:

- 7.0 Select the ERPAs in the Evacuate ERPAs section of the Part I window.
- 7.1 The program selects default ERPAS based on wind direction
- 7.2 If you import data from DAPAR program updates ERPAs in accordance with Dose Projections
- 7.3 Once a recommendation has been made to evaluate an ERPA that ERPA should always be included in updated recommendations.
- 8.0 Select the "Preview" button to see the completed form on-screen and verify data.
- 9.0 Select the "Print/Save" button to print the form and save it to the historical records.
- 10.0 To complete a periodic update notification form:
- 10.1 The information will remain as entered until the user edits fields or presses the "Reset" button.
- 10.2 Make any required changes to the information.
- 10.3 Preview and Print/Save.

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Attachment 9.2
MEANS User Guide #2
NYS Radiological Emergency Data Form (Part II)
 Sheet 1 of 5

- 1.0 IF the MEANS program is NOT running THEN start the MEANS program by one of the following:
 - 1.1 Double clicking icon on desktop
 - 1.2 Selecting Means from the start memo
 - 1.3 Locating Means program on the "C" Drive
- 2.0 The following window will open:



- 3.0 Description of Choices (buttons) on Main Switchboard:
 - 3.1 Button 1 – Opens up the NYS Radiological Emergency Data Form Input Screen. (INForm)
 - 3.2 Button 2 – Opens up DAPAR input screens to perform Dose Assessments.
 - 3.3 Button 3 – Opens up Database of Emergency Action Levels (EAL), which allows review of EAL Descriptions and Technical Basis.
 - 3.4 Opens up access to historical notification and dose assessment forms. Forms are stored when the "print/save" button is pressed from within the modules to print forms. Copies of historical forms can be printed from this window.

Attachment 9.2
MEANS User Guide #2
NYS Radiological Emergency Data Form (Part II)
 Sheet 2 of 5

- 3.5 Button 5 -- Closes program.
- 3.6 The Admin button is used by Emergency Planning Staff to edit EAL information.
- 4.0 Press **Button 1** and the following window will open:

- 5.0 Choose the "Part 2" tab at the top of the window and the following window will open:

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Attachment 9.2
MEANS User Guide #2
NYS Radiological Emergency Data Form (Part II)
 Sheet 3 of 5

6.0 To complete Part II of the NYS Notification Form perform the following steps:

NOTES:

Fields on the form can be selected with the mouse cursor or by tabbing between fields.
 Pressing **Exit** will take you back to Main Switchboard keeping all information entered.
 Pressing **Reset** will clear all fields

- 6.1 **DO NOT** enter a transmission time at this time. (This time should be entered by communicator when message is transmitted to offsite agencies.)
- 6.2 Select "**RECS**" or "**Other**" for method to be used to transmit data. Normally this will be via RECS.
- 6.3 Click on the drop down button  in the "**This Is:**" field and select "**NOT and Exercise**" or "**An Exercise**"
- 6.4 Enter Release Data:
 - 6.4.1 **IF** the Release Duration is known **THEN** enter known value
ELSE
 Use default value of **4 hours**.
 - 6.4.2 **IF** the release start and stop dates and times are known **THEN** enter these values
- 6.5 Choose the basis for the projected doses
 - 6.5.1 Inplant Measurements
 - 6.5.2 Field Measurements
 - 6.5.3 Assumed Source Term

NOTES:

Projected offsite doses may be entered manually or imported from the DAPAR module in MEANS

Before information can be imported from DAPAR the individual performing dose assessments must export the data from DAPAR.

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Attachment 9.2
MEANS User Guide #2
NYS Radiological Emergency Data Form (Part II)
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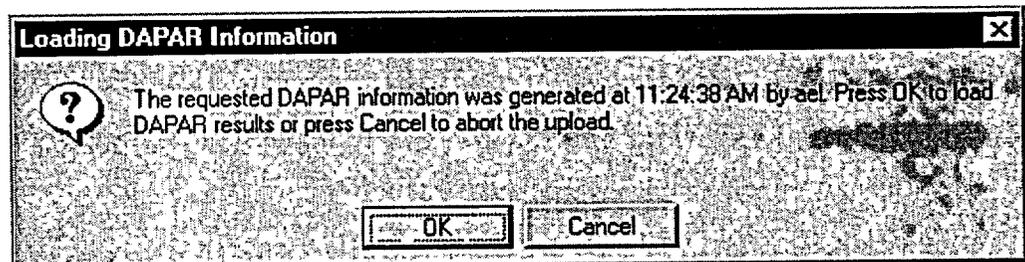
6.6 Enter “Dose (Rem)”

6.6.1 Doses may be entered manually.

OR

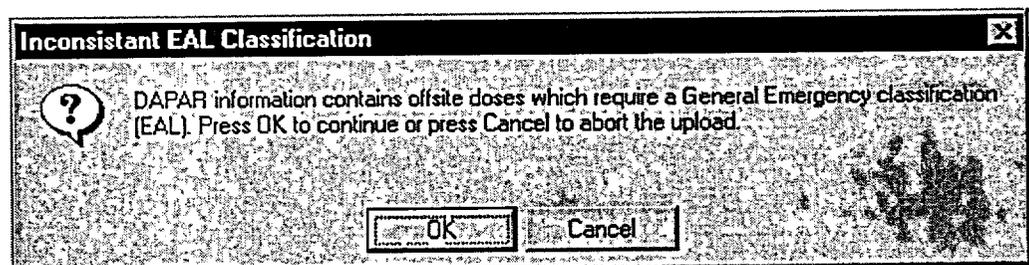
6.6.2 Imported directly from DAPAR module as follows:

- A. Data must be exported from DAPAR prior to importing it into Part II. See Attachment 9.3 for guidance on exporting data.
- B. Radiological data **CANNOT** be imported unless, a release is selected on Part I of the form.
- C. **IF** the data has been exported **AND** a release has been selected **THEN** the “Load DAPAR” button will become active. Pressing it will provide the following prompt:



D. Verify that the time matches the data you wish to import and press “OK” to import data.

E. **IF** the results of the DAPAR dose projections require a PAR (projected doses exceed PAGs) and a General Emergency has not been selected on Part I **THEN** you will receive the following prompt:



The program will not allow issuing of a Protective Action Recommendation unless there is a General Emergency

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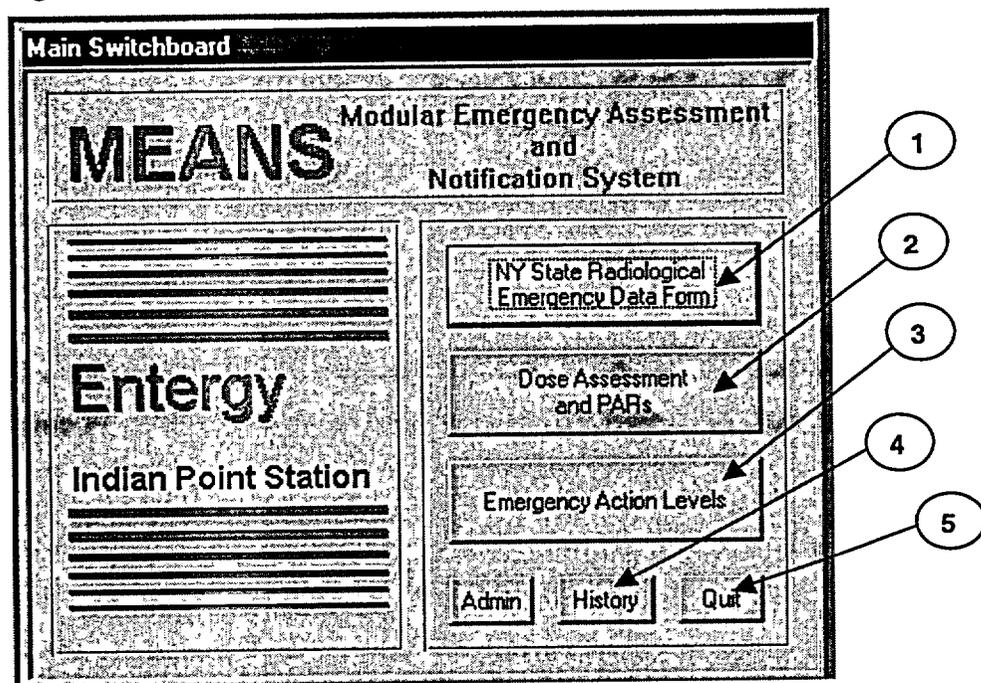
Attachment 9.2
MEANS User Guide #2
NYS Radiological Emergency Data Form (Part II)
 Sheet 5 of 5

- 6.7 Atmospheric data can only be entered if a "*Above or Below TS to Atmosphere*" is chosen on Part I
- 6.8 Waterborne data can only be entered if a "*Above or Below TS to Water*" is chosen on Part I
- 6.9 **IF** unmonitored release option is selected **THEN** DAPAR Data can not be loaded.

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Attachment 9.3
MEANS User Guide #3
Dose Assessment and Protective Action Recommendations
 Sheet 1 of 7

- 1.0 IF the MEANS program is NOT running THEN start the MEANS program by one of the following:
 - 1.1 Double clicking icon on desktop
 - 1.2 Selecting Means from the start memo
 - 1.3 Locating Means program on the "Public Drive (R) Drive" EPlan Folder.
- 2.0 The following window will open:



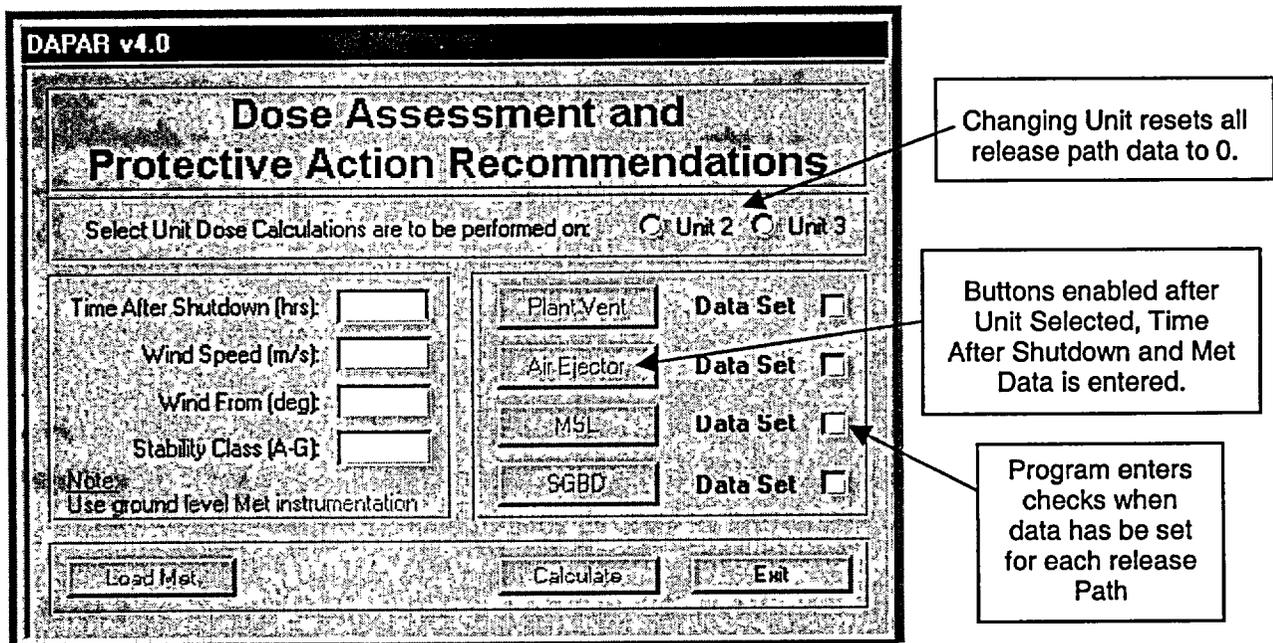
- 3.0 Description of Choices (buttons) on Main Switchboard:
 - 3.1 Button 1 – Opens up the NYS Radiological Emergency Data Form Input Screen (INForm).
 - 3.2 Button 2 – Opens up DAPAR input screens to perform Dose Assessments.
 - 3.3 Button 3 – Opens up Database of Emergency Action Levels (EAL), which allows review of EAL Descriptions and Technical Basis.
 - 3.4 Button 4 – Opens up access to historical notification and dose assessment forms. Forms are stored when the "print/save" button is pressed from within the modules to print forms. Copies of historical forms can be printed from this window.

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Dose Assessment and Protective Action Recommendations
 Sheet 2 of 7

3.5 Button 5 -- Closes program.

The Admin button is used by Emergency Planning Staff to edit EAL information.

4.0 Choose **Button 2** to open the Dose Assessment and Protective Action Recommendation” (DAPAR) module:



Notes:

The buttons to perform dose calculations will not become active until Unit, Met Data and Time after shutdown data is entered.

IF you “Load Met” data from Form I, after entering Time After Shutdown **THEN** tab to the Time After Shutdown field and re-enter time to activate buttons.

IF you have “Data Set” for more than one release path **THEN** the program will sum dose projections from each set of data. To clear “Set Data” press the cancel button in appropriate window.

5.0 Select affected Unit

6.0 Enter the reactor “Time After Shutdown (hrs):”

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7.0 Enter, "Wind Speed (m/s)", Wind Direction, "Wind From (deg):" and "Stability Class (A-G):"

OR

Press "Load Met" button to load meteorological data previously entered in NYS Radiological Emergency Data Form.

8.0 Select the button that matches the location of the release.

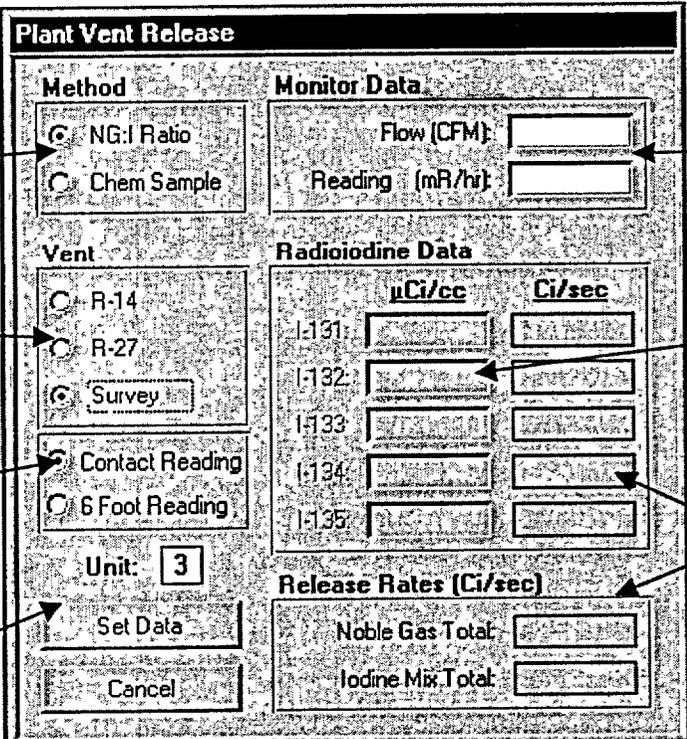
8.1 "Plant Vent" for R-44 (R-14 unit 3), R-27 or survey of release from plant vent.

8.2 "Air Ejector" for a release from the Air Ejector. (R-45)

8.3 "MSL" for a release from a SG or ruptured main steam line. (R-28, 29, 30, 31 or R-62A-D)

8.4 "SGBD" for a release from a Steam Generator Blowdown line. (R-49)

9.0 **IF** you choose "Plant Vent" **THEN** enter appropriate information in the following window:



Plant Vent Release

Method

NG:I Ratio
 Chem Sample

Monitor Data

Flow (CFM):
 Reading (mR/hr):

Vent

R-14
 R-27
 Survey

Radioiodine Data

	$\mu\text{Ci/cc}$	Ci/sec
I-131	<input type="text"/>	<input type="text"/>
I-132	<input type="text"/>	<input type="text"/>
I-133	<input type="text"/>	<input type="text"/>
I-134	<input type="text"/>	<input type="text"/>
I-135	<input type="text"/>	<input type="text"/>

Release Rates (Ci/sec)

Noble Gas Total:
 Iodine Mix Total:

Unit:

Callouts:

- Select default Noble Gas Ratio or "Chem Sample" if you have Radioiodine Data.
- Select the appropriate Monitor (monitor numbers for affected Plant will appear.)
- For Unit 3 only a Contact or 6 Ft reading may be used for plant vent survey.
- Enter Vent Flow Rate and Monitor Reading
- Enabled to enter iodine data when "Chem Sample" is selected
- Once data is entered "Set Data"

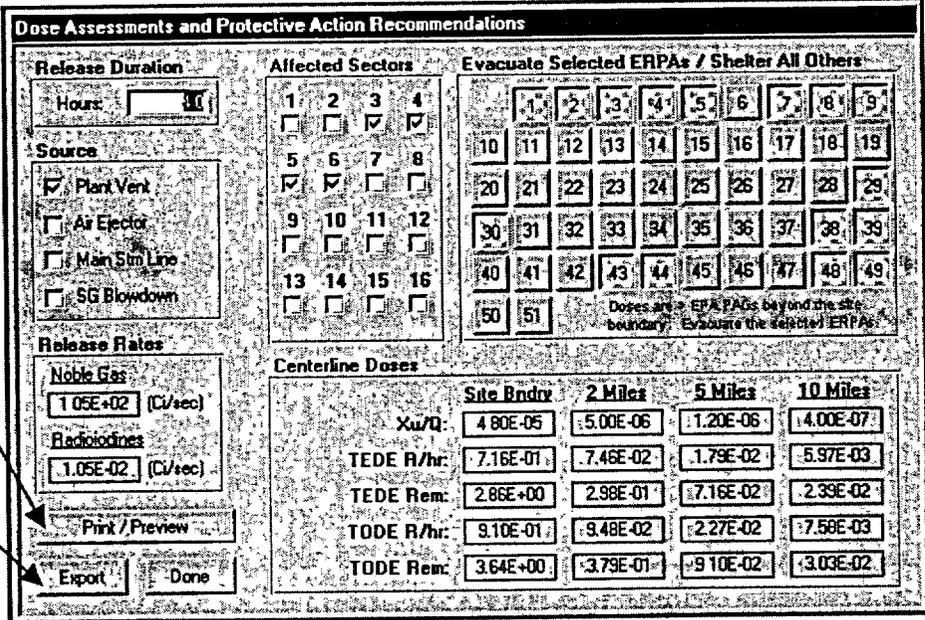
Program Calculates these Values

Unless R-27 is selected and Ci/Sec is known, then it may be entered as "Noble Gas Total"

9.1 Once Data is set for the plant vent the "Dose Assessment and Protective Action Recommendations" (see section 4.0) window will open again.

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Dose Assessment and Protective Action Recommendations
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9.2 Press the “Calculate” button to perform dose projection calculations. The following window will open:

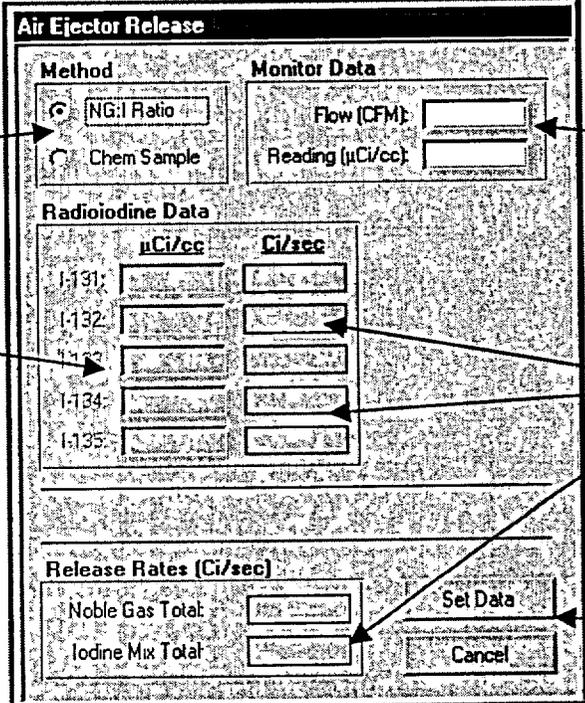


Press this button to Summary Form

Press this button to export data to NYS Forms

	Site Bndry	2 Miles	5 Miles	10 Miles
Xu/Q:	4.80E-05	5.00E-06	1.20E-06	4.00E-07
TEDE R/hr:	7.16E-01	7.46E-02	1.79E-02	5.97E-03
TEDE Rem:	2.86E+00	2.98E-01	7.16E-02	2.39E-02
TODD R/hr:	9.10E-01	9.48E-02	2.27E-02	7.56E-03
TODD Rem:	3.64E+00	3.79E-01	9.10E-02	3.03E-02

10.0 IF you choose “Air Ejector” THEN enter appropriate information in the following window:



1. Select default Noble Gas Ratio or “Chem Sample” if you have radioiodine data.

2. Enabled to enter data when “Chem Sample” is selected

3. Enter Air Ejector Leakage Rate and R-45 (u2) or R-15 (u3)

Program Calculates these Values

Once data is entered “Set Data”

	uCi/cc	Ci/sec
I-131:		
I-132:		
I-133:		
I-134:		
I-135:		



Attachment 9.3

MEANS User Guide #3

Dose Assessment and Protective Action Recommendations

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- 10.1 Once data is set for the air ejector release path the "Dose Assessment and Protective Action Recommendations" (see section 4.0) window will open again.
- 10.2 Press the "Calculate" button to perform dose projection calculations. The Dose Assessment and Protective Action Recommendations window shown in section 8.2 will open, press "Print / Preview" button to print data.

11.0 IF you choose "MSL" THEN enter appropriate information in the following window:

Select the monitor and enter data for each release path, multiple monitors may be chosen. (R62a-d for Unit 3)

11.1 When you press one of the monitor buttons the following window will open to enter release data for each Main Steam Line

1. Select default Noble Gas Ratio or "Chem Sample" if you have Radioiodine Data.

2. Enabled to enter data when "Chem Sample" is selected

3. Enter release Flow Rate and Monitor Reading
Default values listed.

Program Calculates these Values

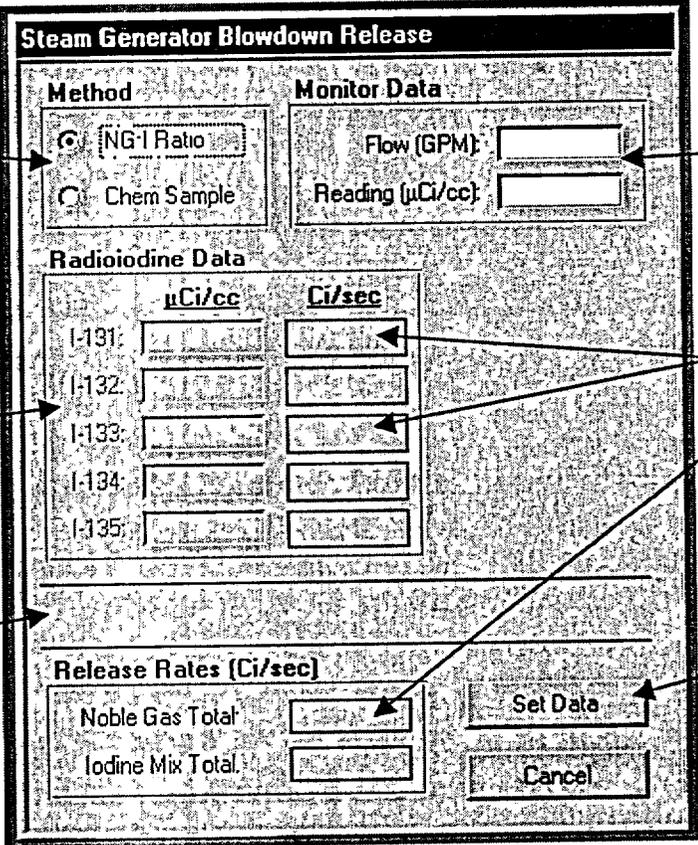
Once data is entered "Set Data"

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Dose Assessment and Protective Action Recommendations
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11.2 Once Data is set for the MSL the “Dose Assessment and Protective Action Recommendations” (see section 4.0) window will open again.

11.3 Press the “Calculate” button to perform dose projection calculations. The Dose Assessment and Protective Action Recommendations window shown under step 8.2 will open. Press “Print / Preview” button to print data.

12.0 IF you choose “SGBD” (Unit 2 Only) THEN enter appropriate information in the following window:



1. Select default Noble Gas Ratio or “Chem Sample” if you have Radioiodine Data.

2. Enabled to enter data when “Chem Sample” is selected

3. IF you wish to apply Particulate Dose Conversion Factors (i.e. refueling accidents)

4. Enter release flow rate and monitor reading

Program calculates these values

Once data is entered “Set Data”

12.1 Once data is set for the SGBD the “Dose Assessment and Protective Action Recommendations” (see section 4.0) window will open again.

12.2 Press the “Calculate” button to perform dose projection calculations. The Dose Assessment and Protective Action Recommendations window shown under step 8.2 will open. Press “Print / Preview” button to print data.

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13.0 Exporting Data

Note:

Transferring data between DAPAR and INForm is a two part process. First data is exported to memory to make it available for use, then it is imported into the notification forms as needed.

- 13.1 **AFTER** you have entered release path data and pressed calculate **THEN** press the “*Export*” button to save data for importing (*Load DAPAR*) into Part I and Part II or NYS Radiological Emergency Data Form.
- 13.2 Enter you initials into the Save Assessment Results box and click “*OK*”. The export button will remain sunken to indicate that the exported data is set.

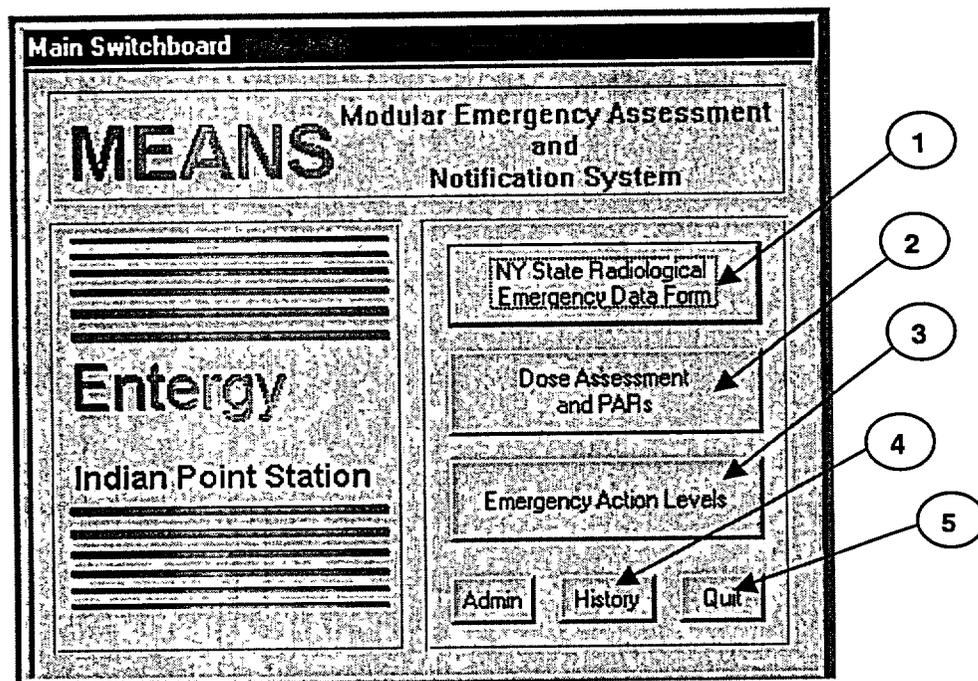
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Attachment 9.4

Use of MEANS for EAL Information Functions

Sheet 1 of 2

- 1.0 IF the MEANS program is NOT running THEN start the MEANS program by one of the following:
 - 1.1 Double clicking icon on desktop
 - 1.2 Selecting Means from the start memo
 - 1.3 Locating Means program on the "Public Drive (R) Drive" EPlan Folder.
- 2.0 The following window will open:



3.0 Description of Choices (buttons) on Main Switchboard:

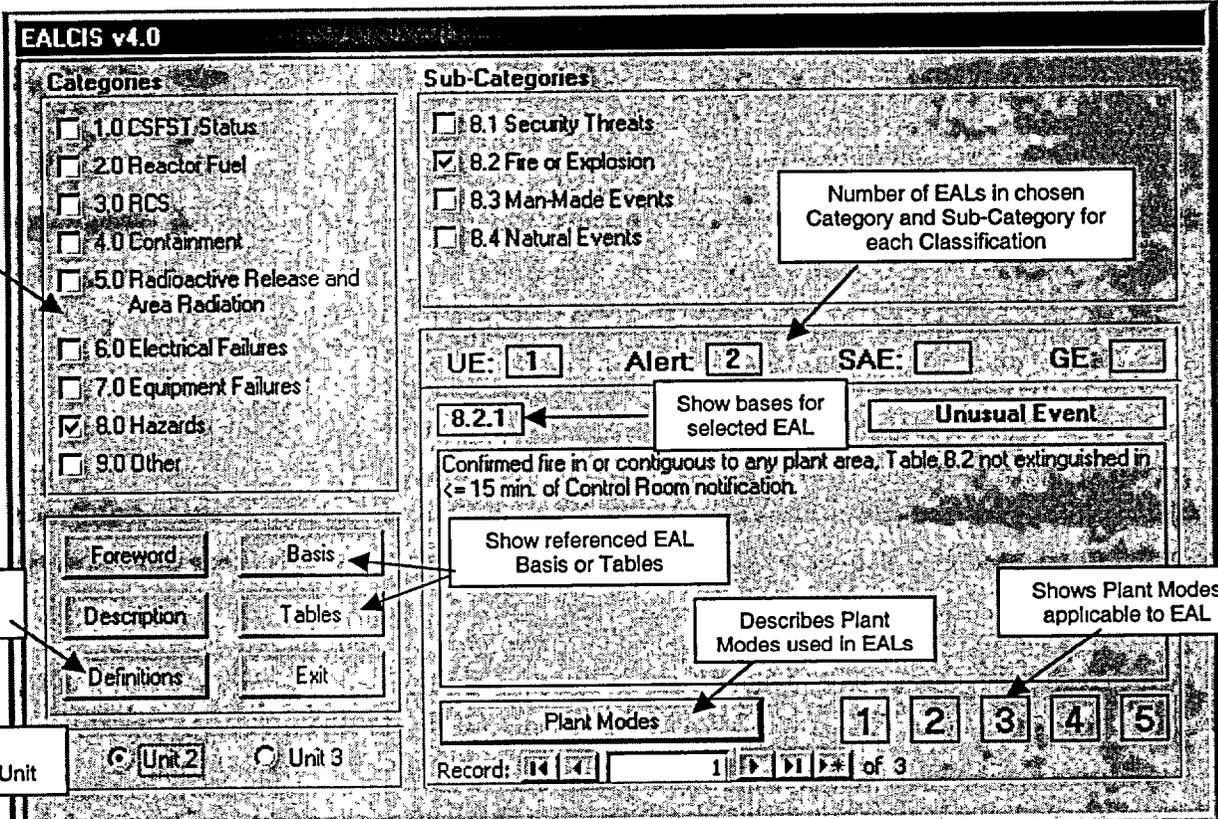
- 3.1 Button 1 – Opens up the NYS Radiological Emergency Data Form Input Screen (INForm).
- 3.2 Button 2 – Opens up DAPAR input screens to perform Dose Assessments.
- 3.3 Button 3 – Opens up Database of Emergency Action Levels (EAL), which allows review of EAL Descriptions and Technical Basis.
- 3.4 Button 4 – Opens up access to historical notification and dose assessment forms. Forms are stored when the "print/save" button is pressed from within the modules to print forms. Copies of historical forms can be printed from this window.

Attachment 9.4
Use of MEANS for EAL Information Functions
 Sheet 2 of 2

3.5 Button 5 -- Closes program.

The Admin button is used by Emergency Planning Staff to edit EAL information.

4.0 Choose **Button 3** to access the Emergency Action Level Information module:



The screenshot shows the EALCIS v4.0 interface with the following callout boxes:

- EAL Category Descriptions:** Points to the 'Categories' list on the left, which includes items like '1.0 CSFST Status', '2.0 Reactor Fuel', '3.0 RCS', '4.0 Containment', '5.0 Radioactive Release and Area Radiation', '6.0 Electrical Failures', '7.0 Equipment Failures', '8.0 Hazards' (checked), and '9.0 Other'.
- Definitions of EAL Terms:** Points to the 'Foreword', 'Description', and 'Definitions' buttons in the lower-left area.
- Choose Appropriate Unit:** Points to the 'Unit 2' and 'Unit 3' radio buttons at the bottom left.
- Number of EALs in chosen Category and Sub-Category for each Classification:** Points to the 'Sub-Categories' list on the right, which includes '8.1 Security Threats', '8.2 Fire or Explosion' (checked), '8.3 Man-Made Events', and '8.4 Natural Events'.
- Show bases for selected EAL:** Points to the '8.2.1' field in the 'Unusual Event' section.
- Show referenced EAL Basis or Tables:** Points to the 'Basis' and 'Tables' buttons in the lower-left area.
- Describes Plant Modes used in EALs:** Points to the 'Plant Modes' dropdown menu at the bottom.
- Shows Plant Modes applicable to EAL:** Points to the numbered buttons (1-5) at the bottom right.

5.0 Choose the EAL "Category" and "Sub Category" to select only those record of interest.

6.0 To locate the record desired, use the "Record" selection buttons to page through all EALs in a sub-category

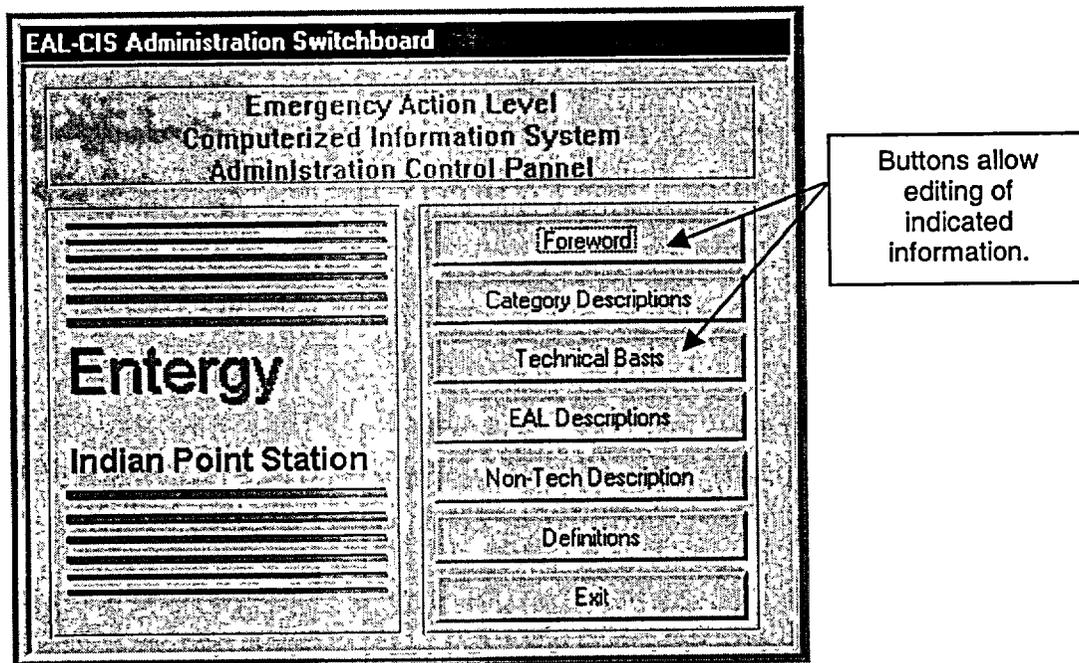
7.0 Press appropriate button as described above to obtain desired information about chosen EAL.

8.0 Press the "Exit" button to return to main switchboard.

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Attachment 9.5
System Administration
Sheet 1 of 1

- 1.0 IF the MEANS program is NOT running THEN start the MEANS program.
- 2.0 On the Main Switchboard select “Admin” to access administrative functions of program.
- 3.0 You will be ask to enter a password, enter the appropriate password and the following window will open:



- 4.0 Edit EAL information as necessary and exit administration controls.

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MEANS Windows Summary

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MEANS Program Information and Functions

Object Type Information or Functional Description

Main Switchboard

INForm	Command Button	Opens the New York State Radiological Emergency Data Forms application.
DAPAR	Command Button	Opens the Dose Assessment and Protective Action Recommendation application.
EALCIS	Command Button	Opens the Emergency Action Level Computerized Information System application.
Admin	Command Button	Opens the administration windows to allow changes to the EALCIS data tables. (This area is password protected)
History	Command Button	Opens the administration windows for historical application form printing and maintenance.
Quit	Command Button	Closes all applications, resets all data inputs, quits out of the MEANS interface and returns to the Windows desktop.

Non-Tab (appears on each tab) Emergency Data Forms

Transmission Date	Text Box	Date the form is transmitted to offsite authorities entered as MM/DD/YY . The system date is entered as a default value.
Transmission Time	Text Box	Time the form is transmitted to offsite authorities entered as HHMM .
Transmission Via	Option Button	Available selections are: <ul style="list-style-type: none"> • RECES • Other
This Is	List Box	Available selections are: <ul style="list-style-type: none"> • NOT an Exercise • An Exercise
Report Selector	Option Buttons	Available selections to set the preview or print commands are: <ul style="list-style-type: none"> • Part 1 • Part 2 • Both
Preview	Command Button	Opens a print preview window for the selected Part 1 and/or Part 2 report.
Print/Save	Command Button	Prints the selected Part 1 and/or Part 2 report and saves the data to the historical file.

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MEANS Windows Summary

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Load DAPAR	Command Button	Loads meteorological, dose assessment and protective action recommendation data. NOTE: The data must have been saved while running the DAPAR application AND a release to the atmosphere must be selected to enable this feature.
Reset	Command Button	Clears all the data and restores BOTH Emergency Data Forms to their initial startup default states.
Exit	Command Button	Closes the emergency data forms window and returns to the main switchboard.

Emergency Data Form -- Part 1 Tab

EAL #	Text Box	EAL number entered as X.X.X . Improper EAL numbers are not accepted. The classification will be automatically selected when an EAL is entered. Entry of an EAL number inconsistent with a previously selected classification will prompt for user direction. Entry of a General Emergency EAL will select the default PARs provided met data has been entered.
Declaration Date	Text Box	Date the event was declared entered as MM/DD/YY . The system date is entered as the default value.
Declaration Time	Text Box	Time the event was declared entered as HHMM .
Reactor Status	List Box	Available selections are: <ul style="list-style-type: none"> • Critical • Hot Shutdown • Cold Shutdown
Shutdown Date	Text Box	Date the reactor was shutdown entered as MM/DD/YY . This control is disabled until either the hot or cold shutdown status is selected.
Shutdown Time	Text Box	Time the event was declared entered as HHMM . This control is disabled until either the hot or cold shutdown status is selected.

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MEANS Windows Summary

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Conditions	List Box	Available selections are: <ul style="list-style-type: none"> • Stable • Improving • Degrading
Release Status	List Box	Available selections are: <ul style="list-style-type: none"> • No Release • Above TS to Atmosphere • Below TS to Atmosphere • Above TS to Water • Below TS to Atmosphere • Unmonitored NOTE: A release to the atmosphere must be selected to enable the Load DAPAR command button.
Speed	Text Box	Wind speed value between 0 - 45 m/sec. Wind speed is automatically entered when DAPAR data is loaded. Entering wind speed will select the default PARs provided the other met data has been entered and a General Emergency classification is selected.
Direction	Text Box	Wind direction entered as degrees from in the range of 000° to 360°. Wind direction is automatically entered when DAPAR data is loaded. Entering wind direction will select the default PARs provided the other met data has been entered and a General Emergency classification is selected.
Stability Class	Text Box	Pasquill category entered as A-G describing the applicable stability class. Stability class is automatically entered when DAPAR data is loaded. Entering stability class will select the default PARs provided the other met data has been entered and a General Emergency classification is selected.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Classification	Option Buttons	<p>Available selections are:</p> <ul style="list-style-type: none"> • Unusual Event Disables PARs • Alert Disables PARs • Site Area Emergency Disables PARs • General Emergency Enables PARs • Recovery Enables PARs • Emergency Terminated Disables PARs • Transport Enables PARs <p>The classification will be automatically selected when an EAL is entered.</p> <p>Selection of a General Emergency will set the default PARs provided met data has been entered.</p> <p>Selection of a classification inconsistent with an entered EAL number will prompt for user direction.</p>
PARs	Option Buttons	<p>Available selections are:</p> <ul style="list-style-type: none"> • Issued • Not Issued <p>Disabled and set at 'Not Issued' for UE, Alert, SAE and Termination.</p> <p>Disabled and set at 'Issued' for GE.</p> <p>Enabled for Recovery and a Transportation Incident.</p>
ERPAs	Toggle Buttons	<p>On or Off buttons for each ERPA.</p> <p>A depressed button is 'on' (indicating evacuate).</p> <p>Buttons are disabled unless a classification of GE, Recovery or Transportation Incident is selected.</p> <p>Default ERPAs are automatically selected whenever (1) a new General Emergency EAL is entered, (2) a General Emergency event is selected or (3) any met data field is updated.</p> <p>Changing a classification from a General Emergency will clear any selected ERPAs.</p>

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
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Emergency Data Form -- Description Tab

Description	Text Box	Provides an editable area for event information. Text for the brief non-technical description is automatically loaded whenever an EAL # has been entered.
--------------------	-----------------	--

Emergency Data Form -- Part 2 Tab

Duration	Text Box	Projected release duration entered as greater than 0 to 96 hours. The default value is four (4.00) hours. The release duration is automatically entered when DAPAR data is loaded.
Start Date	Text Box	Date the release of radioactive materials began entered as MM/DD/YY . The system date is entered as the default value.
Start Time	Text Box	Time the release of radioactive materials began entered as HHMM .
Finish Date	Text Box	Date the release of radioactive materials ended entered as MM/DD/YY .
Finish Time	Text Box	Time the release of radioactive materials ended entered as HHMM .
Bases	List Box	Available selections are: <ul style="list-style-type: none"> • In-Plant Measurements • Field Measurements • Assumed Source Term 'Assumed Source Term' is automatically selected when DAPAR data is loaded.
Xu/Q(s)	Text Boxes	Xu/Q values for Site Boundary, 2 miles, 5 miles and 10 miles downwind. Xu/Q values are automatically entered when DAPAR data is loaded.
TEDE(s)	Text Boxes	TEDE values for Site Boundary, 2 miles, 5 miles and 10 miles downwind. TEDE values are automatically entered when DAPAR data is loaded.
TODE(s)	Text Boxes	TODE values for Site Boundary, 2 miles, 5 miles and 10 miles downwind. TODE values are automatically entered when DAPAR data is loaded.
Noble Gas	Text Box	Noble Gas Release Rate for an airborne release in Ci/sec. The text box is enabled when an airborne release is chosen. The Noble Gas release rate is automatically entered when DAPAR data is loaded.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Iodine	Text Box	Radioiodine Release Rate for an airborne release in Ci/sec. The text box is enabled when an airborne release is chosen. The radioiodine release rate is automatically entered when DAPAR data is loaded.
Particulate	Text Box	Particulate Release Rate for an airborne release in Ci/sec. The text box is enabled when an airborne release is chosen.
Total	Text Box	Information only (non-editable). Gives the total airborne radioactive release rate in Ci/sec.
NG:I Ratio	List Box	Available selections are: <ul style="list-style-type: none"> • Assumed • Actual
Isotopes	Text Box	List of the primary isotopes identified or presumed to be in the release. Entries can be made beyond the length of the text box however, information printed on the report will be limited by the amount of space provided on the form itself.
Volume	Text Box	Volume of radioactive liquid for a waterborne release in gallons. The text box is enabled when a waterborne release is chosen.
Concentration	Text Box	Concentration of gross radioactivity of the liquid for a waterborne release in $\mu\text{Ci/cc}$. The text box is enabled when a waterborne release is chosen.
Total	Text Box	Information only (non-editable). Gives the total waterborne radioactive release in Curies.

Emergency Data Form -- Field Data Tab

Vector	Text Box	Location of the radiological sample or survey in reference to the plant. Entered as distance from plant in miles and direction from plant as sector or degrees (miles/sector or miles/degrees).
Location	Text Box	Brief physical description of the radiological sample or survey location.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Time	Text Boxes	Time the radiological survey or sample was performed entered as HHMM.
Reading	Text Boxes	Value of the radiological survey or sample reading.
Units	Option Buttons	Available selections are: <ul style="list-style-type: none"> mR/hr µCi/cm²

DAPAR -- Main Data

Time After S/D	Text Box	Time since reactor shutdown from 0 to 270 hours. Zero is used to indicate the reactor is still critical.
Wind Speed	Text Box	Wind speed value between 0 - 45 m/sec. Wind speed is automatically entered when Load Met data is selected.
Wind Direction	Text Box	Wind direction entered as degrees from in the range of 000° to 360° . Wind direction is automatically entered when Load Met data is selected.
Stability	Text Box	Pasquill category entered as A-G describing the applicable stability class. Stability is automatically entered when Load Met data is selected.
Unit	Option Buttons	Choose the affected Unit to ensure proper constants and conversion factors are used to calculate Release Rate.
Plant Vent	Command Button	Opens the plant vent release data window. Disabled until the meteorological information has been entered.
Air Ejector	Command Button	Opens the air ejector release data window. Disabled until the meteorological information has been entered.
MSL	Command Button	Opens the main steam line master data window. Disabled until the meteorological information has been entered.
SGBD	Command Button	Opens the steam generator blow down release data window. Disabled until the meteorological information has been entered.
Data Set(s)	Check Box	Information only (non-editable). A checked box indicates data has been entered for the applicable release point. The check box is cleared when Cancel is selected from the release point's data entry window.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Calculate	Command Button	Calculates dose and determines PARs. Opens the dose rate data window. Disabled until meteorology and at least one release point have been entered.
Exit	Command Button	Closes the DAPAR main data window and returns to the main switchboard. All entries and selections are retained until the MEANS application is exited (quit).

Release Point Data

Method	Option Button	Available selections are: <ul style="list-style-type: none"> • NG:I Ratio • Chem Sample Establishes the method for which the radioiodine concentration is determined. NG:I Ratio is the default selection.
Flow	Text Box	Effluent flow rate in: <ul style="list-style-type: none"> • CFM (cubic feet per minute for plant vent and air ejector) • Lbs/Hr (pounds per hour for main steam line) • GPM (gallons per minute for steam generator blow down)
Noble Gas Reading	Text Box	Monitor or sample reading in $\mu\text{Ci/cc}$ or survey results in mR/Hr.
Vent ²	Option Buttons	Available selections are: <ul style="list-style-type: none"> • R-44 / R-14 • R-27 • Survey • Sample Selecting the Survey option changes the reading prompt from $\mu\text{Ci/cc}$ to mR/Hr.

² The vent option buttons are only applicable to the plant vent monitored release point.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Isotopic Concentrations	Text Boxes	Monitor or sample reading in $\mu\text{Ci/cc}$ or survey results in mR/Hr . The text boxes are disabled until the Chem. Sample option button is selected. Data for any or all isotopes can be entered after the text box has been enabled.
Isotopic Release Rate	Text Boxes	Information only (non-editable). Shows the calculated isotopic radioiodine release rates based on the inputs for vent flow rate and isotopic concentrations when Chem. Sample is selected.
Noble Gas Release Rate	Text Box	Editable only when a R-27 vent release is selected, otherwise the field is for information only (non-editable). Shows the calculated Noble Gas release rate in Ci/sec based on the inputs for effluent flow rate and monitor reading or survey/sample results.
Total Iodine Release Rate	Text Box	Information only (non-editable). Shows the total radioiodine release rate based on the inputs for vent flow rate and method selected.
Set Data	Command Button	Accepts the information in the active release point data window and returns to the main data window.
Cancel	Command Button	Deletes any release data entered in the active window and returns to the DAPAR main data window.

MSL Summary Data

Monitor	Command Buttons	Closes the MSL master data window and opens the selected MSL release point data window.
Set	Check Box	Information only (non-editable). A checked box indicates data has been entered for the applicable release point. The check box is cleared when Cancel is selected from the release point's data entry window.
Release Rate	Text Boxes	Information only (non-editable). Indicates the total Noble Gas and radioiodine release rates in Ci/sec .
Set Data	Command Button	Accepts all of the entered MSL release data and returns to the main data window.
Cancel	Command Button	Deletes all of the entered MSL release data and returns to the main data window.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
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Dose Assessment and PAR Summary

Release Duration	Text Box	Projected release duration entered as greater than 0 to 96 hours. The default value is four (4.00) hours.
Source	Check Boxes	Information only (non-editable). Indicated the source term release point(s).
Affected Sectors	Check Boxes	Information only (non-editable). Describes the downwind sectors which are affected under the provided meteorological data.
ERPAs	Text Button	Information only (non-editable). Illustration of the ERPAs which meet the dose criteria for evacuation.
Release Rates	Text Boxes	Information only (non-editable). Indicates the total Noble Gas release rate and the amount of radioiodine released which is used to determine the TODE dose rates.
Dose Rates	Text Boxes	Information only (non-editable). Indicates the downwind Xu/Q, TEDE and TODE (in units of Rem/Hr) values.
Print/Preview	Command Button	Opens another window which allows printing a summary . NOTE: Only printing saves saves dose assessments in historical data.
Export	Command Button	Saves the meteorological, dose projection and protective action recommendation information for export to the radiological emergency data forms. The export button will automatically reset whenever any information is changed.
Done	Command Button	Closes the PAR summary window and returns to the main data window.

Reports Information and Functions

Report Type	Option Buttons	Available selections are: <ul style="list-style-type: none"> • Dose Assessment and PAR Summary • Dose Rate Assessments: Summary Form Affects the choices for the release points
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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Release Point	Option Buttons	Available selections are: <ul style="list-style-type: none"> • Plant Vent • MSL R-28 through R-31 (Unit 2) R-62a-d (Unit 3) • Air Ejector • SG Blowdown • All When Summary type is selected, individual release points can not be chosen.
Preview	Command Button	Opens a print preview window for the selected report type.
Print/Save	Command Button	Prints the selected report. Saves Historical Data
Done	Command Button	Closes the Reports window and returns to the DAPAR Summary window.

EAL Selection

Category	Option Buttons	Available selections are: <ol style="list-style-type: none"> 1.0 CSFST Status 2.0 Reactor Fuel 3.0 RCS 4.0 Containment 5.0 Radioactive Release and Area Radiation 6.0 Electrical Failures 7.0 Equipment Failures 8.0 Hazards 9.0 Other
Unit	Option Button	Chooses appropriate Unit to display data for.
Sub-Category	Option Buttons	The available selection depends on the selected category.
Classifications	Text Boxes	Information only (non-editable). Describes the number of event EALs for each classification level based on the selected sub-category.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
EAL #	Text Box	Information only (non-editable). Provides the EAL number of the current EAL record.
EAL Classification	Text Box	Information only (non-editable). Provides the classification level of the current EAL record.
Description	Text Box	Information only (non-editable). Provides the EAL description of the current EAL record.
Plant Modes	Command Button	Opens an information window which provides the definitions for each plant mode. This control is not visible until a category and sub-category have been selected.
Applicable Modes	Text Boxes	Information only (non-editable). Provides the applicable plant modes of the current EAL record.
EAL Area	N/A	Provides an area within the EAL selection window where individual EAL information is provided. Controls common to windows based applications within this area include: <ul style="list-style-type: none"> • <u>Navigation Buttons</u>: Allows navigation among records within the table. They include 'Go To First', 'Go To Previous', 'Go To Next' and 'Go To Last'. • <u>Record #</u>: A record number can be entered directly to go to the desired record. • <u>Of #</u>: Displays the number of records found to match the search criteria.
Foreword	Command Button	Opens a text window which allows scrolling through the foreword section of the EAL technical bases manual.
Description	Command Button	Opens a text window which allows scrolling through the discussion of the selected category. This control is disabled until a category has been selected.
Definitions	Command Button	Opens a window which provides a list box of definitions for key words and phrases of the EAL technical bases manual.
Basis	Command Button	Opens a window which allows for text and numeric searches of the EAL technical Bases.
Tables	Command Button	Opens a window which allows the display the tables and attachments associated with or referenced by the EALs.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Exit	Command Button	Closes the EALCIS window and returns to the MEANS interface. All entries and selections are retained until the interface itself is exited (quit).

Foreword

Text View Area	Vertical Scroll Bar	Allows for scrolling through the foreword. Enabled when the text area is selected by using a pointing device or the tab key.
OK	Command Button	Closes the foreword window and returns to the EAL selection window.

Category Description

Text View Area	Vertical Scroll Bar	Allows for scrolling through the description. Enabled when the text area is selected by using a pointing device or the tab key.
OK	Command Button	Closes the category description window and returns to the EAL selection window.

Definitions

Word List	List Box	Allows selection of the desired word or phrase by: <ul style="list-style-type: none"> • Direct selection from the drop-down list • Typing directly into the text area of the list box.
OK	Command Button	Closes the definitions window and returns to the EAL selection window.

EAL Basis

EAL Number	Text Box	Search criteria based on a desired EAL number or portion. Entry can consist of a category, subcategory or individual EAL number. Can be utilized alone or with text criteria.
Text	Text Box	Search criteria based on a desired text string. Can be utilized alone or with EAL Number criteria.
Search	Command Button	Conducts the record search based on the provided EAL number and text criteria.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Done	Command Button	Closes the EAL Basis window and returns to the EAL selection window.
Search Results Area	N/A	<p>Provides an area within the EAL Basis window where search results can be viewed.</p> <p>Controls common to windows based applications within the search area include:</p> <ul style="list-style-type: none"> • <u>Navigation Buttons</u>: Allows navigation among records within the table. They include 'Go To First', 'Go To Previous', 'Go To Next' and 'Go To Last'. • <u>Record #</u>: A record number can be entered directly to go to the desired record. • <u>Of #</u>: Displays the number of records found to match the search criteria. • <u>Vertical Scroll Bar</u>: Allows scrolling through the record when the text extends beyond the length of the viewing area.

EAL Tables

Table Buttons	Command Buttons	<p>Available selections are:</p> <ul style="list-style-type: none"> • Table 4.1 • Table 4.2 • Table 4.3 • Table 5.1 • Table 5.2 • Table 5.3 • Table 8.2 • Attachment A
OK	Command Button	Closes the tables window and returns to the EAL selection window.

Admin. Main Switchboard

Object	Type	Information or Functional Description
Foreword	Command Button	Opens a text window which allows editing of the foreword section of the EAL technical bases manual.
Category Description	Command Button	Opens a text window which allows editing of the category descriptions.
Technical Basis	Command Button	Opens a window which allows for text and numeric searches and editing of the EAL technical Bases.
Non-Technical Description	Command Button	Opens a window which allows for text and numeric searches and editing of the EAL non-technical descriptions.

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MEANS Program Information and Functions

Object	Type	Information or Functional Description
Definitions	Command Button	Opens a text window which allows the editing and addition of definitions for key words and phrases of the EAL technical bases manual.
Exit	Command Button	Closes the application and returns to the MEANS main switchboard.