

November 15, 2002

10 CFR 50, Appendix E  
Section V

US Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**MONTICELLO NUCLEAR GENERATING PLANT**  
Docket No. 50-263 License No. DPR-22

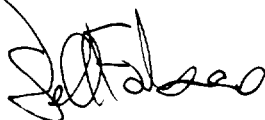
**Emergency Plan Implementing Procedures**

Furnished with this letter is a revision to the Monticello Nuclear Generating Plant Emergency Plan Implementing Procedures. The following procedures are revised:

<u><b>Procedure</b></u>	<u><b>Procedure Title</b></u>	<u><b>Revision</b></u>
A.2-101	Classification of Emergencies	29
A.2-106	Activation and Operation of the TSC	21
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A.2-810	Transfer to the Backup EOF	3

Please post changes in your copy of the Monticello Nuclear Generating Plant Emergency Plan Implementing Procedures. Superseded procedures should be destroyed. These revisions do not reduce the effectiveness of the Monticello Nuclear Generating Plant Emergency Plan.

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## 1.0 PURPOSE

This procedure specifies conditions or groups of conditions that indicate an emergency exists and the actions to be taken by Operations personnel to verify and classify the type of emergency condition.

## 2.0 APPLICABILITY

- 2.1 An off-normal condition corresponding to one of the initiating events described in FIGURE 7.2 (Emergency Classification Guidelines) of this procedure is occurring or has occurred.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

- 3.1 The Emergency Director (TSC) is responsible for:

- 3.1.1 Direction of overall site emergency response in accordance with A.2-213 (RESPONSIBILITIES OF THE EMERGENCY DIRECTOR).
- 3.1.2 Emergency classification, declaration and notification in accordance with Section 6.1.1.
- 3.1.3 Event termination or recovery in accordance with A.2-602 (EVENT TERMINATION OR RECOVERY).

- 3.2 The Duty Shift Manager (Interim Emergency Director) is responsible for the following until relieved by a designated Emergency Director:

- 3.2.1 Direction of overall site emergency response and assuming the responsibilities of Emergency Director.
- 3.2.2 Emergency classification, declaration and notification in accordance with Section 6.1.2.
- 3.2.3 Implementing the EPIP which corresponds to the declared emergency.
- 3.2.4 Event termination or recovery in accordance with A.2-602 (EVENT TERMINATION OR RECOVERY).

- 3.3 The Duty Shift Supervisor and Control Room Operators are responsible for:

- 3.3.1 Immediate notification of the Duty Shift Manager of any events that may be classified as emergency conditions.
- 3.3.2 Verification of emergency condition indications.
- 3.3.3 Assisting with assessment and determination of emergency classification.
- 3.3.4 Taking immediate actions in accordance with plant procedures and directives to control the event and place the plant in a stable condition.

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3.4 The Shift Emergency Communicator is responsible for:

3.4.1 The performance of emergency notifications and communications in accordance with plant procedures and directives.

#### 4.0 DISCUSSION

4.1 Three distinct phases in the Emergency Classification, Declaration and Notification process

4.1.1 During the implementation of this procedure, the Emergency Director must consider the three distinct phases in the Emergency Classification, Declaration and Notification process.

- A. **Classification:** The act of **assessing** the EALs to determine the appropriate classification which the ongoing events are categorized. This may take a reasonable length of time (5 to 15 minutes for most situations) depending upon the complexity of the situation. This 15 minute assessment period is consistent with the NRC Branch Position on Timeliness of Classification of Emergency Conditions, EPPOS No. 2.
- B. **Declaration:** The act of formally **declaring** the classification based on the assessment of EALs. This is the point at which the classification time is set and the 10CFR50, App. E 15 minute off-site notification clock starts.
- C. **Notification:** The act of **making the notification(s)** to the State, Wright and Sherburne Counties, NRC, etc.

4.2 Definitions

4.2.1 Emergency Condition - An occurrence, or combination of events and indications that fall into one of the following classifications:

A. Notification of Unusual Event (NUE)

Unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.

B. Alert

Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.



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C. Site Area Emergency

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary.

D. General Emergency

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels off-site.

4.2.2 Emergency Action Levels (EAL) - Numerical or qualitative values for the operational or radiological parameters, (radiological dose rates; water borne or surface deposited concentrations of radioactivity; specific instrument indications or changes in indications) used as thresholds for initiating procedures or actions to assess and verify plant conditions. EAL may require initiating specific emergency procedures as designated by a particular class of emergency.

4.2.3 Gap (Gap Release) - The radioactive material released from the fuel pellets during normal operation that is trapped in the fuel pin. If the pin fails (cladding fails), this material will be released from the gap into the reactor coolant.

4.3 Recognition

Attached to this procedure is FIGURE 7.2 (Emergency Classification Guidelines (1-30)). These guidelines identify the four emergency classifications, the possible initiating event(s), emergency action levels for each classification, and, where applicable, specific instruments and indications to be used to detect and classify an emergency. The identified instruments and alarms are a representative listing of various instruments that may be used to verify an emergency condition. There are many process variables referred to in the guidelines.

The instruments, indications, or alarms listed for any particular event are not necessarily a complete list of all those that will show abnormal indications or be useful in classifying the event. There is typically more than one instrument or instrument channel that monitors a specific parameter. The redundant channels and coincident indicators should be used to verify the emergency condition.

The emergency action levels specified in the guidelines do not necessitate initiation of any particular phase of the emergency plan but rather signify a need for assessment and classification of conditions. In many cases, the proper classification will be immediately apparent from in-plant instrumentation. In others, further assessment is necessary to determine the applicable emergency classification.

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The plant operating staff should consider the effect that combinations of initiating events have, that if taken individually would constitute a lower emergency classification but collectively may exceed the criteria for a higher classification.

#### 4.4 Technical Specification Shutdown

Limiting Conditions of Operation (LCOs) require the plant to be brought to a required shutdown mode when the Technical Specification required configuration cannot be restored. Depending on the circumstances, this may or may not be an emergency or precursor to a more severe condition. In any case, the initiation of plant shutdown required by the site Technical Specifications requires a one hour report under 10CFR50.72 (b) Non-Emergency Events. The plant is within its safety envelope when being shut down within the allowable action statement time in the Technical Specifications.

An immediate Notification of an Unusual Event is required when the plant is not brought to the required operating mode within the allowable action statement time in the Technical Specifications. **Declaration of an Unusual Event is based on the time at which the LCO-specified action statement time period elapses under the site Technical Specifications and is not related to how long a condition may have existed.** Other required Technical Specification shutdowns that involve precursors to more serious events such as Physical or Radiological Hazards, Fission Product Barrier Degradation, or Equipment Malfunction requires an immediate Notification of an Unusual Event.

#### 4.5 Rapidly Escalating and/or De-escalating Events

In the case of an event that rapidly escalates then de-escalates in emergency classification or is initiated at a higher emergency class then rapidly de-escalates, the initial off-site notifications **SHALL** indicate the current emergency classification. In addition to the current emergency class, the off-site authorities and NRC **SHALL** be informed of the highest emergency classification reached during the course of the event. This information should be included in the initial emergency notifications to the off-site authorities and NRC.

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#### 4.6 Late Discovery of a Classifiable Event or Condition

Late discovery of an event or condition which met the criteria for declaration of an emergency but no emergency had been declared and the basis for the emergency classification no longer exists at the time of discovery **SHALL** be reported to the NRC. This may be due to a rapidly concluded event or an oversight in the emergency classification made during the event or it may be determined during a post-event review. NRC notification (or an NRC update if the event was previously reported but misclassified) within one hour of the discovery of the undeclared (or misclassified) event **SHALL** be the reporting format (see 4 AWI-04.08.02 (10CFR50.72 AND 10CFR 73.71 IMMEDIATE NOTIFICATION)). Notification of state and local emergency response organizations **SHALL** also be considered. An actual declaration of the event is not necessary.

### 5.0 PRECAUTIONS

- 5.1 There are many indications of an emergency condition that may occur either individually, in group events or sequentially. The operator must be careful not to rely on any one indication as being absolutely indicative of an emergency condition. Although the operator should believe indications and take action based on those indications, they **SHALL** attempt to verify indications by checking secondary or coincident indicators. Continued surveillance and assessment of plant conditions is necessary to ensure that the emergency classification is appropriately revised as conditions change, or as more definitive information is obtained.

### 6.0 INSTRUCTIONS

#### 6.1 Emergency Classification, Declaration, and Notification

##### 6.1.1 Emergency Director (TSC) Instructions:

- A. Refer to A.2-213, Section 6.11 (Emergency Classification Changes).

##### 6.1.2 Duty Shift Manager (Interim Emergency Director) Instructions:

- A. **Classification** - When informed of plant parameters, radiological release levels or events which indicate that an emergency classification may be appropriate, evaluate the emergency classification.
1. Confirm that the indications have been verified using redundant or coincident indications.
  2. Refer to FIGURE 7.1 (List Of Initiating Conditions) and identify any guidelines applicable to the initiating condition.
  3. Locate the applicable guideline in FIGURE 7.2.

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4. If multiple events and/or indications are involved, classify the emergency based on the event (or indication) that results in the highest (most conservative) emergency classification.
5. Consider the effect that combinations of events have; that, if taken individually, would constitute a lower emergency classification but collectively may exceed the criteria for a higher classification.
6. Summon the Shift Emergency Communicator(s) to the Control Room via the Site PA system (Access #305).

**B. Declaration** - Declare the emergency class.

1. Announce the emergency classification in the Control Room.

**C. Notification** - in accordance with the appropriate Emergency Classification Checklist and Emergency Call-List (included in each emergency classification folder), notify the SEC to make the required notifications (i.e., State & Locals: 15 min., NRC: 1 hr., etc....)

1. Review the completed form(s) and sign the form(s) in the space provided.

**D. Implement the EPIP** which corresponds to the declared emergency classification and complete the appropriate emergency classification checklist.

## **6.2 Event Termination or Recovery**

- 6.2.1 Perform Event Termination or Recovery in accordance with A.2-602 (EVENT TERMINATION OR RECOVERY).

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## 7.0 FIGURES

### FIGURE

#### 7.1 List of Initiating Conditions

<u>Initiating Condition</u>	<u>Guideline</u>	<u>Page</u>
Radioactive Effluents (high release rate or unmonitored)	1	9
In-Plant Radiation Levels (increase, loss-of-control)	2	13
Intentionally Blank	3	15
Reactor Coolant Leak	4	16
Main Steam Line Break	5	19
Fuel Cladding Degradation (high coolant or OG activity)	6	21
Safety Relief Valve Failure	7	23
Intentionally Blank	8 - 11	24
Reactor Protection System Failure	12	25
Loss of Plant Shutdown or Shutdown Cooling Capability	13	26
Loss of Instrumentation (indicators, annunciators)	14	28
Control Room Evacuation	15	30
Toxic/Flammable Gases	16	31
Security Compromise	17	33
Loss of AC Power	18	35
Loss of DC Power	19	37
Tornado or Sustained Winds	20	39
River Water Hi / Lo (flood or low water level)	21	40
Earthquake	22	41
Fire	23	42
Explosion	24	43
Aircraft or Missiles	25	44
Miscellaneous (train derailment, turbine failure)	26	45
Intentionally Blank	27	46
General Emergency (All GUIDELINES)	28	47
Other Plant Conditions	29	52
Major Damage to Spent Fuel	30	53

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## FIGURE

### **7.2 Emergency Classification Guidelines**

#### **GUIDELINE 1**

#### **Radioactive Effluent**

#### **UNUSUAL EVENT**

RADIOLOGICAL EFFLUENT OFF-SITE DOSE CALCULATION MANUAL (ODCM)  
LIMITS EXCEEDED

#### **EALS**

- 1a. Discharge Canal Monitor exceeds 400 CPS indicated by annunciator DISCHARGE CANAL HI RADIATION (4-A-22) and recorder C-02-17.358, and Shift Manager's judgement is the increase is due to release of radioactive byproduct materials from the plant.

#### **OR**

- 1b. Sampling identifies a liquid release to river which exceeds ODCM-02.01 limits.

#### **OR**

- 1c. Stack Effluent Monitor (Channel A or B) exceeds 90,000  $\mu\text{Ci}/\text{Sec}$  indicated by annunciator STACK EFFLUENT HI HI RADIATION (C-259-A-1) and RECORDERS RR-7858A and RR-7858B on C-257/C-258 and computer point STACK NOBLE GAS RELEASE RATE ALARM (PRM011).

#### **OR**

- 1d. Reactor Building Vent Effluent Monitor (Channel A or B) exceeds 4,500  $\mu\text{Ci}/\text{sec}$  indicated by annunciator RBV EFFLUENT HI HI RADIATION (C-259-A-2) and RECORDERS RR-7859A and RR-7859B on C-257/C-258.

#### **OR**

- 1e. Unmonitored gaseous release to the atmosphere which is estimated or suspected to exceed ODCM limits (4,500  $\mu\text{Ci}/\text{Sec}$ ).

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 1**

#### **Radioactive Effluent - Cont'd**

#### **ALERT**

RADIOLOGICAL EFFLUENTS GREATER THAN 10 TIMES OFF-SITE DOSE CALCULATION MANUAL (ODCM) LIMITS

#### **EALs**

- 1a. Discharge Canal Monitor exceeds 4000 CPS. |
- OR**
- 1b. Sampling identifies a liquid release to river which is 10 times ODCM-02.01 limits. |
- OR**
- 1c. Stack Effluent Monitor (Ch A or B) exceeds  $9.0E + 5 \mu\text{Ci/Sec}$ .
- OR**
- 1d. Reactor Building Vent Effluent Monitor (Ch A or B) exceeds  $4.5E+4 \mu\text{Ci/Sec}$ .
- OR**
- 1e. Unmonitored gaseous release to the atmosphere which is estimated or expected to exceed 10 times ODCM-03.01 limits ( $4.5E+4 \mu\text{Ci/Sec}$ ).

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 1</b>
--------------------

#### **Radioactive Effluent - Cont'd**

#### **SITE AREA EMERGENCY**

EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO GREATER THAN 50 Mrem/Hr FOR 1/2 HOUR OR GREATER THAN 500 Mrem/Hr (Whole Body) For 2 MINUTES (Or Five Times These Levels For Thyroid) AT THE SITE BOUNDARY FOR ADVERSE METEOROLOGY. THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS (e.g., Radiation Level In Containment With Leak Rate Appropriate For Existing Containment Pressure) OR ARE MEASURED IN THE ENVIRONS, OR EPA PROTECTIVE ACTION GUIDELINES ARE PROJECTED TO BE EXCEEDED OUTSIDE THE SITE BOUNDARY.

#### **EALs**

- 1a. Stack Effluent Monitor (Ch A or B) exceeds  $5.7\text{E}+6$   $\mu\text{Ci}/\text{Sec}$  for 30 minutes.  
**OR**
- 1b. Stack Effluent Monitor (Ch A or B) exceeds  $5.7\text{E}+7$   $\mu\text{Ci}/\text{Sec}$  2 minutes.  
**OR**
- 1c. Stack release rate of radioiodines exceeds  $5.7\text{E}+3$   $\mu\text{Ci}/\text{Sec}$  for 30 minutes.  
**OR**
- 1d. Stack release rate of radioiodines exceeds  $5.7\text{E}+4$   $\mu\text{Ci}/\text{Sec}$  for 2 minutes.  
**OR**
- 1e. RB Vent Effluent Monitor (Ch A or B) exceeds  $2.1\text{E}+6$   $\mu\text{Ci}/\text{Sec}$  for 30 minutes.  
**OR**
- 1f. RB Vent Effluent Monitor (Ch A or B) exceeds  $2.1\text{E}+7$   $\mu\text{Ci}/\text{Sec}$  for 2 minutes.  
**OR**
- 1g. RB Vent release rate of radioiodines exceeds 3600  $\mu\text{Ci}/\text{Sec}$  for 30 minutes.  
**OR**
- 1h. RB Vent release rate of radioiodines exceeds  $3.6\text{E}+4$   $\mu\text{Ci}/\text{Sec}$  for 2 minutes.  
**OR**
- 1i. Whole body doses (TEDE) greater than 1000 mrem or thyroid doses (CDE) of greater than 5000 mrem are projected beyond the site boundary.  
**OR**
- 1j. Containment Radiation Monitor reading indicates above the 0.01% curve when plotted versus time after shutdown in accordance with A.2-208 (CORE DAMAGE ASSESSMENT) Section 6.2 and associated FIGURE 7.1.  
**OR**



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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 1</b>
--------------------

#### **Radioactive Effluent - Cont'd**

##### **SITE AREA EMERGENCY (Cont'd)**

- 1k. Measured Whole Body dose rates at the site boundary or beyond exceed 50 mrem/hr for 30 minutes or 500 mrem/hr for 2 minutes.

##### **OR**

- 1l. Radioiodine concentrations measured at the site boundary or beyond exceed  $7.0\text{E-}8 \mu\text{Ci/CC}$  for 30 minutes or  $7.0\text{E-}7 \mu\text{Ci/CC}$  for 2 minutes.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 2**

#### **In-Plant Radiation Levels**

##### **UNUSUAL EVENT**

Not Applicable

##### **ALERT**

SEVERE DEGRADATION IN CONTROL OF RADIOACTIVE MATERIALS

##### **EAL**

- 1a. Increase by a factor of 1000 in plant radiation levels as indicated by Area Radiation Monitoring System:

**NOTE:** EALs shown as **FULL SCALE** indicate that an increase by a factor of 1000 is beyond the range of the particular monitor. In these cases, a full scale reading combined with the Shift Manager's concurrence, **SHALL** meet the criteria for the **ALERT** classification. Reading in mrem/hr except as noted.

<u>PANEL</u>	<u>DESCRIPTION</u>	<u>NORMAL</u>	<u>EAL</u>
C-11	A-1 1027 RB NE Low	10	Full scale
C-11	A-2 1027 RB N High	5	5000
C-11	A-3 1027 RB W Stairway	1	1000
C-11	A-4 1001 Source Storage	20	Full scale
C-11	A-5 Fuel Pool Skimmer Tk Area	20	Full scale
C-11	A-6 1001' Decon Area	3	Full scale
C-11	A-7 985' Sample Hood	5	Full scale
C-11	A-8 Rx Cleanup System Access	0.25	250
C-11	A-9 962 RB East	0.8	800
C-11	A-10 East CRD HCU	3	Full scale
C-11	A-11 West CRD HCU	3	Full scale
C-11	A-12 TIP Drive Area	2	Full scale
C-11	A-13 TIP Cubicle	30	Full scale
C-11	A-14 HPCI Turbine Area	2	Full scale
C-11	A-15 Rx Bldg Drain Tk Area	25	Full scale
C-11	A-16 RCIC Pump Area	1	1000
C-11	A-17 East CS and RHR Area	20	Full scale

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 2**

#### **In-Plant Radiation Levels - Cont'd**

#### **ALERT - Cont'd**

<u>PANEL</u>	<u>DESCRIPTION</u>	<u>NORMAL</u>	<u>EAL</u>
C-11	A-18 West CS and RHR Area	8	Full scale
C-11	A-19 Hot Chemistry Lab	.25	250
C-11	A-20 Control Room Low Range	0.02	20
C-11	A-21 Control Room High Range	3	3000
C-11	B-1 Turbine Operating Floor	90	Full scale
C-11	B-2 Turbine Front Standard	70	Full scale
C-11	B-3 Cond Demin Operating Area	3	1000
C-11	B-4 Mechanical Vacuum Pump Rm	9	Full scale
C-11	B-5 Feedwater Pump Area	1	1000
C-11	C-1 Radwaste Control Room	0.2	200
C-11	C-2 Sample Tank Area	3	Full scale
C-11	C-3 Conveyer Operating Area	0.2	200
C-11	D-1 Hot Machine Shop	0.2	200
C-252	E-1 Recombiner Instrument Room	1	Full scale
C-252	E-2 Recombiner Pump Room	3	Full scale
C-252	F-1 Off-gas Storage Foyer	0.3	100
C-11	F-2 Off-gas Storage Foyer High Range	<100	1000
C-257/C-258	Containment Rad Monitor	3-5 Rem/hr	50 Rem/hr

#### **OR**

- 1b. Direct measurement of radiation levels corresponding to an increase by a factor of 1000.

#### **SITE AREA EMERGENCY**

Not applicable

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 3**

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 4**

#### **Reactor Coolant Leak**

#### **UNUSUAL EVENT**

PRIMARY SYSTEM LEAK RATE EXCEEDS TECHNICAL SPECIFICATIONS

**NOTE:** Under this **GUIDELINE** an Unusual Event should be declared when the leak rate is confirmed to be in excess of the corresponding EAL value (i.e. 5 GPM unidentified leakage, 20 GPM identified leakage or 2 GPM increase in unidentified leak rate in 24 hrs).

#### **EALs**

- 1a. Unidentified leakage exceeds 5 GPM as indicated by computer point, FLOOR DRAIN SUMP RATE OF CHANGE (PCT509), or calculated from indicator LR-7409 on Panel C-04 in the Control Room.

#### **OR**

- 1b. Identified leakage exceeds 20 GPM as indicated by computer point, EQUIPMENT DRAIN SUMP RATE OF CHANGE (PCT508) or calculated from indicator LR-7409 on Panel C-04 in the Control Room.

#### **OR**

- 1c. Unidentified leakage rate increases 2 GPM within any 24 hour period as determined from Test 0381 (CONTAINMENT COOLANT LEAKAGE LOG).

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## FIGURE

### 7.2 Emergency Classification Guidelines - Cont'd

#### GUIDELINE 4

#### Reactor Coolant Leak - Cont'd

#### ALERT

PRIMARY COOLANT LEAK RATE GREATER THAN 50 GPM

**NOTE:** Failure of a SRV to close should not be classified using Guideline 4. The failure of a SRV to close should be classified using Guideline 7 (Safety Relief Valve Failure).

#### EAL

- 1a. Total leakage exceeds 50 GPM as indicated by computer point, FLOOR DRAIN SUMP RATE OF CHANGE (PCT509) and computer point, EQUIPMENT DRAIN SUMP RATE OF CHANGE (PCT508) or as calculated from indicator LR-7409 on Panel C-04 in the Control Room.

#### OR

**NOTE:** Unisolable - The leak is NOT isolable from the Control Room OR an attempt for isolation from the Control Room has been made and was unsuccessful. An attempt for isolation should be made prior to the accident classification. If isolable upon identification, this Initiating Condition is not applicable.

- 1b. Unisolable primary system leakage outside the drywell as indicated by area temperatures or ARM levels  $\geq$  maximum safe values in at least one area.

#### OR

- 1c. Shift Manager's judgement.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 4</b>
--------------------

#### **Reactor Coolant Leak - Cont'd**

##### **SITE AREA EMERGENCY**

KNOWN LOSS OF COOLANT ACCIDENT GREATER THAN MAKEUP CAPACITY

##### **EAL**

- 1a. Total leakage exceeds 50 GPM as indicated by computer point, FLOOR DRAIN SUMP RATE OF CHANGE (PCT509) and computer point, EQUIPMENT DRAIN SUMP RATE OF CHANGE (PCT508) or as calculated from indicator LR-7409 on Panel C-04 in the Control Room.

##### **OR**

**NOTE:** **Unisolable** - The leak is NOT isolable from the Control Room OR an attempt for isolation from the Control Room has been made and was unsuccessful. An attempt for isolation should be made prior to the accident classification. If isolable upon identification, this Initiating Condition is not applicable.

- 1b. Unisolable primary system leakage outside the drywell as indicated by area temperatures or ARM levels  $\geq$  maximum safe values in at least one area.

##### **AND**

2. Reactor water level decreasing below 1 foot above active fuel (-114inches) indicated by FUEL ZONE LEVEL INDICATOR (LI-2-3-91A/B).

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 5**

#### **Main Steam Line Break**

#### **UNUSUAL EVENT**

Not applicable

#### **ALERT**

MAIN STEAM LINE BREAK WITH MSIV MALFUNCTION CAUSING LEAKAGE TO SECONDARY CONTAINMENT

#### **EALS**

1. Shift Manager's judgement that MSIV is malfunctioning or continuing steam flow with evidence that the steam line break is outside primary containment (e.g. visual observation, radiation or temperature).

#### **AND**

- 2a. Annunciators MAIN STEAM LINE HIGH FLOW A/B ALARM ( 5-A-25/26) and RX WATER LEVEL HI/LO ALARM ( 5-B-24).

#### **OR**

- 2b. Annunciator MAIN STEAM TUNNEL HIGH TEMPERATURE A/B ALARM (5-A-17/18)

#### **OR**

- 2c. Annunciator MAIN STEAM LINE LEAKAGE ALARM (5-B-32).



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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 5**

#### **Main Steam Line Break - Cont'd**

#### **SITE AREA EMERGENCY**

MAIN STEAM LINE BREAK WITH FAILURE OF MSIVs TO ISOLATE THE LEAK AND CAUSING LEAKAGE OUTSIDE SECONDARY CONTAINMENT

#### **EALs**

1. Shift Manager or Emergency Director's judgement that MSIV is malfunctioning or continuing steam flow with evidence that steam line break is outside primary containment.

#### **AND**

- 2a. Annunciators MAIN STEAM LINE FLOW A/B ALARM (5-A-25/26) and RX WATER LEVEL HI/LO ALARM (5-B-24).

#### **OR**

- 2b. Annunciator MAIN STEAM TUNNEL HIGH TEMPERATURE ALARM (5-A-17/18).

#### **OR**

- 2c. Annunciator MAIN STEAM LINE LEAKAGE ALARM (5-B-32).

#### **AND**

- 3a. Annunciator TURBINE BUILDING HIGH RADIATION ALARM (4-A-21).

#### **OR**

- 3b. High airborne radioactivity levels in the Turbine Building indicated by Continuous Air Monitors (CAMs) or direct measurement.

#### **OR**

- 3c. Visual observation that blow-out panels between the Steam Chase and Turbine Building have been ruptured.

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 6**

#### **Fuel Cladding Degradation**

#### **UNUSUAL EVENT**

##### **FUEL DAMAGE INDICATION**

##### **EALs**

- 1a. Off-gas Pretreatment Monitor exceeds 20,000 ( $2 \times 10^4$ ) mrem/hr as indicated on Recorder RR-4902 or RM-17-150A and RM-17-150B.

##### **OR**

- 1b. Off-gas Pretreatment Monitor increases by 4,000 mrem/hr within 30 minutes at steady power as indicated by Recorder RR-4902 or RM-17-150A and RM-17-150B.

##### **OR**

- 1c. Reactor coolant I-131 dose equivalent exceeds 5  $\mu$ Ci/gram as determined by sample and analysis.

#### **ALERT**

SEVERE LOSS OF FUEL CLADDING INDICATED BY HIGH OFF-GAS AT OFF-GAS PRETREATMENT MONITOR (greater than 5 Ci/ Sec corresponding to 16 isotopes decayed 30 minutes) **OR** VERY HIGH COOLANT ACTIVITY SAMPLE (e.g.,  $> 300 \mu$ Ci/gm I-131 dose equivalent).

##### **EALs**

- 1a. Off-gas Pretreatment Monitor exceeds 200,000 ( $2 \times 10^5$ ) mrem/hr indicated on Recorder RR-4902 or RM-17-150A and RM-17-150B.

##### **OR**

**NOTE:** Resin intrusion or excessive hydrogen injection rates may cause high radiation without fuel cladding damage.

- 1b. Main Steam Line Monitor indicates 6000 mrem/hr due to high radiation.

##### **OR**

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 6**

#### **Fuel Cladding Degradation - Cont'd**

##### **ALERT (Cont'd)**

- 1c. Reactor coolant > 300  $\mu\text{Ci/gm}$  I-131 dose equivalent as determined by sample and analysis.

##### **OR**

- 1d. Containment Radiation Monitor reading exceeds the Containment Monitor Response to Contained Source Curve (FIGURE 7.3).

##### **SITE AREA EMERGENCY**

DEGRADED CORE WITH POSSIBLE LOSS OF COOLABLE GEOMETRY

##### **EALs**

1. More than 1/3 of core uncovered as indicated by reactor water level below -174 inches.

##### **AND**

2. Containment Radiation Monitor reading exceeds the Containment Monitor Response to Containment Source Curve (Figure 7.3).

##### **AND**

- 3a. Reactor coolant >3,000  $\mu\text{Ci/gm}$  I-131 dose equivalent as determined by sampling and analysis.

##### **OR**

- 3b. Inability to insert control rods fully.

##### **OR**

- 3c. Inability to position SRMs or IRMs within core.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 7**

#### **Safety Relief Valve Failure**

##### **UNUSUAL EVENT**

FAILURE OF A SAFETY RELIEF VALVE TO CLOSE FOLLOWING REDUCTION OF APPLICABLE PRESSURE

##### **EALs**

1a. Annunciator AUTO BLOWDOWN RELIEF VALVE LEAKAGE (3-A-09).

##### **OR**

1b. Annunciator SRV OPEN ALARM (5-A-46).

##### **ALERT**

Not applicable

##### **SITE AREA EMERGENCY**

Not Applicable

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 8**

**Intentionally Blank**

**GUIDELINE 9**

**Intentionally Blank**

**GUIDELINE 10**

**Intentionally Blank**

**GUIDELINE 11**

**Intentionally Blank**

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 12**

#### **Reactor Protection System Failure**

##### **UNUSUAL EVENT**

Not applicable

##### **ALERT**

FAILURE OF THE REACTOR PROTECTION SYSTEM TO INITIATE AND COMPLETE A SCRAM WHICH BRINGS THE REACTOR SUBCRITICAL

##### **EALs**

1. Valid Scram Signal.

##### **AND**

2. Neutron count rate indicates reactor critical.

##### **SITE AREA EMERGENCY**

TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCRAM (continued power operation but no core damage immediately evident)

**NOTE:** Refer to Guideline 6 for Fuel Cladding Degradation determination.

##### **EALs**

1. Failure to bring reactor subcritical with control rods.

##### **AND**

2. Failure of the Standby Liquid Control System.

##### **AND**

3. Shift Manager or Emergency Director's judgement that a transient is in progress.

##### **AND**

4. No indication of core damage (if core damage is indicated, declare a GENERAL EMERGENCY).

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 13</b>
---------------------

#### **Loss of Plant Shutdown or Shutdown Cooling Capability**

##### **UNUSUAL EVENT**

As specified in Guideline 29.

##### **ALERT**

COMPLETE LOSS OF ABILITY TO ACHIEVE OR MAINTAIN PLANT COLD SHUTDOWN

##### **EALs**

- 1a. Loss of core cooling capabilities needed to achieve plant cold shutdown.

##### **OR**

- 1b. Loss of core cooling capabilities required to maintain the Reactor Coolant Temperature < (less than) 212°F.

##### **AND**

2. Shift Manager's judgement that the plant cannot reach or maintain cold shutdown.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 13</b>
---------------------

#### **Loss of Plant Shutdown or Shutdown Cooling Capability - Cont'd**

#### **SITE AREA EMERGENCY**

COMPLETE LOSS OF ABILITY TO ACHIEVE OR MAINTAIN HOT SHUTDOWN

#### **EALs**

1. Inability to SCRAM and inoperable Standby Liquid Control System.

#### **AND**

- 2a. Loss of all Safety Relief Valve capability.

#### **OR**

- 2b. Inoperable RHR System.

#### **OR**

- 2c. Inoperable RHR heat sink.

#### **AND**

- 3a. Loss of main condenser cooling.

#### **OR**

- 3b. No makeup capability from either HPCI or RCIC Systems.

#### **AND/OR**

4. Shift Manager or Emergency Director's judgement that plant cannot reach or maintain hot shutdown.

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.



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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 14**

#### **Loss of Instrumentation**

##### **UNUSUAL EVENT**

INDICATIONS OR ALARMS ON PROCESS OR EFFLUENT PARAMETERS NOT FUNCTIONAL IN THE CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN

##### **ALERT**

LOSS OF MOST OR ALL ANNUNCIATORS WHILE OPERATING ABOVE COLD SHUTDOWN AND PLANT IN STABLE CONDITION.

##### **EALs**

1. Unplanned loss of most or all of annunciators on panels C-03, C-04, C-05, C-08.

##### **AND**

2. Shift Manager's judgement that annunciators are non-functional.

##### **AND**

3. Loss of plant computer alarm display, alarm typer and SPDS display.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 14</b>
---------------------

#### **Loss of Instrumentation - Cont'd**

#### **SITE AREA EMERGENCY**

LOSS OF MOST OR ALL ANNUNCIATORS AND PLANT TRANSIENT INITIATED OR IN PROGRESS

##### **EALs**

1. Unplanned loss of most or all of annunciators on panels C-03, C-04, C-05, C-08.

##### **AND**

2. Shift Manager or Emergency Director's judgement that annunciators are non-functional.

##### **AND**

3. Loss of plant computer alarm display, alarm typer and SPDS display.

##### **AND**

4. Shift Manager or Emergency Director's judgement that a transient has been initiated or is in progress.

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 15**

#### **Control Room Evacuation**

##### **UNUSUAL EVENT**

Not applicable

##### **ALERT**

EVACUATION OF THE CONTROL ROOM IS REQUIRED OR ANTICIPATED AND CONTROL OF SHUTDOWN SYSTEMS HAVE BEEN ESTABLISHED AT LOCAL STATIONS. (If local control has not been established in 15 minutes, go to SITE AREA EMERGENCY)

##### **EAL**

1. As determined by Shift Manager.

##### **SITE AREA EMERGENCY**

EVACUATION OF CONTROL ROOM AND CONTROL OF SHUTDOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS IN 15 MINUTES

##### **EAL**

1. As determined by Shift Manager or Emergency Director.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 16**

#### **Toxic/Flammable Gases**

##### **UNUSUAL EVENT**

NEAR OR ON-SITE TOXIC OR FLAMMABLE GAS RELEASE

##### **EAL**

- 1a. Widespread toxic or flammable gaseous hazard being experienced or projected on-site (out side of plant) leading to the evacuation or sheltering of personnel outside the plant.

##### **OR**

- 1b. Receipt of recommendation by Local, County, or State Officials to evacuate personnel from the site based on an off-site hazardous or flammable gaseous release event.

##### **ALERT**

ENTRY INTO FACILITY ENVIRONS OF UNCONTROLLED TOXIC OR FLAMMABLE GASES

##### **EAL**

- 1a. Toxic gaseous concentrations being measured or projected within a large area of the plant at the breathing zone greater than:
  - a. 50 ppm Ammonia
  - b. 10 ppm Chlorine
  - c. 5 ppm Vinyl Chloride
  - d. 2000 ppm Butadiene
  - e. 50 ppm Ethylene Dichloride
  - f. 500 ppm Gasoline
  - g. 2100 ppm Propane
  - h. 2000 ppm L.P.G.
  - i. IDLH for any toxic gas

**NOTE:** IDLH = Immediately Dangerous to Life or Health. IDLH Reference: NIOSH Pocket Guide to Chemical Hazards.

##### **OR**

- 1b. Flammable gas concentrations being measured within the plant at a distance of greater than 10 feet from the source exceeding the lower explosive limit.

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## FIGURE

### 7.2 Emergency Classification Guidelines - Cont'd

#### GUIDELINE 16

#### Toxic/Flammable Gases - Cont'd

#### SITE AREA EMERGENCY

ENTRY OF UNCONTROLLED FLAMMABLE GASES INTO VITAL AREAS OR ENTRY OF UNCONTROLLED TOXIC GASES INTO VITAL AREAS WHERE LACK OF ACCESS TO THE AREA CONSTITUTES A SAFETY PROBLEM AND THE PLANT IS **NOT** IN COLD SHUTDOWN

#### EALs

- 1a. Toxic gaseous concentrations being measured or projected within a major portion of a vital area of the plant at the breathing zone greater than or equal to the following such that further access to the vital area is being prevented at a time when it is needed.
  - a. 50 ppm Ammonia
  - b. 10 ppm Chlorine
  - c. 5 ppm Vinyl Chloride
  - d. 2000 ppm Butadiene
  - e. 50 ppm Ethylene Dichloride
  - f. 500 ppm Gasoline
  - g. 2100 ppm Propane
  - h. 2000 ppm L.P.G.
  - i. IDLH for any toxic gas

**NOTE:** IDLH = Immediately Dangerous to Life or Health. IDLH Reference: NIOSH Pocket Guide to Chemical Hazards.

#### OR

- 1b. Flammable gas concentrations being measured or projected within a major portion of a vital area of the plant from an unisolable source exceeding the lower explosive limit such that further access to the vital area is being prevented at a time when it is needed.

#### AND

2. Plant **IS NOT** in cold shutdown.

#### GENERAL EMERGENCY

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 17**

#### **Security Compromise**

##### **UNUSUAL EVENT**

SECURITY THREAT OR ATTEMPTED ENTRY OR ATTEMPTED SABOTAGE

##### **EAL**

- 1a. Security determines the threat to be credible and the Shift Manager determines the threat would have an adverse impact on the safe operation or shutdown capability of the plant.

##### **OR**

- 1b. Security discovers an unauthorized attempted entry by force or stealth (secret) into the protected area.

##### **OR**

- 1c. Security confirms that an act of attempted sabotage did occur to vital plant equipment or security equipment.

##### **ALERT**

ON-GOING SECURITY COMPROMISE

##### **EAL**

- 1a. Security Safeguards Contingency event that results in unauthorized personnel commandeering an area within the protected area, but not controlling shutdown capability or any vital areas.

##### **OR**

- 1b. Bomb device discovered within plant protected area and outside of any vital area.

##### **SITE AREA EMERGENCY**

IMMINENT LOSS OF PHYSICAL CONTROL OF THE PLANT

##### **EAL**

- 1a. Physical attack on the plant involving imminent occupancy of the Control Room, auxiliary shutdown panels, and any other vital areas.

##### **OR**

- 1b. Bomb device discovered within a vital area.

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 17**

**Security Compromise (Cont.)**

**GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 18**

#### **Loss of AC Power**

#### **UNUSUAL EVENT**

LOSS OF OFF-SITE POWER OR LOSS OF ON-SITE AC POWER CAPABILITY

#### **EALs**

- 1a. Verified zero voltage on bus voltage meters or breaker indicators for Bus 11, Bus 12, Bus 13, Bus 14, and 1AR transformer on Panel C-08.

#### **OR**

- 1b. Loss of 11 and 12 Emergency Diesel Generators when they are required to be operable by Technical Specifications and inoperability is not due to surveillance testing.

#### **ALERT**

LOSS OF OFF-SITE POWER AND LOSS OF ALL ON-SITE AC POWER (STATION BLACKOUT) (see Site Area Emergency for extended loss)

#### **EALs**

1. Verified zero voltage on bus voltage meters or breaker indicators for Bus 11, Bus 12, Bus 13, Bus 14, Bus 15, Bus 16, and 1AR transformer on Panel C-08.

#### **AND**

2. Loss of 11 and 12 Emergency Diesel Generators when they are required to be operable by Technical Specifications.



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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 18**

**Loss of AC Power - Cont'd**

**SITE AREA EMERGENCY**

LOSS OF OFF-SITE POWER AND LOSS OF ALL ON-SITE AC POWER FOR MORE THAN 15 MINUTES

EALs

1. Verified zero voltage on bus voltage meters or breaker indicators for Bus 11, Bus 12, Bus 13, Bus 14, Bus 15, Bus 16 and 1AR transformer on Panel C-08.

**AND**

2. Loss of 11 and 12 Emergency Diesel Generators when they are required to be operable by Technical Specifications.

**AND**

3. Failure to restore power to at least one emergency bus within 15 minutes from the time of loss of both off-site and on-site AC power.

**GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### 7.2 Emergency Classification Guidelines - Cont'd

#### GUIDELINE 19

#### Loss of DC Power

#### UNUSUAL EVENT

Not applicable

#### ALERT

LOSS OF ALL VITAL DC POWER (see Site Area Emergency for extended loss)

#### EALs

1. Loss of both 125 VDC power sources and loss of both 250 VDC power sources as indicated by annunciators:

DIV. I 250V DC HI-LO VOLTAGE (8-A-20); **and**  
 DIV. II 125 & 250V DC TROUBLE (20-B-09); **and**  
 NO. 12 125V DC BUS VOLTAGE HIGH/LOW (8-B-13); **and**  
 NO. 11 125V DC BUS VOLTAGE HIGH/LOW (8-C-14)

#### AND

2. Shift Manager's judgement that all vital DC power is lost or degraded voltages are measured at battery terminals.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 19</b>
---------------------

#### **Loss of DC Power - Cont'd**

#### **SITE AREA EMERGENCY**

LOSS OF ALL VITAL ON-SITE DC POWER FOR MORE THAN 15 MINUTES

#### **EALs**

1. Loss of both 125 VDC power sources and loss of both 250 VDC power sources as indicated by annunciators:

DIV. I 250V DC HI-LO VOLTAGE (8-A-20); **and**  
 DIV. II 125 & 250 VDC TROUBLE (20-B-09); **and**  
 NO. 12 125 VDC BUS VOLTAGE HIGH/LOW (8-B-13); **and**  
 NO. 11 125 VDC BUS VOLTAGE HIGH/LOW (8-C-14)

#### **AND**

2. Shift Manager or Emergency Director's judgement that all vital DC power is lost or degraded voltages are measured at battery terminals.

#### **AND**

3. 15 minute time lapse.

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 20**

#### **Tornado or Sustained Winds**

##### **UNUSUAL EVENT**

##### **TORNADO ON-SITE**

##### **EALs**

- 1a. Tornado observed to touch down within the site boundary.

##### **OR**

- 1b. Sustained winds above 75 MPH for greater than 10 minutes at the site.

##### **ALERT**

##### **TORNADO STRIKING THE FACILITY**

##### **EALs**

- 1a. Tornado strikes a vital plant structure.

##### **OR**

- 1b. Sustained winds above 90 MPH for greater than 10 minutes at the site.

##### **SITE AREA EMERGENCY**

##### **SUSTAINED WINDS OR TORNADO IN EXCESS OF DESIGN LEVELS**

##### **EALs**

- 1a. Tornado causes damage to vital plant equipment or plant structures.

##### **OR**

- 1b. Sustained winds above 100 MPH for greater than 10 minutes at the site.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### 7.2 Emergency Classification Guidelines - Cont'd

#### **GUIDELINE 21**

#### River Water Hi/Lo

##### **UNUSUAL EVENT**

RIVER WATER LEVEL IN EXCESS OF 918 FEET OR RIVER FLOW BELOW 240 CFS (approximately 902.4 FT river level)

##### **ALERT**

RIVER WATER LEVEL BETWEEN 921 AND 930 FEET OR RIVER WATER LEVEL BELOW 900.5 FT

##### **SITE AREA EMERGENCY**

RIVER WATER LEVEL EXCEEDS 930 FT OR RIVER WATER LEVEL BELOW 899 FT OR FLOOD OR LOW WATER CAUSES DAMAGE TO VITAL EQUIPMENT

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 22**

#### **Earthquake**

##### **UNUSUAL EVENT**

ANY EARTHQUAKE FELT IN-PLANT OR DETECTED ON STATION SEISMIC INSTRUMENTATION AND SUBSEQUENTLY CONFIRMED BY ONE OR MORE OFF-SITE SOURCES

##### **EALs**

- 1a. Annunciator EARTHQUAKE ALARM (6-C-8).

##### **OR**

- 1b. Shift Manager's judgement.

##### **ALERT**

CONFIRMED EARTHQUAKE GREATER THAN OBE LEVELS

##### **EAL**

1. Annunciator OPERATIONAL BASIS EARTHQUAKE ALARM (6-C-13).

##### **SITE AREA EMERGENCY**

CONFIRMED EARTHQUAKE GREATER THAN DBE LEVELS AND PLANT NOT IN COLD SHUTDOWN

##### **EALs**

1. Annunciator DESIGN BASIS EARTHQUAKE ALARM (6-C-18).

##### **AND**

2. Plant not in cold shutdown.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 23**

#### Fire

##### **UNUSUAL EVENT**

FIRE WITHIN THE PLANT NOT EXTINGUISHED WITHIN 15 MINUTES OF DETECTION

##### EAL

**NOTE:** Verification of the alarm in this context means those actions taken in the Control Room to determine that the Control Room alarm is not spurious.

1. Fire in buildings or areas contiguous to any of the following areas not extinguished within 15 minutes of Control Room notification or verification of a Control Room alarm: Reactor, Turbine, Radwaste, Plant Administrative, Intake Structure, Diesel Generator, Heating Boiler, Recombiner, EFT, Condensate Storage Tanks

##### **ALERT**

FIRE POTENTIALLY AFFECTING SAFETY SYSTEM

##### EALs

1. Observation that fire could affect a safety system.

##### **AND**

2. Shift Manager's judgement.

##### **SITE AREA EMERGENCY**

FIRE COMPROMISING THE FUNCTIONS OF A SAFETY SYSTEM

##### EALs

1. Observation of fire that affects safety systems or functions.

##### **AND**

2. Shift Manager or Emergency Director's judgement.

##### **GENERAL EMERGENCY**

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 24**

#### **Explosion**

##### **UNUSUAL EVENT**

NEAR OR ON-SITE EXPLOSION

##### **EALs**

1. Visual observation or notification received.

##### **AND**

2. Shift Manager's judgement.

##### **ALERT**

KNOWN EXPLOSION DAMAGE TO THE FACILITY AFFECTING PLANT OPERATIONS

##### **EALs**

1. Visually observed evidence of an explosion directly affecting plant safe operation.

##### **AND**

2. Shift Manager's judgement.

##### **SITE AREA EMERGENCY**

SEVERE DAMAGE TO SAFE SHUTDOWN EQUIPMENT FROM MISSILES OR EXPLOSION

##### **EALs**

1. Plant **not** in cold shutdown.

##### **AND**

2. Shift Manager or Emergency Director's judgement.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.



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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 25**

#### **Aircraft and Missiles**

##### **UNUSUAL EVENT**

AIRCRAFT CRASH ON-SITE OR SUSPICIOUS AIRCRAFT ACTIVITY OVER THE FACILITY

##### **EAL**

1. Visual observation or notification is received.

##### **ALERT**

AIRCRAFT CRASH ON THE FACILITY OR MISSILE IMPACT ON FACILITY

##### **EAL**

1. Visual observation.

##### **SITE AREA EMERGENCY**

AIRCRAFT CRASH AFFECTING VITAL STRUCTURES BY IMPACT OR FIRE, OR SEVERE DAMAGE TO SAFE SHUTDOWN EQUIPMENT FROM MISSILES OR EXPLOSION

##### **EAL**

1. As determined by Shift Manager or Emergency Director with plant **not** in cold shutdown.

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 26**

#### **Miscellaneous**

#### **UNUSUAL EVENT**

TRAIN DERAILMENT ON-SITE

**OR**

TURBINE ROTATING COMPONENT FAILURE CAUSING RAPID PLANT SHUTDOWN

#### **EALs**

1a. Visual observation.

**OR**

1b. Shift Manager's judgement.

#### **ALERT**

TURBINE FAILURE CAUSING CASING PENETRATION

#### **EALs**

1a. Visual observation

**OR**

1b. Shift Manager's judgement.

#### **SITE AREA EMERGENCY**

Not applicable

#### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 27**

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 28**

#### **General Emergency - All GUIDELINES**

- A. EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO 1 REM/HR (whole body) or 5 REM/HR (thyroid) AT THE SITE BOUNDARY UNDER ACTUAL METEOROLOGICAL CONDITIONS. DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS (e.g., radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) OR ARE MEASURED IN THE ENVIRONS.**

#### EALs

- 1a. Stack Effluent Monitor (Ch A or B) exceeds  $2.4\text{E}+8$   $\mu\text{Ci}/\text{Sec}$ .

#### **OR**

- 1b. RB Vent Effluent Monitor (Ch A or B) exceeds  $9.3\text{E}+7$   $\mu\text{Ci}/\text{Sec}$ .

#### **OR**

- 1c. Stack radioiodine release rate, as determined by sampling and analysis, exceeds  $1.95\text{E}+5$   $\mu\text{Ci}/\text{Sec}$ .

#### **OR**

- 1d. RB Vent radioiodine release rate, as determined by sampling and analysis, exceeds  $2.0\text{E}+5$   $\mu\text{Ci}/\text{Sec}$ .

#### **OR**

- 1e. Release rate projection based on Containment Radiation Monitor or Containment Sampling exceeds any of the values in 1a, 1b, 1c, or 1d above.

#### **OR**

- 1f. Dose rates of 1000 mrem /hr (whole body) are measured at the site boundary or beyond.

#### **OR**

- 1g. Radioiodine concentrations measured at the site boundary or beyond exceed  $7.0\text{E}-6$   $\mu\text{Ci}/\text{CC}$ .

#### **OR**

- 1h. Dose projection calculations, based on actual or expected meteorological conditions and source term, indicates dose rates equal to or exceeding 1000 mrem/hr (whole body) or 5000 mrem/hr (thyroid) at the site boundary or beyond.

**OR**

I/mab

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 28**

#### **General Emergency - All GUIDELINES - Cont'd**

#### **B. LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH A POTENTIAL LOSS OF 3RD BARRIER**

##### **CLAD/COOLANT BOUNDARY FAILURE, POTENTIAL CONTAINMENT LOSS**

##### **EALs**

**NOTE:** Failure of MSIVs to isolate constitutes a loss of both primary coolant boundary and containment. When this is combined with cladding failure, all three barriers have been lost.

1. Evidence of Fuel Cladding Degradation per Guideline 6, Alert or Site Area Emergency level.

##### **AND**

2. Failure of primary coolant boundary as evidenced by:
  - High Drywell pressure; **or**
  - High Drywell temperature; **or**
  - Failure of MSIVs to isolate; **or**
  - Safety Relief Valve stuck open; **or**
  - GAP activity in primary containment atmosphere; **or**
  - Failure of Scram Discharge Volume valves to isolate

##### **AND**

3. Potential loss of containment as evidenced by:
  - Containment temperature or pressure approaching design limits (281°F and 56 PSIG) and increasing; **or**
  - Loss of containment cooling; **or**
  - Failure of Scram Discharge Volume valves to isolate; **or**
  - Shift Manager or Emergency Director's judgement that loss of containment is likely.

##### **OR**

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 28**

**General Emergency - All GUIDELINES - Cont'd**

**C. LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH A POTENTIAL LOSS OF 3RD BARRIER**

**CLAD/CONTAINMENT FAILURE, POTENTIAL COOLANT BOUNDARY LOSS**

**NOTE:** In either of the following situations loss of containment should be judged to be likely:

- Small or large LOCA with failure of ECCS to perform, or
- Loss of requisite decay heat removal systems (RHR and other heat sinks) following shutdown.

**EALs**

1. Evidence of Fuel Cladding Degradation per Guideline 6, Alert or Site Area Emergency level.

**AND**

- 2a. Failure of containment as evidenced by all containment penetrations required for isolation not valved off or closed.

**OR**

- 2b. Shift Manager or Emergency Director's judgement that containment has failed.

**AND**

3. Potential loss of primary coolant boundary as evidenced by reactor pressure near design limits (1210 psig measured in the steam dome @ 575°F) and increasing or loss of all ECCS.

**OR**

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FIGURE

**7.2 Emergency Classification Guidelines - Cont'd**

**GUIDELINE 28**

**General Emergency - All GUIDELINES - Cont'd**

**D. LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH A POTENTIAL LOSS OF 3RD BARRIER**

**CONTAINMENT/COOLANT BOUNDARY FAILURE, POTENTIAL CLAD FAILURE**

EALs

**NOTE:** Failure of MSIVs to isolate constitutes a loss of both primary coolant boundary and containment. When this is combined with cladding failure, all three barriers have been lost.

- 1a. Failure of containment as evidenced by all containment penetrations required for isolation not valved off or closed.

**OR**

- 1b. Shift Manager or Emergency Director's judgement that containment has failed.

**AND**

2. Failure of primary coolant boundary as evidenced by:

- High Drywell pressure; **or**
- High Drywell temperature; **or**
- Failure of MSIVs to isolate; **or**
- Safety Relief Valve stuck open; **or**
- GAP activity in primary containment atmosphere; **or**
- Failure of Scram Discharge Volume valves to isolate

**AND**

- 3a. Potential loss of cladding as evidenced by loss of all ECCS

**OR**

- 3b. Reactor water level < TAF (-126") and decreasing.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 28</b>
---------------------

#### **General Emergency - All GUIDELINES - Cont'd**

- E. LOSS OF PHYSICAL CONTROL OF THE PLANT**
- F. OTHER PLANT CONDITIONS EXIST, FROM WHATEVER SOURCE, THAT MAKE RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PERIOD POSSIBLE** (e.g. any core melt situation, see example BWR sequences).

#### **EXAMPLE BWR SEQUENCES**

1. Transient (e.g., loss of off-site power) plus failure of requisite core shutdown systems (e.g., scram or standby liquid control system). Could lead to core melt in several hours with containment failure likely. More severe consequences if pump trip does not function.
  2. Small or large LOCAs with failure of ECCS to perform, leading to core degradation or melt in minutes to hours. Loss of containment integrity may be imminent.
  3. Small or large LOCA occurs and containment performance is unsuccessful affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without containment boundary.
  4. Shutdown occurs but requisite decay heat removal systems (e.g., RHR) or non-safety systems heat removal means are rendered unavailable. Core degradation or melt could occur in about ten hours with subsequent containment failure.
- G. ANY MAJOR INTERNAL OR EXTERNAL EVENTS (E.G., FIRES, EARTHQUAKES, SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS RESULTING IN ANY OF THE ABOVE (A-F).**



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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

<b>GUIDELINE 29</b>
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#### **Other Plant Conditions**

##### **UNUSUAL EVENT**

**NOTE:** For plant conditions which require plant shutdown under Technical Specifications, the Unusual Event ***SHALL*** be declared no later than the time at which the LCO-specified action statement time period elapses. The Unusual Event may be declared earlier at the discretion of the Shift Manager or Emergency Director.

PLANT CONDITIONS EXIST REQUIRING SHUTDOWN UNDER TECHNICAL SPECIFICATION REQUIREMENTS **AND** INABILITY TO REACH REQUIRED OPERATING MODE WITHIN TECHNICAL SPECIFICATION TIME LIMITS.

#### **OR**

PLANT CONDITIONS EXIST THAT WARRANT INCREASE AWARENESS ON THE PART OF PLANT OPERATING STAFF OR STATE AND/OR LOCAL OFF-SITE AUTHORITIES.

#### **OR**

OTHER CONDITIONS EXIST WHICH IN THE JUDGEMENT OF THE SHIFT MANAGER OR EMERGENCY DIRECTOR INDICATE A POTENTIAL DEGRADATION OF THE LEVEL OF SAFETY OF THE PLANT.

##### **ALERT**

PLANT CONDITIONS EXIST THAT WARRANT PRECAUTIONARY ACTIVATION OF THE TECHNICAL SUPPORT CENTER AND PLACEMENT OF THE EMERGENCY OPERATIONS FACILITY AND OTHER KEY EMERGENCY PERSONNEL ON STANDBY

##### **SITE AREA EMERGENCY**

OTHER PLANT CONDITIONS EXIST THAT WARRANT ACTIVATION OF THE EMERGENCY RESPONSE CENTERS AND MONITORING TEAMS

##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

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## FIGURE

### **7.2 Emergency Classification Guidelines - Cont'd**

#### **GUIDELINE 30**

#### **Major Damage to Spent Fuel**

##### **UNUSUAL EVENT**

Not applicable

##### **ALERT**

FUEL DAMAGE ACCIDENT WITH RELEASE OF RADIOACTIVITY TO CONTAINMENT

##### **EALs**

1. Dropping, bumping or otherwise rough handling of a spent bundle or individual fuel rods.

##### **AND**

2. Annunciator FUEL POOL RADIATION MONITOR CH A or B (5-A-1 or 5-A-2) exceeds 50 mrem/hr.

##### **SITE AREA EMERGENCY**

MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT (e.g., large object damages fuel or water loss below fuel level)

##### **EALs**

- 1a. Decrease in fuel pool level below 36'9" indicated by LS-2787, SPENT FUEL POOL LEVEL HI/LO ALARM on Panel C-65.

##### **OR**

- 1b. Dropping a heavy object onto spent fuel confirmed by direct observation.

##### **AND**

2. Annunciator FUEL POOL RADIATION MONITOR CH A or B (5-A-1 or 5-A-2) exceeds 50 mrem/hr.

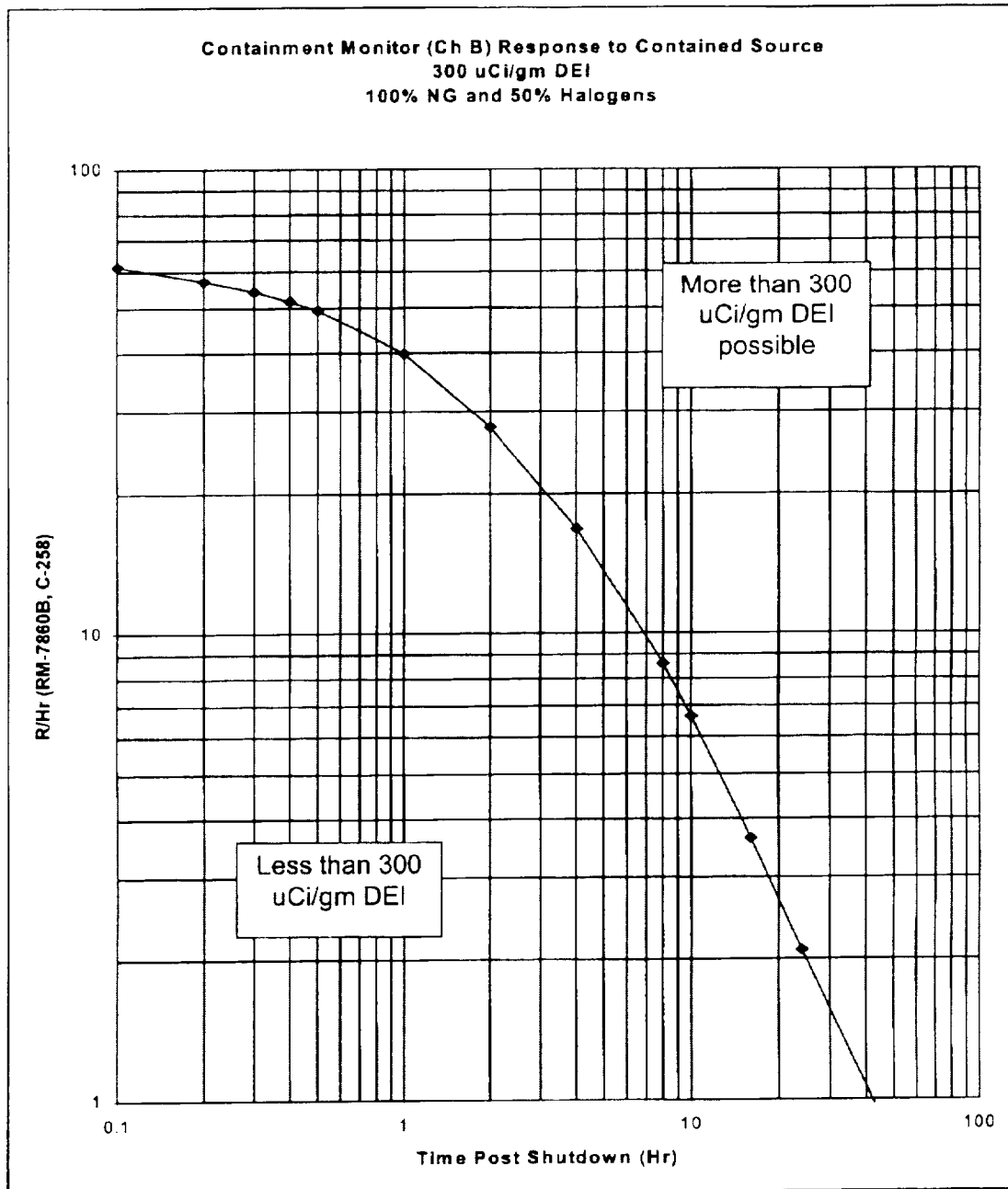
##### **GENERAL EMERGENCY**

As specified in GUIDELINE 28.

## FIGURE

## 7.3 Containment Monitor Response To Contained Source Curve

Containment Monitor Response To Contained Source  
300 uCi/gm DEI  
100% NG and 50% Halogens



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### **Basis for Containment Monitor Response Curve**

Containment radiation monitoring is accomplished with two detectors. Each is located near one of the 28" recirc suction lines. The A Containment Monitor (azimuth 180°) response is complicated by its proximity to the steam lines which exit the drywell directly below it. Therefore, the B channel geometry (azimuth 0°) was used to generate the response curve.

The purpose of the response curve is to show the minimum Containment Monitor response to a fuel clad degradation condition indicated by a coolant concentration of 300 uCi/gm DEI.

#### **Assumptions:**

- The only radiation source is an 18-foot vertical section of the 28" diameter "A" Recirc suction line (933' to 951' level).
- The source is totally contained, i.e., no significant airborne radioactive material.
- Noble gases would be present in proportion to the radioiodine concentration (300 uCi/gm DEI), assuming that for each fuel rod with cladding damage, 100% of the noble gases and 50% of the radioiodines are released to the coolant.

#### **Givens:**

- The detector is located 110 inches horizontally from the outer diameter of the A Recirc suction line. Distance used in calculation is 124 inches from detector to center of source.
- The detector is located at 944' level.
- Shielding consists of 1" of steel (pipe wall).

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3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: <u>02-2943, 01-3939</u>			
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I/mab

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## **1.0 PURPOSE**

This procedure provides instructions for the staffing, activation and operation of the Technical Support Center (TSC) in the event of an emergency at the Monticello Nuclear Plant.

## **2.0 APPLICABILITY**

An emergency condition corresponding to an ALERT classification or higher has been declared at the Monticello Nuclear Plant.

## **3.0 ORGANIZATION AND RESPONSIBILITIES**

3.1 The Emergency Director is responsible for:

3.1.1 Overall coordination and direction of the utility emergency response activities at the TSC.

3.2 The Support Group Leader (TSC Coordinator) is responsible for:

3.2.1 Implementation of this procedure and overall coordination of TSC activation and operation.

3.2.2 Coordination of initial TSC staffing, coordinate FFD evaluation during initial TSC staffing and coordinating the establishment of ERO shift schedules for protracted events.

3.2.3 TSC access including establishment of the TSC access point, Emergency Ventilation System (EVS) operation, personnel ingress, radiological monitoring and badging.

3.2.4 Coordination of administrative support in the TSC including recorders, switchboard, chronological flipchart, document control and distribution.

3.2.5 Coordination of emergency procurement and logistics for the TSC.

3.2.6 Liaison with State, Local, or Federal agency personnel (e.g. NRC, etc.) responding to the TSC.

## **4.0 DISCUSSION**

The Technical Support Center (TSC) is located on the second floor of the plant Administration Building and is approximately 1800 sq. ft in size. This procedure provides instructions for the activation, staffing and operation of the TSC. The Support Group Leader is responsible to coordinate the activities governed by this procedure.

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This procedure consists of instructions for which the Support Group Leader is ultimately responsible. Specific functions contained in this procedure may be assigned to other individuals from the various groups which comprise the Support Group. In these cases, the suggested group to perform the function is identified within parentheses immediately after the instruction, however, other assignments may be dictated by the level of staffing in these groups.

Section 6.1 provides instructions for initial facility activation and staffing including verification of fitness-for-duty of personnel reporting to the TSC. Section 6.2 provides instructions for the establishment of shift schedules for ERO personnel in the event of a protracted emergency. Section 6.3 provides instructions for those activities that should be performed continually while the TSC is in operation. Section 6.4 contains instructions for TSC activities required for plant (or site) evacuation including the personnel accountability process (in the TSC). Section 6.5 contains instructions related to monitoring and controlling TSC habitability and personnel monitoring (dosimetry) in the TSC. Section 6.6 provides general instructions for logistics and emergency procurement.

## **5.0 PRECAUTIONS**

- 5.1 The TSC facility may be used for normal daily operations, training or emergency drills provided that these activities do not interfere with the timely activation or continued operation of the TSC in the event of an emergency.
- 5.2 The TSC and OSC staff may consist of female plant personnel of child bearing age (i.e., may be limited to 20 mrem/month) and/or personnel without Basic Rad Worker Training (i.e., not trained to perform whole body frisking, etc). Consideration should be given to these personnel in the event of an emergency which involves elevated radiation levels or significant radiological consequences.

## **6.0 INSTRUCTIONS**

### **6.1 Initial Activation and Staffing**

- 6.1.1 Upon notification of an emergency, refer to the main ERO Tagboard to determine Support Group Leader assignment in accordance with procedure A.2-001 (EMERGENCY ORGANIZATION).
- 6.1.2 Proceed to the TSC and obtain the Support Group Leader log book, 3-ring binder, and ball-cap from the TSC bookcase and assume the duties of Support Group Leader.
- 6.1.3 Obtain the keys for the TSC bookcase from the Emergency Key Cabinet in the TSC Communications Room. Unlock both TSC bookcase doors and the Technical Manual File Cabinets.
- 6.1.4 Initiate and maintain the Support Group Leader Log in accordance with procedure A.2-502 (RECORD KEEPING DURING AN EMERGENCY).
- 6.1.5 Obtain Form 5790-106-01 (SUPPORT GROUP LEADER CHECKLIST) from the TSC controlled forms file and initiate the checklist.

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**CAUTION**

**Do not operationally test the TSC Accountability Card Reader while the security computer is being placed in the "accountability" mode. Security badge insertion during system reconfiguration may result in system failure or delays in the accountability process.**

- 6.1.6 Verify the TSC Accountability Card Reader is operational by inserting your security badge and observing the indicating light change from red to green and back to red.
- 6.1.7 As TSC Group Leaders report to the TSC, ensure each group leader has the following materials
  - A. Group Leader Log Book and 3-ring binder (specific EIPs and Forms).
  - B. Emergency Plan Implementing Procedures (EIPs) Manuals.
  - C. Group Leader ball-cap.
  - D. Emergency Director gavel.
  - E. Sufficient stationery and supplies including forms from the TSC controlled forms file.
- 6.1.8 As Support Group personnel become available, assign personnel to perform the following functions:
  - A. Setup and maintain the TSC Events Flipchart (stored by TSC bookcase).
  - B. Maintain the TSC Emergency Organization Status Board (located in front, right of the TSC).
  - C. Recorder for the Emergency Director and maintain the Emergency Director Log in accordance with A.2-502.
    - 1. Obtain a copy of the Control Room Log and Shift Supervisors Log (for the current shift only) and deliver to the Emergency Director.
  - D. Document control and administrative support in the TSC and OSC (including Warehouse support in the OSC).
- 6.1.9 Assist radiation protection with setup and activation of the TSC/OSC PIOPS Continuous Air Monitor (CAM) in the hallway adjacent to the elevator (the CAM is normally stored in the TSC).



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- 6.1.10 When directed by the Radiological Emergency Coordinator (REC) coordinate establishing the EFT/EVS boundaries by closing and posting all EFT/EVS boundary doors, (identified on FIGURE 7.1) and activate the EVS in accordance with Section 6.7 of this procedure.
- 6.1.11 If the event is occurring off-hours (i.e., ERO personnel are called in), verify personnel reporting to the TSC are fit-for-duty in accordance with FFD requirements using the following methods as necessary:

**NOTE: The fitness of individuals should be assessed prior to their engaging in safety-related emergency response activities. The fitness-for-duty assessment should include, at a minimum, a determination of whether individuals have consumed alcohol within the last 5 hours.**

- A. Question individuals as they arrive in the TSC, or,
  - B. During initial staffing, make announcements in the TSC (in conjunction with status updates) requesting personnel that are not fit-for-duty or that have consumed alcohol within the last five hours identify themselves.
- 6.1.12 Coordinate the disposition of personnel that indicate they are not fit-for-duty or that have consumed alcohol within the last five hours as follows:
- A. Evaluate whether the individual is essential to the emergency response and the individuals' ability to perform assigned functions.
  - B. Individuals that are considered essential to emergency response should be immediately tested for BAC (i.e., breathalyzer).
    - 1. Individuals whose test results are less than FFD Guidelines (i.e., 0.04 BAC) may engage in emergency response activities.
    - 2. Individuals whose test results exceed FFD Guidelines should be evaluated to determine if they are able to perform their assigned functions, and if so, may be assigned emergency response duties under supervision.
  - C. Non-essential personnel may be directed to a waiting area (e.g., Lunchroom), sent home or evacuated if a plant or site evacuation is conducted. Personnel assigned to the next shift should be directed in accordance with Section 6.2.
  - D. Coordinate any FFD testing that may be required (e.g., breathalyzer analysis) with the Security Group Leader.

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- 6.1.13 Initiate Form 5790-106-02 (TSC STAFFING AND ORGANIZATION CHART) and establish minimum TSC staffing as follows:
- A. Check Main ERO Tagboard to confirm key TSC positions identified on the chart are staffed.
  - B. Check on status of staffing various TSC groups with the respective TSC group leader. Coordinate contacting additional personnel as requested by the group leaders.
  - C. Complete the TSC STAFFING AND ORGANIZATION CHART with the names of qualified, fit-for-duty personnel from the tagboard or present in the TSC.
- 6.1.14 When all positions, denoted on the TSC STAFFING AND ORGANIZATION CHART as "minimum staffing requirements", are filled, inform the Emergency Director that TSC minimum staffing is complete and the TSC may be declared activated and operational.
- 6.1.15 When TSC minimum staffing is complete prompt the Emergency Director to make an announcement in the TSC that the TSC is staffed and operational.
- 6.1.16 Continue to establish full TSC staffing by filling all remaining positions identified on the TSC STAFFING AND ORGANIZATION CHART. When all positions are filled, inform the Emergency Director the TSC is fully staffed.
- 6.1.17 When TSC staffing is complete (i.e., all positions on the TSC STAFFING AND ORGANIZATION CHART are filled), direct excess personnel as follows:
- A. If in an ALERT, personnel may return to their normal work duties (restricted to activities outside the Controlled Area depending on the nature of the event).
  - B. If a Plant (or Site) evacuation is ordered (i.e., a SITE AREA or GENERAL EMERGENCY declared), excess personnel should be evacuated with other non-essential personnel. Prior to their release from the Assembly Point (or departure from the site) 24-hour shift staffing should be considered in accordance with Section 6.2.

## **6.2 ERO Shift Scheduling**

- 6.2.1 If the duration of the event could exceed 12 hours, evaluate the TSC staffing required to support 24-hour coverage. Assist the TSC Group Leaders with the assignment of "next shift" personnel as follows:
- A. Obtain Forms 5790-106-03 through 5790-106-08.

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**NOTE:** The Support Group ERO Shift Schedule includes the TSC Group Leader positions in addition to the other support group positions. The Support Group Leader should coordinate the TSC group leader assignments with the Emergency Director

- B. Establish a date and time the next shift is to begin and record the date and time of the on-duty shift and the next shift in the spaces provided.
  - C. Issue the shift schedules to the respective group leaders and instruct them to identify the present ERO shift and assign the next shift personnel (in their group) for each position identified on the shift schedule.
  - D. Instruct group leaders to consult Form 5790-001-01 (EMERGENCY RESPONSE ORGANIZATION) to identify qualified individuals.
  - E. Collect the completed ERO Shift Schedules and review for completeness.
  - F. Make two copies of the completed ERO Shift Schedules and distribute as follows:
    - 1. Retain the original set of ERO Shift Schedules.
    - 2. Provide a copy of all ERO shift schedules to the Security Group Leader and instruct them to forward the copies to the Security Building.
    - 3. Return one copy of the ERO Shift Schedule to the respective TSC group leader (i.e., REC gets RP & Chemistry ERO Shift Schedule, etc.).
  - G. The completed ERO Shift Schedules should be used to inform next shift ERO personnel of their scheduled work times.
- 6.2.2 If a plant (or site) evacuation is occurring or has occurred (i.e., excess ERO personnel have evacuated to an Assembly Point) and the ERO shift schedules have not been established:
- A. Request the Emergency Director (and REC) delay the release of evacuees from the Assembly Point until next shift ERO assignments are made.
  - B. Complete the ERO Shift Schedules in accordance with Section 6.2.1.

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- C. Ensure evacuees that are assigned to the next ERO shift are informed and they are provided instructions for site access when returning to the plant (i.e., Company ID badge required for site access).

6.2.3 Coordinate the departure of next shift ERO personnel as follows:

- A. Ensure ERO personnel are informed of their next ERO shift in accordance with the completed shift schedules.
- B. Ensure personnel are instructed to contact the plant if their final destination, after departing the site, is a location other than their permanent residence. In this case, they should provide a phone number at which they can be reached if needed sooner than their next scheduled shift.
- C. Next shift ERO personnel should depart the site as follows depending on the situation

1. Normal departure:

If the emergency classification is ALERT or no plant (or site) evacuation is being conducted, next shift personnel should depart the site using normal departure procedures.

2. Evacuation:

If a plant (or site) evacuation is being conducted, the departure of next shift ERO personnel should be coordinated with the other evacuees.

- 6.2.4 If, after initial staffing is established, additional personnel or expertise is needed in the TSC, coordinate contacting additional ERO personnel.

**NOTE:** Refer to the Monticello and Prairie Island Nuclear Emergency Telephone Directory for telephone numbers

### **6.3 Operation of the Technical Support Center**

**NOTE:** This section contains activities for which the Support Group Leader is responsible. These activities should be performed continually, as necessary, while the TSC is in operation

- 6.3.1 Ensure that Emergency Organization Status Board is manned and maintained including (Admin):
  - A. Emergency Classification.
  - B. Key ERO assignments.

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- C. Responsibility for off-site communications (TSC or EOF).
- 6.3.2 Ensure the TSC Events Flipchart is manned and maintained in accordance with Section 6.8.1.
- 6.3.3 Ensure the Recorder for the Emergency Directory is manned and that the Emergency Director Log is maintained in accordance with A.2-502 and Section 6.8.2.
- 6.3.4 Keep the TSC clear of unassigned or unnecessary personnel and equipment which may interfere with the TSC operation.
- 6.3.5 Coordinate periodic general status PA announcements as follows:
  - A. The Lead EC (or designated EC) and Support Group Leader should compose an announcement which consists of accurate, factual information.
  - B. The announcements should be performed by an Emergency Communicator from a work cubicle outside the TSC to minimize disruption in the TSC.
  - C. The announcements should include the following information (if applicable):
    - 1. The present emergency classification level and reason for the classification.
    - 2. The status of the reactor (i.e., shutdown, etc.) and the status of any systems critical to safe shutdown or reactor core cooling (e.g., HPCI, RHR, etc.)
    - 3. A brief summary of accident mitigation efforts underway or planned by the TSC and the objectives of those mitigation efforts.
    - 4. A summary of personnel status including the results of personnel accountability, injuries, etc.
- 6.3.6 Assist the Emergency Director with the conduct of periodic briefings in the TSC as follows:
  - A. Briefings should be conducted approximately every 30 minutes or as determined by the Emergency Director.
  - B. During briefings and announcements, the noise level in the TSC should be kept to a minimum and all key TSC Group Leaders should participate.
  - C. Significant events should be announced in the TSC as they occur.

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- 6.3.7 If a plant (or site) evacuation is conducted, coordinate personnel accountability in the TSC in accordance with Section 6.4
- 6.3.8 Monitor the results of TSC and Control Room habitability surveys (from the REC) and refer to Section 6.5 for:
  - A. The establishment of the EFT and EVS boundaries in the event of a radioactive release.
  - B. The establishment of strict contamination control measures in the EFT and EVS boundaries.
  - C. Dosimetry issuance to TSC personnel in the event of a plant evacuation or elevated radiation level in the TSC.
- 6.3.9 Provide logistics support for TSC operation including emergency procurement in accordance with Section 6.6. Coordinate off-site logistics support with the Logistics Coordinator in the EOF (when staffed).

#### **6.4 Evacuation and Personnel Accountability**

- 6.4.1 When the Security Group Leader indicates the security computer and accountability card readers are ready, coordinate the personnel accountability process in the TSC in accordance with step A. If the computer method is not operational refer to step B.

**NOTE: When compiling accountability lists, include only those personnel whose whereabouts and physical condition are actually known.**

- A. If the TSC Accountability Card Reader is operable:
  - 1. Make an announcement within the TSC instructing personnel to:
    - a. Give their security badge to the person collecting them but maintain control of their TLD.
    - b. Stay in the TSC while the accountability is being completed.
    - c. Ensure the correct security badge is returned to them upon completion of the accountability process.
  - 2. Direct a support group member to collect the security badges from personnel in the TSC and insert them into the TSC accountability card reader.
  - 3. When all badges have been entered in the card reader, immediately return them to the individual.

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4. Using Form 5790-107-01 (EMERGENCY ACCOUNTABILITY SIGN-IN FORM) prepare a list of personnel assigned to the TSC but not present during the card reader entry process.
5. Immediately forward the completed list to the Security Group Leader.

B. If the TSC Accountability Card Reader is NOT operable:

1. Using Form 5790-107-01 prepare a list of:
  - a. All personnel in the TSC.
  - b. Personnel assigned to the TSC but are not present due to an Emergency Work Team task.
2. Immediately forward the completed list to the Security Group Leader.

6.4.2 Dispatch a runner to obtain the completed EMERGENCY ACCOUNTABILITY SIGN-IN FORM from the Control Room and immediately forward the form to the Security Group Leader.

**NOTE: Since no accountability card reader exists in the Control Room the accountability process for all operators and personnel assigned to the Control Room will always require completion of an EMERGENCY ACCOUNTABILITY SIGN-IN FORM.**

6.4.3 Excess TSC personnel that were released to their normal workstations (at ALERT) should evacuate with other non-essential personnel. Prior to their departure from the Assembly Point (or site) coordinate the assignment of next shift ERO personnel in accordance with Section 6.2.

6.4.4 Upon completion of the accountability process, if continuous personnel accountability in the TSC is desired, initiate a Form 5790-106-10 (EMERGENCY RESPONSE FACILITY SIGN-IN/OUT FORM) for the TSC. Update the log as personnel leave or return to the TSC.

**NOTE: The establishment of continuous accountability of TSC personnel should be considered if contamination control is established (by the REC) for the EFT and EVS envelopes. In this case, accountability (i.e. logging personnel in and out) may be performed at the step-pad set-up for entry/exit to the EFT or EVS envelopes.**

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## 6.5 Habitability and Personnel Monitoring

**NOTE:** Upon activation of the TSC, Radiation Protection will conduct periodic habitability surveys of all emergency response facilities including the TSC. The results of these surveys should be posted on the RP Status Board in the TSC.

- 6.5.1 Periodically review the results of TSC habitability surveys and effluent release levels (both posted on RP Status Board).
- 6.5.2 When directed by the REC or when radioactive effluent levels exceed the ALERT level (specified in A.2-101 (CLASSIFICATION OF EMERGENCIES)), coordinate the establishment of the EFT/EVS boundaries and activation of the EVS as follows:

**NOTE:** The REC will recommend manual initiation of the EFT for the Control Room and EVS for the TSC and adjoining areas in the event effluent releases exceed the levels in Guideline 1, Radioactive Effluents of A.2-101 for the ALERT classification.

- A. Ensure all EFT and Emergency Ventilation System (EVS) boundary doors (identified in FIGURE 7.1) are closed.
  - B. Post all EFT and EVS boundary doors (both sides) with EFT/EVS BOUNDARY-KEEP DOOR CLOSED signs.
  - C. Activate the TSC/BOSC EVS in accordance with Section 6.7.
  - D. Periodically check the EFT/EVS boundary doors to ensure they are properly closed (and latched).
- 6.5.3 Assist radiation protection in establishing strict contamination control measures for the EFT/EVS boundaries. as follows:

**NOTE:** When, during the conduct of habitability surveys, loose surface contamination levels in excess of 1000 DPM/100cm<sup>2</sup> are found in the EFT or EVS boundaries, the REC will direct the establishment of strict contamination control measures.

- A. Ensure all EFT or EVS boundary doors (identified in FIGURE 7.1) are closed and posted EFT or EVS BOUNDARY-CONTAMINATION CONTROL IN EFFECT-NO ENTRY/EXIT.
- B. Assist in the setup of a step-off pad and frisker (Count Rate Meter and 2" Pancake Probe or equivalent) by the West Door next to Elevator.
- C. Make an announcement on the Plant PA System that strict contamination control measures are in effect within the EFT or EVS boundaries, all access/egress is through the door by the elevator and all personnel entering should perform a whole body frisk at the step-off pad.



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- D. Control eating and drinking in the EFT or EVS Boundary Areas until foodstuffs and surfaces are properly monitored for contamination.
- E. Consider continuous personnel accountability in accordance with Section 6.4.

**NOTE: If personnel have Electronic Dosimeters (ED), another dosimeter is not required.**

- 6.5.4 If dose rates in the TSC (within the EFT or EVS boundaries) are increasing and expected to reach .5 mr/hr, at the discretion of the REC and/or ED, issue dosimetry as follows:
  - A. Immediately after (or in conjunction with) the personnel accountability process issue one 0-5R dosimeter to each individual in the TSC.
  - B. Ensure dosimeters are reading less than 1 rem prior to issuance. If not, rezero prior to issuing.
  - C. Record the dosimetry issuance data including name (or TLD number), dosimeter reading in and dosimeter reading out (when collected) on Form 5790-201-02 (DOSIMETRY ISSUANCE LOG).

**NOTE: The REC and/or ED is/are responsible to direct the issuance of dosimetry in manned response centers (TSC, OSC and Control Room) if dose rates in any response center (in EFT/EVS envelope) are increasing and expected to reach .5 mr/hr.**

- 6.5.5 Ensure that all personnel reporting to the TSC (after the dosimetry issuance process) have adequate dosimetry. If not, issue appropriate dosimetry in accordance with Section 6.5.4.
- 6.5.6 When dosimetry is issued in the TSC in accordance with Section 6.5.4, verify high range dosimetry is issued in other manned emergency response centers as follows:
  - A. Contact the OSC Coordinator and verify electronic dosimeters or high range dosimeters are issued to all personnel in the OSC.
  - B. Contact the Shift Manager/Shift Supervisor and either:
    - 1. Verify electronic dosimeters or high range dosimetry is being issued to the Control Room staff by Radiation Protection personnel from Access Control, or

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2. Coordinate the issuance of dosimetry to Control Room personnel yourself. 0-5 R dosimeters are located in the emergency equipment locker in the Control Room. DOSIMETRY ISSUANCE forms are located in the Control Room file drawer labeled Emergency Plan Forms.

- 6.5.7 Immediately after dosimetry is issued in the TSC and other manned response centers, assist Radiation Protection in the establishment of secondary access control in the Security Building in accordance with A.2-411 (ESTABLISHMENT OF A SECONDARY ACCESS CONTROL) as follows:

**NOTE:** Upon completion of a plant (or site) evacuation due to radiological exposure concerns, all personnel in on-site manned response centers are issued high range dosimetry. To ensure incoming personnel (on-site and off-site) are properly monitored, a dosimetry issuance station should be established in the Security Building where badged, incoming personnel receive high range dosimetry. If the Security Building becomes uninhabitable, the Dosimetry Issuance Station should be established at the EOF.

- A. Upon completion of the dosimetry issuance process, collect all Dosimetry Issuance Forms used to issue dosimetry in the TSC, OSC, Control Room and Access Control and deliver them to the Security Building.
- B. If necessary, provide one support group member to assist at secondary access control in the Security Building as follows:
  1. For badged personnel entering the Protected Area issue one 0-5 R dosimeter, record the dosimetry data on a Dosimetry Issuance Form and confirm the individual has a TLD on their security badge.
  2. Refer individuals that are not badged (at Monticello) to the EOF for access processing (except NRC and off-site emergency response personnel such as Fire Department, LLEA and ambulance personnel).
- 6.5.8 If elevated dose rates exist outside the Controlled Area, periodically instruct TSC personnel to check their dosimetry for accumulated exposure. These instructions may be provided during the TSC briefings (conducted by the Emergency Director).
- 6.5.9 If thyroid doses for TSC, OSC, Control Room or Access Control personnel exceed, or are projected to exceed 25 rem, assist the REC in the administration of Potassium Iodide in accordance with A.2-304 (THYROID PROPHYLAXIS).

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## **6.6    Logistics and Emergency Procurement**

**NOTE:** Refer to the Monticello and Prairie Island Nuclear Emergency Telephone Directory for the telephone number of local off-site emergency response organizations, vendor services and federal and state government agencies.

- 6.6.1 Provide logistics support for the TSC, OSC, Control Room, Access Control and Security Building including:
  - A. Administrative support including emergency procedure processing, forms completion and status board upkeep.
  - B. Document control support including records retention, drawing retrieval, etc.
  - C. Warehouse support including spare parts and equipment retrieval and emergency procurement.
  - D. Food and beverages from local off-site suppliers.
- 6.6.2 Ensure warehouse support is available in the OSC for spare parts retrieval, procurement and material management.
- 6.6.3 Function as the plant liaison with the Xcel Energy Communications department for the following activities:
  - A. Coordination of press interviews (if conducted) with plant management.
  - B. Rumor control.
  - C. Coordination of information for press releases.
- 6.6.4 Function as the liaison and primary on-site contact with off-site agencies (i.e., NRC Incident Response Team, INPO, etc.) for logistics matters such as:
  - A. Identification of local lodging (e.g., hotels, etc.).
  - B. On-site work space and communications arrangements.
  - C. Access to an interface with plant and corporate management personnel.
  - D. Identify location of procedures, drawing and other documents.

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6.6.5 Coordinate (and make) requests for local off-site emergency response organization support including:

- A. Fire Department
- B. Ambulance and hospital
- C. Local law enforcement agencies (LLEA).

**NOTE: The Security Group is the primary contact for LLEA.**

6.6.6 Coordinate procurement of off-site vendor services with the primary on-site contact and the EOF Logistics Coordinator including:

- A. Contract Health Physics support (REC is primary contact).
- B. General Electric Emergency Support Program (Engineering Group Leader is primary contact in accordance with A.2-210, (ENGINEERING SUPPORT IN THE TSC)).
- C. Contract radwaste shipping services including shipment of post accident samples off-site for analysis.
- D. Contract analytical laboratory services (Teledyne Inc.) for the analysis of environmental samples.

6.6.7 When the emergency is terminated, coordinate follow-up activities including:

- A. Assist the Emergency Director in preparation of short and long term recovery actions to return the plant to an operational status (prior to recovery phase transition).
- B. Collect, compile and retain all emergency records, logs, checklists, etc. for review.
- C. If necessary, coordinate the following activities for the NRC:
  - 1. Sequestering of plant components or systems until inspected.
  - 2. Scheduling and conduct of personnel interviews.

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## 6.7 TSC/BOSC Emergency Ventilation System (EVS) Operation

- 6.7.1 If the event involves radiological releases (Stack, Reactor Building Vent, HPV or unmonitored) to the environment, and if directed by the REC, shift the TSC emergency ventilation system to the emergency mode as follows:

**NOTE 1:** TSC-EVS Control Panel C-354 is located in the TSC HP Room.

**NOTE 2:** HS-9346 (V-AC-14 Remote Shutdown) is a toggle switch which controls the Second Admin Bldg Addition Ventilation Unit and is located in the 3rd floor Admin Bldg East H&V Room on the south wall on the side of the VAV SET POINT TRANSMITTER Panel (next to Panel LL-31).

### **CAUTION**

If during activation or operation any trouble light illuminates (Yellow lights on TSC-EVS Control Panel C-354) return the NORM/EMERG switch to the NORM position and notify the Engineering Group Leader.

- A. Verify EFT is in the High Radiation Mode by calling the Control Room.
  - B. Secure V-AC-14 by placing HS-9346 (V-AC-14 Remote Shutdown) in OFF.
  - C. Start V-FU-17 and V-EAC-17 by placing HS-4894 (Panel C-354) in EMERG.
  - D. Verify on Panel C-354 that lights VD-9300, VD-9301, VD-9335, and VD-9336 change from Red to Green.
  - E. Verify on Panel C-354 that lights VD-9261 and VD-9262 change from Green to Red.
- 6.7.2 During system operation periodically observe the system to confirm proper operation as follows:
- A. At least every 8 hours check DPI-9320, the D/P manometer for TSC/BOSC envelop pressure, located in SW corner of TSC. Maintain D/P >0 in H<sub>2</sub>O.
  - B. At least every 8 hours check DPI-9321, the D/P manometer for TSC/BOSC envelop pressure, located in NW closet of the TSC (Ops key 269). Maintain D/P >0 in H<sub>2</sub>O.
- 6.7.3 Check and adjust TSC temperature as necessary to maintain room temperature. V-EAC-17 Temp Controller (TSC-9334) is located next to Panel C-354.

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6.7.4 When the TSC/BOSC ventilation system is no longer required in the EMERG mode, shutdown V-FU-17 and V-EAC-17 by placing HS-4894 (Panel C-354), in NORM.

6.7.5 Restart V-AC-14 by placing HS-9346 (V-AC-14 Remote Shutdown) in ON.

## **6.8 TSC Support Group Instructions**

### **6.8.1 Chronological Flipchart**

- A. The Chronological Flipchart Recorder should be stationed strategically in the TSC to facilitate the timely and accurate flow of information from key TSC personnel (e.g., ED, REC, EGL, etc.).
- B. The Flipchart Recorder should monitor the dialogue in the TSC and record significant events and the times that they occur including:
  - 1. Classification changes.
  - 2. Changes in release rates.
  - 3. Off-site protective actions recommended.
  - 4. Report of missing persons, injuries or other related events.
- C. As Flipchart sheets are filled they should be prominently posted in a designated location (hallway immediately outside the TSC).

### **6.8.2 Emergency Director Recorder (Narrative Log Keeper)**

- A. The Emergency Director Recorder should make all entries into the ED Log Book (or an equivalent log consisting of narrative log sheets which are numbered sequentially and bound in a three-ring binder).
- B. The ED Recorder should be stationed immediately adjacent to the ED to facilitate the timely and accurate flow of information.
- C. The ED Recorder should document all significant information and communications involving the Emergency Director (e.g., decisions made, strategies developed and messages communicated) in accordance with A.2-502.
- D. The ED Recorder should periodically review the entries in the log with the Emergency Director to verify accuracy of the entries.

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#### 6.8.3 Document Control

- A. The TSC Support Group member assigned to document control should be stationed near the Support Group Leader in the TSC.
- B. TSC Document Control should receive completed, approved original documents and forms from various TSC personnel (Emergency Communicators, REC, etc.) when their immediate use is no longer required.
- C. TSC Document Control should review the forms for completeness and file in an appropriate container provided for emergency records.
- D. TSC Document Control should periodically inventory the blank forms in the TSC Controlled Forms file to ensure sufficient blank forms are available.

#### 6.8.4 Form Duplicating and Distribution (copy machine operator)

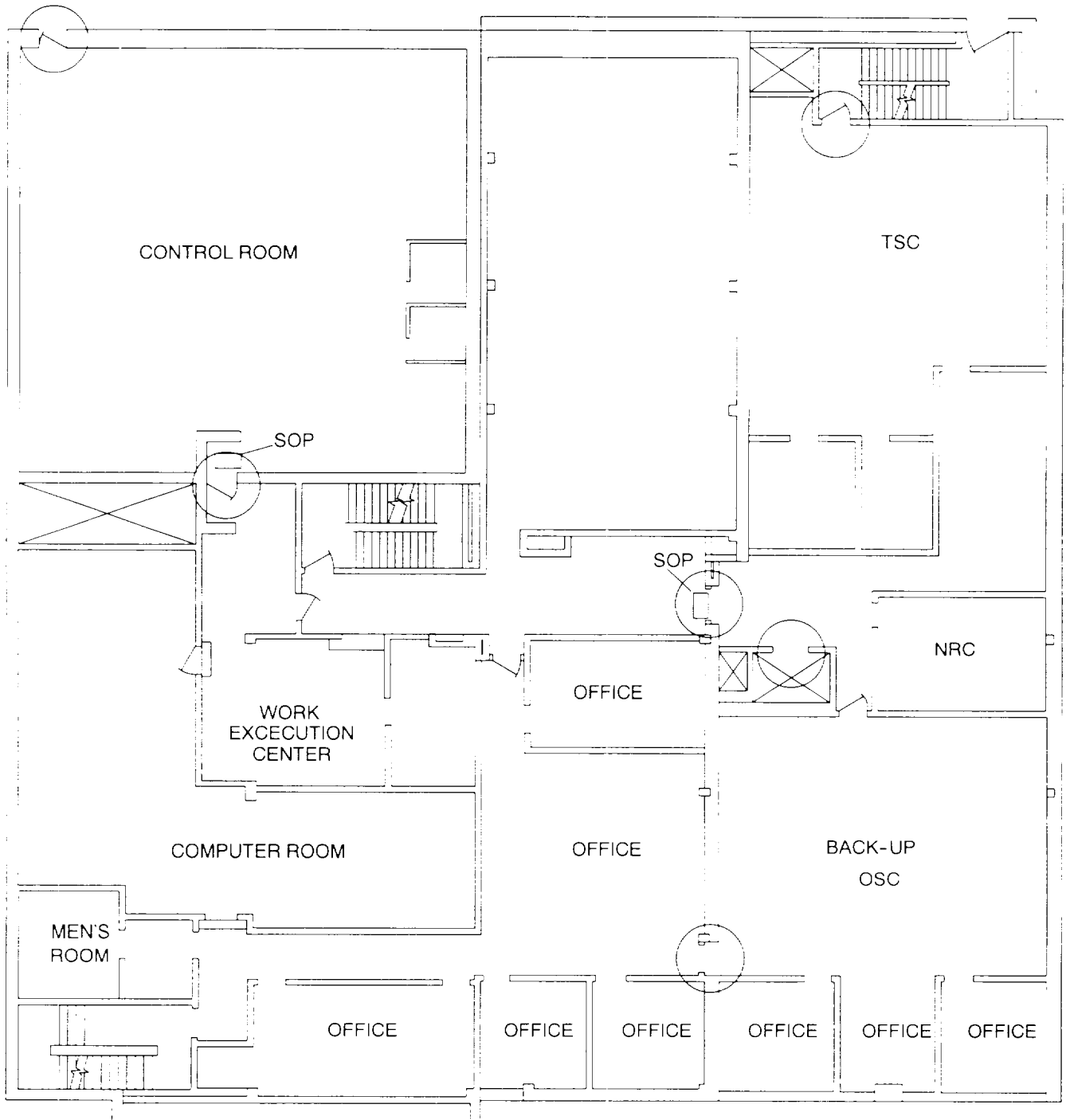
- A. The TSC support group member assigned form duplicating and distribution should be stationed near the Support Group Leader.
- B. The copy machine operator should receive documents for printing (and distribution) from the Emergency Communicators, Support Group Leader or other TSC personnel.
- C. The copy machine operator should obtain the rubber stamp indicating the distribution of duplicated forms (to personnel), stamp the original document, make the required number of copies and distribute as follows:
  1. Prior to NRC Initial Site team arrival:
    - a. Stamp the document with the TSC Copy Distribution Stamp only.
    - b. Distribute in accordance with stamp instructions.
  2. After NRC Initial Site Team arrival:
    - a. Stamp the document with both TSC and NRC distribution stamps.
    - b. Distribute in accordance with stamp instructions.
- D. Upon completion of copying completed forms for distribution, the copy machine operator should forward the original document to TSC Document Control and inform the requestor that copying and distribution is complete.

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## 7.0 FIGURES

### FIGURE

#### 7.1 EFT/EVS Boundary Floor Plan



A.2-106-1



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## 1.0 PURPOSE

This procedure provides instructions and guidance for activation and continued operation of the primary Operational Support Center (OSC) during a declared emergency (Alert or higher) at the MNGP.

Section 6.9 satisfies commitment M82031A and M85091A.

## 2.0 APPLICABILITY

2.1 An emergency classification (Alert or higher) has been declared at the Monticello Plant and,

2.2 The Emergency Director has ordered the Operational Support Center activated.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

3.1 The OSC Coordinator is responsible for:

3.1.1 Overall coordination of activation and operation of the Operational Support Center.

3.1.2 Performance of personnel accountability for OSC personnel in the event of an evacuation.

\$ 3.1.3 Selecting, assembling and dispatching OSC emergency teams as requested by the TSC and Control Room.

3.2 The Radiation Protection Coordinator (RPC) is responsible for:

3.2.1 Radiological monitoring and control in the OSC including habitability surveys.

3.2.2 Development and issuance of Emergency RWPs and radiological briefings of OSC emergency team members as directed by the OSC Coordinator.

3.2.3 Providing radiation protection support for OSC emergency teams, in-plant survey teams, on-site (out-of-plant) survey teams and off-site Field Teams.

3.3 The Chemistry Coordinator is responsible for:

3.3.1 Coordination of in-plant chemistry sampling and analysis activities.

3.3.2 Coordination of sample logging, identification and documentation.

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- 3.4 Mechanical, Electrical and I&C Maintenance Supervisors are responsible for:
  - 3.4.1 Selection, assembly and briefing of OSC emergency teams as directed by the OSC Coordinator.
- 3.5 Maintenance Engineering personnel are responsible for:
  - 3.5.1 Technical support in the OSC including manning technical communications links with the TSC, maintaining status boards, OSC team coordination (via portable radios) and technical support to the OSC Coordinator.
- 3.6 Materials Engineering Support personnel are responsible for:
  - 3.6.1 Warehouse and inventory control support in the OSC including spare/replacement parts identification and retrieval.

#### **4.0 DISCUSSION**

This procedure provides instructions for the activation, staffing and operation of the Operational Support Centers. The Primary OSC is located on the first floor of the Plant Administration building. This facility consist of a Command center (located in the Maintenance Supervisor's area) and a staging area for OSC teams (in the Plant Lunch Room). Plant drawings and technical reference materials are readily available in the area and adjacent maintenance offices.

The OSC is staffed by personnel from the Maintenance Group (e.g., mechanical, electrical and I&C), Radiation Protection, Chemistry, and Nuclear Plant Helper Groups. Initial staffing of key OSC positions is facilitated by the OSC ERO Tag Board located in the OSC Command Center. The tag board is designed to provide initial direction to OSC personnel in the initial (staffing) stages of an emergency when the OSC Coordinator may not be available (not yet staffed) to coordinate the various emergency response activities.

A backup (alternate) Operational Support Center is located on the second floor of the Plant Administration building. The backup OSC is located within the TSC Emergency Ventilation System boundary and would be activated and used in the event the Primary OSC becomes uninhabitable.

Instructions in this procedure apply to both the operation of the Primary OSC and the Back-up OSC unless noted otherwise.

#### **5.0 PRECAUTIONS**

- 5.1 Search and rescue of missing persons should take precedence over repair or corrective actions unless such actions are necessary to effect rescue or protect the immediate health and safety of the general public.
- 5.2 Emergency repair/re-entry team members should be selected from volunteers if the team mission involves high risk or exposure expected to be in excess of MNGP administrative or NRC limits.

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## 6.0 INSTRUCTIONS

### 6.1 Initial Activation and Staffing

6.1.1 Upon notification of an emergency, refer to the OSC ERO Tagboard to determine initial OSC Coordinator assignment as follows:

A. If no one has assumed the OSC Coordinator position, turn the tag and sign-in as OSC Coordinator.

6.1.2 Establish residence at the OSC Command table (in the maintenance support area adjacent to the Lunchroom).

6.1.3 Initiate and complete Form 5790-107-06 (OSC COORDINATOR CHECKLIST) to support initial activation and staffing of the OSC.

**NOTE: The fitness of individuals should be assessed prior to their engaging in safety-related emergency response activities. The fitness-for-duty assessment should include, at a minimum, a determination of whether individuals have consumed alcohol within the last five hours.**

6.1.4 If FFD questioning is conducted (off-hours only), coordinate the disposition of individuals that indicate they are not fit-for-duty or that have consumed alcohol within the last five hours as follows:

A. Evaluate whether the individual is essential to the emergency response and the individual's ability to perform assigned functions.

B. Individuals considered essential to the emergency response should be immediately tested for BAC (i.e., breathalyzer) and:

1. Individuals whose test results are less than FFD guidelines (0.04% BAC) may engage in emergency response activities.
2. Individuals whose test results exceed FFD guidelines should be evaluated to determine if they are able to perform their duties and, if so, may be assigned emergency response duties under supervision.

C. Non-essential personnel may be directed to a waiting area (e.g., Lunchroom), sent home, or evacuated (if a Plant or Site evacuation is conducted). Personnel assigned to the next ERO shift should be directed in accordance with Section 6.2.

6.1.5 When the OSC is fully staffed, direct excess personnel as follows:

A. If in an Alert, personnel may return to their normal work duties (restricted to activities outside the Controlled Area depending on the event) or they may be instructed to standby in the Lunchroom (or Cold Machine Shop depending on habitability).

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- B. If a Plant (or Site) evacuation is imminent (i.e., in a Site Area or General Emergency) excess OSC personnel should be evacuated with other non-essential personnel. Prior to their departure from the Assembly Point (or site) 24-hour OSC staffing should be considered in accordance with Section 6.2.

- 6.1.6 Review Form 5790-107-06 for completeness and refer to Section 6.3 for continuing OSC operating instructions.

## **6.2 ERO Shift Scheduling**

- 6.2.1 If the duration of the event could exceed 12-hours, evaluate the OSC staffing required to support 24-hour coverage.
- 6.2.2 If and when requested by the Maintenance Group Leader (or TSC Coordinator), coordinate the assignment of ERO shifts for the OSC groups by assisting with the completion of Form 5790-106-07 (ERO SHIFT SCHEDULE - MAINTENANCE GROUP) and forwarding the completed schedule to the Maintenance Group Leader.
- 6.2.3 Coordinate the completion of ERO Shift Schedules for other groups (represented in the OSC) with their respective Group Leader in the TSC.
- 6.2.4 If 24-hour coverage is required, coordinate the departure of "next shift" OSC personnel as follows:
  - A. Ensure ERO personnel are informed of their next ERO shift in accordance with the ERO Shift Schedule.
  - B. Ensure personnel are instructed to contact the TSC if their final destination, after departing the site, is a location other than their permanent residence. In this case, they should provide a telephone number at which they can be reached if needed sooner than their next scheduled shift.
  - C. Ensure ERO personnel are instructed to carry their Company ID card to regain access to the site (in the event road blocks are established by off-site authorities).
- 6.2.5 Next shift ERO personnel should depart the site as follows (depending on the situation):
  - A. If no releases (above ODCM limits) are occurring and no off-site protective actions are in effect, personnel may depart the site as normal.

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- B. If significant releases are occurring or off-site protective actions are in effect or a Plant/Site evacuation is conducted, coordinate the departure of next shift ERO personnel with other evacuees and the county authorities (Sheriff Dispatcher or County EOC). The departure route should take personnel upwind of any releases.

### **6.3 Operation of the OSC**

- 6.3.1 Ensure the OSC Coordinator telephone is continuously manned.
- 6.3.2 Ensure the OSC-TSC Plant Status Communicator link is manned and the OSC Plant Status board maintained in accordance with A.2-504 (EMERGENCY COMMUNICATOR DUTIES IN THE TSC AND OSC).
- 6.3.3 Ensure the OSC Emergency Work Status Communicator (OSC-TSC telephone) link and the OSC radio console are continuously manned and the OSC PERSONNEL AVAILABILITY and OSC TEAM TRACKING boards are maintained in accordance with A.2-504.
- 6.3.4 Provide periodic status updates in the OSC (Command Center and Lunchroom as applicable) in accordance with Section 6.4.
- 6.3.5 Provide periodic status updates to the Maintenance Group Leader in accordance with Section 6.4.
- 6.3.6 Process Form 5790-107-04 (EMERGENCY WORK REQUEST) and dispatch emergency teams from the OSC in accordance with Section 6.6 and A.2-206 (WORK CONTROL DURING EMERGENCIES).
- 6.3.7 Ensure OSC Radiation Protection personnel perform periodic habitability surveys in the OSC (Access Control, Security Building, Control Room, etc.) in accordance with Section 6.9 and:
  - A. Post the survey's results on the OSC Plant Status board.
  - B. Issue dosimetry to OSC personnel, (if necessary).
  - C. Establish contamination controls in the OSC (if necessary).
  - D. As applicable, recommend if/when relocation to the backup OSC is advisable (based on OSC habitability).
- 6.3.8 As necessary, monitor the SPDS/ERIS data to determine current plant conditions and radiation levels in accordance with Section 6.5.
- 6.3.9 If/when plant problems arise, evaluate the problem using the collective expertise in the OSC Command Center. Provide recommendations to the TSC via the Maintenance Group Leader.

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- 6.3.10 As necessary, provide OSC personnel for OSC-TSC Task Groups as follows:
- A. Task group assignments should be based on the requisite expertise for the particular problem.
  - B. Task groups may use the work area immediately outside the TSC or TSC NRC Conference Room (if not occupied by the NRC).
  - C. OSC task group member name tags should be relocated to the OSC TEAM TRACKING BOARD and the task group assigned a team number.
  - D. Upon completion of their assignment members of the task group may be used to brief OSC teams prior to being dispatched, they may participate on the OSC team itself, or dissolve back into the OSC staff.
- 6.3.11 If the duty Shift Manager (or Shift Supv) requests additional Operations personnel, dispatch the requested operators and relocate their name tag(s) on the OSC PERSONNEL AVAILABILITY board (to the assigned section).
- 6.3.12 If spare parts or materials are required, direct OSC personnel (the Support Group members familiar with purchasing, inventory control, and warehousing) to retrieve the spare parts or materials from the on-site warehouses.
- 6.3.13 If spare parts or materials are required that are not stocked in the on-site warehouse(s), forward the request to the EOF (EOF Coordinator) via the TSC.
- 6.3.14 As necessary, direct OSC Document Control to retrieve plant drawings, technical manuals or other pertinent documents for use in OSC team briefings or OSC-TSC Task Groups.
- 6.3.15 If conducting operations from the Primary OSC and habitability or other conditions dictate, request to relocate the OSC function to the backup OSC on 2nd floor of Admin Bldg. If/when directed, relocate the OSC in accordance with Section 6.13.

#### **6.4 Status Update Instructions**

- 6.4.1 The OSC Coordinator (or a designee) should conduct periodic status updates in the OSC (Command Center and Lunchroom as applicable) including the following topics:
- A. Plant status including reactor condition (provided by the licensed operations member in the OSC).
  - B. Accident mitigation strategies (developed by the TSC) and the status of mitigation actions underway or planned.

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- C. Progress report of OSC teams presently dispatched.
  - D. On-site and off-site radioactive releases.
  - E. On-site and off-site protective actions taken (recommended to or implemented by off-site authorities).
  - F. OSC habitability and in-plant radiation conditions.
  - G. Status check of staffing in each functional group within the OSC (Electricians, I&C, RP, etc.)
- 6.4.2 The OSC Coordinator should provide (continuous) status updates to the Maintenance Group Leader which include the following topics:
- A. The status of OSC emergency teams out in the field (in-plant).
  - B. The status of OSC teams ordered (by the TSC) but not yet dispatched.
  - C. The results of OSC teams that have completed their mission and returned to the OSC.
  - D. Any personnel injuries, overexposures or contaminations.
  - E. OSC staffing, habitability and other needs.

## **6.5 SPDS/ERIS Vax Instructions**

- 6.5.1 Using a PC terminal, log onto the MNGP Computer Network displaying the desktop screen. If using the laptop in the OSC, then log onto the network using "**mtHQEC**" for both the logon "User name" and "Password". For access through a desktop computer, logon using your current "User name" and "Password".
- 6.5.2 From the computer terminal desktop "Start" menu, initiate the "VAXes" application by choosing "Business Applications", "Kea 5.0", and "VAXes" from the sequential drop down menus.
- 6.5.3 Respond to the "Host" prompt by typing LARRY or MOE.
- 6.5.4 Respond to the USERNAME: prompt by typing HQEC and pressing RETURN.
- 6.5.5 Respond to the PASSWORD: prompt by typing HQEC and pressing RETURN.
- 6.5.6 Respond to the FILE NUMBER: prompt by entering the number of the desired display (1-28).



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- 6.5.7 Review the data display for desired information. Ensure the status code (displayed on the right of the screen) is code 1 indicating the data is good. If not, the accuracy of the data is questionable.
- 6.5.8 To change display screens (select other data), enter CTRL Y and respond to the WOULD YOU LIKE TO SELECT ANOTHER FILE: prompt by entering Y and pressing RETURN.
- 6.5.9 To exit the system, enter CTRL Y and respond to the WOULD YOU LIKE TO SELECT ANOTHER FILE prompt by entering N and pressing RETURN.

## 6.6 Emergency Work Control and Search and Rescue

### **CAUTION**

The process of selecting, briefing and preparing emergency teams should be followed for all emergency teams dispatched from the OSC. However, there are certain emergency tasks for which time may be a crucial factor (lifesaving, etc.). In these cases, team preparation should be expedited while ensuring the safety of team members is adequately protected.

- 6.6.1 When notified by the TSC of a task requiring an OSC emergency team:
  - A. Review the EMERGENCY WORK REQUEST form (if one was initiated for the work).
  - B. Obtain a brief description of the task, the work location and the priority code (1-3) which indicates the timeliness and relative importance of the task to other emergency work already identified.
  - C. Identify any qualifications or special skills required to perform the task.
- 6.6.2 Announce and briefly review the task in the OSC Command Center and determine:
  - A. The type of personnel to assign to the OSC team (e.g., electricians, mechanical maintenance, Rad Prot Tech (RPT), etc.) and personnel available by reviewing the OSC PERSONNEL AVAILABILITY board to identify potential team candidates.
  - B. The topics to be reviewed in the team pre-job briefing including precautions, tagouts, isolations, and special instructions.
- 6.6.3 Direct an OSC Maintenance Supervisor and RPC to select, assemble, brief and prepare the emergency team in accordance with Section 6.7.

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- 6.6.4 Assign an emergency team number (the next team number in numerical sequence from the OSC TEAM TRACKING board) and direct the OSC TEAM TRACKING board be updated with the team number, task description and priority (1-3).
- 6.6.5 When the emergency team members have been assigned, direct the OSC TEAM TRACKING board be updated by moving team member name tags from the OSC AVAILABILITY board to the OSC TEAM TRACKING BOARD.
- 6.6.6 Complete the EMERGENCY WORK REQUEST form (if used) with the names of the emergency team members.
- 6.6.7 When the team is prepared, direct the OSC Team Communicator to establish and maintain radio contact with the team.
- 6.6.8 When the team is dispatched from the OSC, inform the Maintenance Group Leader. Direct the OSC Team Communicator(s) to update the TSC Emergency Work Status board keeper via 2-way link.
- 6.6.9 If problems are encountered by the emergency team, inform the TSC. Assist the TSC (and emergency team) in developing alternate methods, routes or other strategies to overcome any problems encountered. If necessary, recall the team to the OSC.
- 6.6.10 When teams return to the OSC, assign a Maintenance Supervisor and RPC to debrief the team (if necessary).
- 6.6.11 Ensure the OSC TEAM TRACKING and OSC PERSONNEL AVAILABILITY boards are updated upon return of the team.
- 6.6.12 Ensure the OSC Team Communicator updates the TSC Emergency Work Status board keeper via the 2-way link.
- 6.6.13 When briefed on the results of the emergency team mission, update the Maintenance Group Leader.
- 6.6.14 Retain Form 5790-107-04, Form 5790-107-02 (EMERGENCY RWP CHECKLIST) and Form 5790-401-01 (EMERGENCY EXPOSURE AUTHORIZATION FORM) and any other documents related to the emergency team mission. Submit the documents to the document control for retention as emergency records.

## **\$ 6.7    Emergency Team Selection, Briefing, and Preparation**

- 6.7.1 Select team members by referring to the OSC PERSONNEL AVAILABILITY board and in accordance with the following guidelines:
  - A. For fire-fighting activities select only Fire Brigade qualified personnel.

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- B. For operations activities (valving, etc.) select qualified Operators.
- C. For search and rescue activities or tasks which involve mechanical, electrical or I&C expertise consider:
  - 1. Soliciting volunteers if the task involves emergency exposures (refer to A.2-401 (EMERGENCY EXPOSURE CONTROL)).
  - 2. Special skills, abilities or experience.
  - 3. Individual's available exposure for tasks which are limited to exposures within MNGP administrative limits.

6.7.2 The Maintenance Supervisor assigned (and a RPT) should complete (if used) PART B of Form 5790-107-04.

**NOTE: If protective anti-contamination clothing will be required, team members may suit-up during the pre-job briefing (to expedite team preparation).**

- 6.7.3 The RPC should assign a RWP number to PART B of Form 5790-107-04 in accordance with the following criteria:
- A. If current radiological conditions are normal (or near normal and the potential for significant change during the job is low), consider assigning the work to an existing Extended or Specific RWP (provided protective clothing and precautions specified on the existing RWP are adequate).
  - B. If radiological conditions are significantly elevated or there is high potential for changes in conditions during the job, assign the work to an existing Emergency Extended RWP (provided protective clothing and precautions specified on the existing Emergency Extended RWP are adequate).
  - C. If conditions are such that work cannot be assigned to an existing Extended, Specific, or Emergency Extended RWP, then initiate and complete Form 5790-107-02 in accordance with Section 6.12.
- 6.7.4 If emergency exposure(s) in excess of MNGP administrative limits are authorized for the task, the RPC assigned (or other RP personnel present) should initiate a Form 5790-401-01 for each team member in accordance with A.2-401.
- 6.7.5 The Maintenance Supervisor, emergency team members (or other OSC personnel) should obtain any reference or technical information (prints, drawings, etc.) to be reviewed during the pre-job briefing. The support group member (assigned to document control) should assist with print/drawing, technical manual retrieval as necessary.

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- 6.7.6 The Maintenance Supervisor and RPC or RPT should conduct a pre-job briefing with the emergency team members as follows using Form 5790-107-09 (EMERGENCY TEAM BRIEFING/DEBRIEFING CHECKLIST).
- A. The Maintenance Supervisor should review the completed Form 5790-107-04 issued for the job and:
    1. Associated documents (e.g., prints, drawings, technical references, etc.).
    2. The work location, work scope and the estimated time at the work site.
    3. Any equipment isolation (valving or de-energizing) or jumper/bypass required to perform the work.
    4. Any tools, equipment and/or spare parts that may be required to perform the job including type, size and coordination of obtaining tools or parts.
    5. Special precautions or instructions that should be observed when performing the work.
  - B. The RPC or assigned RPT should review the completed Form 5790-107-02 or the existing Extended/Specific RWP if used including:
    1. RPT in attendance requirements.
    2. Existing or anticipated radiological conditions in the work area and travel routes.
    3. Protective clothing and respirator equipment requirements (may be specified earlier to expedite team preparation). If respirators or SCBAs are required they should be obtained from Access Control.
    4. Dosimetry and personnel monitoring requirements including back-out criteria (if used).
    5. Designated travel routes and the plant exit point (if specified).
    6. Any controlled keys required.
    7. Emergency exposures authorized including reviewing Form 5790-401-01 and having team sign the form(s).

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- C. If necessary, the following technical reference materials should be reviewed during the pre-job briefing:
  - 1. Plant drawings from the OSC Aperture Card file or Construction Drawing file (in the Work Execution Center (WEC) Office).
  - 2. Applicable technical manuals.
  - 3. The travel route and work sites on CEVUE.
- 6.7.7 If spare parts and/or tools are required, the Maintenance Supervisor should:
  - A. If spare parts (from the on-site warehouse) are required, direct the Material Specialist (warehouse personnel in the OSC) to coordinate the retrieval of the spare parts from the warehouse.
  - B. If tools are required (from the Cold Shop), dispatch OSC personnel (not team members) to obtain the necessary tools/equipment.
  - C. Direct the personnel obtaining tools and spare parts to deliver them to the OSC, Access Control, or another location convenient to the OSC team enroute to the work area.
- 6.7.8 During or immediately following the pre-job briefing, the emergency team members should don appropriate protective clothing specified on the RWP or Emergency RWP Checklist.
- 6.7.9 If respirators or SCBAs are required, the team members may obtain them at Access Control (after departing the OSC) or the required respirators may be brought to the OSC during team preparation.
- 6.7.10 Personal dosimetry, specified on the RWP, should be issued to the emergency team members by the RPT assigned (or another OSC RPT) as follows:
  - A. If electronic dosimeters are used, the team members should log-in at the RWP Sign-in station. A RPT (or Access Control RPT if one is not assigned to the team) should accompany the team to the RWP Sign-in station if manual setting of the electronic dosimeters dose and dose rate alarms is required.
  - B. If an electronic dosimeters reader (and dosimeters) are relocated to the OSC, log-in may occur in the OSC (prior to team departure) with a RPT manually setting the dose and dose rate alarms if required.

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- C. If Direct Reading Dosimeters (DRDs) are used, they should be issued to emergency team members in the OSC (prior to team departure). Dosimeters available in the OSC supply cabinet include 0-5R, 0-10R and 0-200R.
  - D. If DRDs are used (or electronic dosimetry is used in the manual mode), all individual exposure received by emergency team members should be recorded and tracked on Form 5790-107-08 (EMERGENCY TEAM LOG-IN). The form should be used to correct individual exposure files in the computer data base.
- 6.7.11 When prepared to depart the OSC, the emergency team should obtain a portable radio and establish radio contact with the OSC Team Communicator prior to departing the OSC.
  - 6.7.12 If respirator protection equipment and/or electronic dosimeters are needed, the emergency team should proceed directly to Access Control after departing the OSC.
  - 6.7.13 When the team is dispatched, the Maintenance Supervisor and RPC should inform the OSC Coordinator and await reassignment to prepare another emergency team.
  - 6.7.14 When a team returns, debrief the team in accordance with PART II of Form 5790-107-09.
  - 6.7.15 All completed forms (associated with an emergency team) should be assembled and the package delivered to the OSC Coordinator for retention as emergency records.

## **6.8 Evacuation and Personnel Accountability**

- 6.8.1 When directed, perform personnel accountability in accordance with one of the following:
  - A. Using an Accountability Card reader (located at Access Control and the I&C Shop for the Primary OSC or the TSC for the Back-up OSC).
    - 1. Direct each individual to insert his/her badge into the Accountability Card reader.
    - 2. Using Form 5790-107-01 (EMERGENCY ACCOUNTABILITY SIGN-IN FORM), prepare a list of all personnel assigned to the OSC but not present during the accountability process (e.g., OSC emergency teams, etc.).
    - 3. Using Form 5790-107-01, prepare a list of essential OSC Command Center personnel who will not be leaving the OSC Command Center to badge into the card reader.

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B. If an Accountability Card reader is not operational:

1. Using Form 5790-107-01, prepare a list of all personnel present in the OSC and all personnel assigned to the OSC but not present during the accountability process (e.g., OSC emergency teams, etc.).

- 6.8.2 If the card reader method was used, inform the Security Group leader immediately upon completion of the card entry process.
- 6.8.3 Immediately forward the completed Form 5790-107-01 compiled in 6.8.1 to the Security Group Leader in the TSC.
- 6.8.4 Excess OSC personnel that were released to their work station or are in standby (in the Lunchroom or Cold Machine Shop) should evacuate with other non-essential personnel. Prior to their departure from the Assembly Point (or site) coordinate the assignment of next-shift personnel in accordance with Section 6.2.
- 6.8.5 Upon completion of the personnel accountability process, maintain continuous accountability of OSC personnel using the OSC PERSONNEL AVAILABILITY and OSC TEAM TRACKING boards. If more detailed accountability is desired, initiate Form 5790-106-10 (EMERGENCY RESPONSE FACILITY SIGN-IN/OUT LOG) for the OSC and update the log as personnel leave or enter the OSC.

**NOTE:** Prior to a Plant (or Site) Evacuation, continuous accountability of personnel assigned to the OSC (i.e., present and not present in the OSC) may be accomplished using the OSC TEAM TRACKING and OSC PERSONNEL AVAILABILITY boards.

#### **6.9 Radiation Protection Coordinator Instructions**

**NOTE:** The RPC work area in the Primary OSC may need to be rearranged (move cubicle partitions) to provide good interface with the OSC Coordinator and a portable radio obtained to allow the RPC to communicate with OSC dispatched teams.

- 6.9.1 Upon activation, the RPC and RPTs should refer to the OSC Tag Board for initial OSC assignments.
- 6.9.2 The RPC should obtain the RWP Books (including in-plant dose rate maps) from the RPC Office and report to the OSC Command Center.
- 6.9.3 Activate the Emergency RWPs (RWPs #900, 901, and 902).
- 6.9.4 Ensure RPTs initiate the following activities (in accordance with tagboard instructions):
  - A. Verify two RPTs are obtaining vehicle keys, drivers and are initiating out-of-plant surveys in accordance with A.2-410 (OUT-OF-PLANT SURVEYS).

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- B. If radiological conditions are a concern, verify habitability surveys are initiated in the OSC, TSC, Control Room, Access Control, and Security Building. Ensure survey results are posted on applicable facility status boards.
  - C. Ensure one RPT is available for assistance at the on-site Assembly Point.
  - D. Ensure one RPT is available to man Main Access Control.
  - E. Ensure several RPTs are available to support OSC teams and pre-job briefings.
  - F. If conducting operations from the Primary OSC, ensure the protective clothing cabinet in the Lunchroom is unlocked.
- 6.9.5 If operating from the Primary OSC, perform the following:
- A. Relocate and activate the OSC PIOPS Continuous Air Monitor (CAM) in the first floor hallway at the top of the stairway to Access Control. (CAM is stored in a cabinet by the vending machines.)
  - B. Locate and activate the OSC Dosimeter Area Radiation Monitor (DARM) in the OSC (Lunchroom).
- 6.9.6 If operating from the Back-up OSC, perform the following:
- A. Ensure the TSC PIOPS Continuous Air Monitor (CAM) is setup and activated in the hallway by elevator.
  - B. Locate, preferably by east windows, and activate the OSC Dosimeter Area Radiation Monitor (DARM) in the back-up OSC.
- 6.9.7 If desired, relocate an Electronic Dosimeter Reader and a rack of Electronic Dosimeters to the OSC.
- 6.9.8 Provide one (or more if required) RPTs to man Main Access Control to assist emergency teams with respirator or SCBA issuance and log-in.
- 6.9.9 Respond to TSC (REC or MSL) requests for in-plant surveys and out-of-plant surveys by dispatching RPTs from the OSC. Ensure RPTs dispatched are tracked (as an OSC team) on the OSC TEAM TRACKING board.
- 6.9.10 Assist with emergency team selection, briefing, and preparation in accordance with Section 6.7.



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- 6.9.11 Continuously monitor in-plant radiation levels on SPDS/ERIS using the instructions in Section 6.5. If ARM readings are not available via SPDS use Form 5790-107-03 (EMERGENCY ARM LOG) and obtain readings from the Control Room.
- 6.9.12 Maintain periodic contact with the RPTs that are manning Main Access Control. Provide periodic relief for them and consider the use of protective clothing or relocating Access Control to the OSC as radiological conditions warrant.
- 6.9.13 Maintain communications with the REC (and/or MSL) in the TSC.
- 6.9.14 If the REC and/or ED determine conditions exist that require dosimetry, issue dosimetry to all OSC personnel in accordance with Section 6.11.
- 6.9.15 If radiological conditions warrant, recommend to the OSC Coordinator to establish strict contamination control measures in the OSC or relocate the Primary OSC to the Back-up OSC as applicable.

#### **6.10 Chemistry Coordinator Instructions**

- 6.10.1 Upon activation, all Chemistry Coordinators should refer to the OSC Tag Board for initial Chemistry Coordinator assignment.
- 6.10.2 Obtain any necessary administrative supplies from the OSC File Cabinet or Access Control.
- 6.10.3 Monitor Chemistry group augmentation and initial assignments and ensure Chemistry personnel are assigned to perform the following emergency response functions (in accordance with OSC Tag Board assignments):
  - A. TSC MIDAS Operator.
  - B. Start-up and preparation of the Gas Chromatograph.
  - C. Set-up and preparation of the Plant Count Room.
  - D. Set-up and preparation of the Chemistry Lab.
- 6.10.4 Ensure Chemistry Technicians (CTs) are dispatched to the EOF to perform the following functions (in accordance with OSC Tag Board assignment). Coordinate these assignments with the REC (in the TSC) and RPSS (in the EOF):
  - A. EOF Count Room CT.
  - B. EOF MIDAS Operator.

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- 6.10.5 Consider relocating the Chemistry Coordinator function to the Chemistry Lab (Access Control). Determination should be based primarily on habitability conditions and coordinated with the RPC and OSC Coordinator.
- 6.10.6 If the Chemistry Coordinator function is relocated to the Chemistry Lab, establish residence in the Chemistry Lab. Notify the Chemistry Section Leader of your relocation to the Chemistry Lab.
- 6.10.7 Implement the applicable section of A.2-108 (ACCESS CONTROL DURING EMERGENCIES) for Chemistry Lab set-up and operation instructions. (A copy of the procedure is included in the PASS Procedures Manual at Access Control.)
- 6.10.8 Maintain communication with the OSC Coordinator and RPC (in the OSC) and the Access Control RPT.

**NOTE: Chemistry personnel dispatched (from the lab) for sampling activities should be identified, assigned a team number, tracked and coordinated by the OSC via radio (talk group 5d).**

- 6.10.9 Notify the OSC Coordinator (and/or RPC) prior to dispatching any (and all) Chemistry personnel for chemistry sampling (e.g., to the Stack or in-plant areas).
- 6.10.10 Coordinate in-plant chemistry sampling activities and sample analysis (in the Chemistry Lab) in accordance with A.2-408 (SAMPLE COORDINATION DURING EMERGENCIES) and as directed by the Chemistry Section Leader or REC.
- 6.10.11 If habitability conditions in the Chemistry Lab dictate (or as directed by the OSC Coordinator) relocate the Chemistry Coordinator function back to the OSC.

#### **6.11 OSC Habitability and Personnel Monitoring**

- 6.11.1 The RPC should coordinate the conduct of periodic habitability surveys including smears, dose rates and air samples (particulate, iodine, etc.) as directed by the REC (or MSL) in the following areas:
  - A. OSC Command Center and Lunchroom areas as appropriate.
  - B. Access Control.
  - C. TSC (including the NRC Conference Room and other areas within the EVS envelope).
  - D. Control Room and Work Execution Center.
  - E. Security Building.

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F. If radiological conditions dictate, areas within the EFT envelope.

6.11.2 Habitability survey results should be reported to the RPC and REC. Results should also be posted on the status board in the respective facilities.

6.11.3 If a Site Area Emergency is declared or a plant (or site) evacuation is conducted due to radiological exposure concerns, the RPC (as directed by the REC) should ensure 0-5R dosimeters (DRDs) or electronic dosimeters are issued to all OSC personnel as follows:

A. DRD Issuances:

1. Obtain the dosimeters and sufficient copies of Form 5790-201-02 (DOSIMETRY ISSUANCE LOG) from the OSC storage cabinet.
2. Verify all OSC personnel have a TLD and rezero (if necessary) and issue one 0-5R dosimeter to each person in the OSC (and Lunchroom).
3. Log the dosimetry issuance information on the Dosimetry Issuance Log.
4. When dosimetry issuance is complete (to all OSC personnel), retain the dosimetry issuance log(s).
5. If necessary, log, rezero and reissue dosimeters when individual dosimeters reach 3/4 scale (4 rem).

B. Electronic Dosimeters Issuance:

1. Instruct all OSC personnel to obtain an electronic dosimeter (either available at Access Control or the OSC) and log in using an Emergency Extend RWP.

C. Ensure all personnel reporting to the OSC (after the dosimetry issuance process) have a 0-5R dosimeter or electronic dosimeter and TLD.

6.11.4 If smearable contamination levels in the OSC (Command Center) or personnel staging areas exceed 1000 dpm/100 Cm<sup>2</sup>, consider establishing strict contamination control measures in the OSC area by:

- A. Designating one OSC exit/entrance point (preferably the Lunchroom entrance for the Primary OSC and the doorway by the elevator for the Back-up OSC) and establishing a Step-Off-pad (and frisking station) at that location.
- B. Ensure all OSC personnel frisk before entering the OSC.

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- C. Conduct followup surveys in the OSC and initiate decontamination (if feasible).
- D. Control eating and drinking in the OSC until all foodstuffs and surfaces are surveyed for contamination.
- E. Consider protective clothing use (paper coveralls or inneralls) for OSC personnel use.

6.11.5 If operating from the Primary OSC and radiological conditions warrant, consider relocating the OSC function (both work control and radiation protection) to the backup OSC. Inform the Maintenance Group Leader, REC and ED.

## **6.12 Emergency RWP Instructions**

- 6.12.1 The RPC should initiate Form 5790-107-02 for all emergency tasks requiring an OSC team that cannot be assigned to an existing Specific or Extended RWP.
- 6.12.2 Review Form 5790-107-04 or the WO issued for the job (if either are used) to determine the job scope and work location.
- 6.12.3 The RPC should complete page 1 of Form 5790-107-02 as follows :
  - A. Indicate whether a RPT should be in attendance on the job (assigned to the OSC Team).
  - B. Determine if emergency exposures (in excess of MNGP administrative or NRC limits) are authorized. If so, initiate Form 5790-401-01 for each team member authorized emergency exposure.
  - C. Indicate the recommended travel route based on existing or expected radiological conditions and the highest anticipated travel route dose rate.
  - D. Indicate the designated plant exit point for the team (e.g., Access Control, Radwaste, etc.)
- 6.12.4 The RPC or RPT should complete page 2 of Form 5790-107-02 as follows:
  - A. Determine the electronic dosimetry alarm setpoints as follows:
    - 1. The electronic dosimeter dose alarm setpoint should be set at the lowest available dose of the team members (i.e., the available dose of the team member with the lowest dose for the job should be assigned to all team members as the authorized dose and the electronic dosimeter set at that limiting dose).

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2. Determine the electronic dosimeter dose rate alarm setpoint by taking the electronic dosimeters dose alarm setpoint divided by the expected time (in hours) at the work area.
  3. Compare the expected work area dose rate to the electronic dosimeter dose rate alarm setpoint determined above.
  4. IF the electronic dosimeter dose rate alarm setpoint is lower than the expected work area dose rates, THEN the job should not be performed until additional job planning is completed and approved by the REC.
- B. Determine the travel route backout dose rate by using 3 times the highest expected travel route dose rate.
  - C. Determine if any Rad Prot keys are required based on the recommended travel route (indicated by the RPC on page 1).
  - D. Determine the required protective clothing, respiratory protection and dosimetry for the job and indicate the requirements on the Emergency RWP Checklist.
  - E. Sign, date and time the completed Emergency RWP Checklist.
- 6.12.5 Retain the EMERGENCY RWP CHECKLIST in the OSC and record the final dosimetry information upon completion of the job.
- 6.12.6 Forward the completed form to OSC Document control for retention as emergency records.

### **6.13 Transfer to the Backup (alternate) OSC**

- 6.13.1 If radiological conditions or other circumstance dictate, consider relocating the OSC to the backup OSC.
- 6.13.2 Contact the Maintenance Group Leader (or Emergency Director) to discuss the transfer to the backup OSC.
- 6.13.3 When directed, relocate the OSC function to the backup OSC in accordance with A.2-109 (ACTIVATION AND OPERATION OF THE BACKUP OSC).

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## 1.0 PURPOSE

This procedure provides instructions and guidance for the direction of on-site radiological monitoring to assess the need for protective actions during an emergency.

## 2.0 APPLICABILITY

- 2.1 An emergency classification (Alert or higher) has been declared at the Monticello Plant and the Emergency Director or Radiological Emergency Coordinator has requested on-site radiological surveys.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

- 3.1 The Radiological Emergency Coordinator (REC) is responsible for:

- 3.1.1 Overall coordination of radiation protection emergency response activities including on-site radiological monitoring.

- 3.2 The Monitoring Section Leader (MSL) is responsible for:

- 3.2.1 Implementation of this procedure.

- 3.2.2 Coordination of on-site radiological surveys and sampling.

- 3.3 Rad Prot Coord (RPC) / Rad Prot Tech (RPT) are responsible for:

- 3.3.1 The conduct of on-site radiological surveys under the direction of the MSL in the TSC.

## 4.0 DISCUSSION

The extent and degree of on-site radiological monitoring following a release of radioactive material will depend on the nature, the severity, the physical/chemical form, and the radioisotopic composition of the release. The Emergency Director, REC or MSL will determine the extent and nature of post-accident radiological monitoring.

For events that occur during normal working hours, sufficient radiation protection personnel would normally be available to support several monitoring teams. During other times, the number of radiation protection personnel may be limited at the onset of the event. In this case, the Emergency Director, REC, or MSL will assign priorities for radiological monitoring based on the known or expected extent and severity of the release and/or related radiological conditions while the emergency organization is being augmented.

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## **5.0 PRECAUTIONS**

- 5.1 Exposures of on-site monitoring personnel should be in accordance with administrative control levels. They should have proper dosimetry, which is frequently checked, remain alert to their own exposure and request relief if cumulative exposure approaches administrative control levels. The Emergency Director may authorize exposure limit extensions if necessary (refer to EPIP A.2-401 (EMERGENCY EXPOSURE CONTROL)). All exposures should be maintained ALARA.
- 5.2 During portable radio communications, observe the following precautions.
  - 5.2.1 Radio communications can be intercepted by commercially available scanners. All communications must be brief, factual and free of exclamatory or alarming expressions.
  - 5.2.2 Carefully word transmissions to minimize confusion, in particular, avoid abbreviations such as "mrem" which could be misinterpreted as "Rem".

## **6.0 INSTRUCTIONS**

### **6.1 MSL Recordkeeping**

- 6.1.1 Upon activation, initiate the MSL Log Book.
- 6.1.2 Record data, trends, and other information of radiological significance in the log in accordance with the following guidance:
  - A. Significant events and the time(s) which they occur including changes in plant conditions, radiological releases, and trends.
  - B. Record key decisions and strategies developed (or implemented).
- 6.1.3 Periodically monitor the distribution of completed forms in the Radiation Protection area (of the TSC) to ensure accurate, consistent, approved information is used by REC.
- 6.1.4 Ensure all completed forms are filed in the appropriate container provided and retained as emergency records.

### **6.2 On-site (Out of Plant) Surveys**

- 6.2.1 If a radioactive release is occurring or has occurred, determine (estimate) if the release is equivalent to or greater than the levels specified in GUIDELINE 1 (entitled "Radioactive Effluents") of EPIP A.2-101 (CLASSIFICATION OF EMERGENCIES) for an ALERT or higher classification.



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- 6.2.2 If the release is determined or estimated to exceed the Alert levels, in A.2-101, direct the RPC (or any available RPT if the RPC is not yet manned) to assemble a survey team to perform on-site, out-of-plant survey in accordance with the following guidance:
- A. Assemble a monitoring team to perform surveys per EPIP A.2-410 (OUT-OF-PLANT SURVEYS).
  - B. If necessary, initiate an Emergency RWP Checklist in accordance with EPIP A.2-107 (ACTIVATION AND OPERATION OF THE OSC).
  - C. Brief the team on affected sectors to be surveyed, potential radiological conditions or other hazards, precautions and protective clothing requirements.
  - D. Equip the team with a Rad Team frequency radio (from the TSC), direct the team to establish and maintain radio communication with the Field Team Communicator in the TSC.
  - E. Dispatch the team to perform surveys in affected areas.
- 6.2.3 Determine the starting point of the survey based on the release point, source term, magnitude of the release, wind direction, and dose projection data (if applicable). Request the initial surveys in this portion (affected sector) of the protected area.
- 6.2.4 Direct the team be dispatched to the selected survey points on Form 5790-201-04 (PROTECTED AREA SURVEY POINTS) and conduct Beta/Gamma dose rate surveys. Surveys should be performed in the following areas, as applicable.
- A. Site areas which may be affected by shine from 1027 EL Reactor Building;
  - B. Stack area (if high stack release occurring);
  - C. Plant structure perimeter (if significant fuel damage has occurred or is suspected) especially outside Rx Bldg railroad doors;
  - D. Protected area perimeter;
  - E. Security Officer station in the gatehouse or the plant access road (if posted);
  - F. Other site locations where personnel are or may be present such as the Cold Machine Shop, office trailers and SAB.
- 6.2.5 Direct the Field Team Communicator to record survey results on Form 5790-202-01 (OFF-SITE SURVEY RESULTS DATA SHEET).

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- 6.2.6 Direct the Field Team Communicator to periodically up-date the team(s) on plant conditions, emergency classification changes, protective actions, etc. as information becomes available.
- 6.2.7 Direct the team to check personal dosimetry and request relief if their exposure approaches administrative limits.
- 6.2.8 Based on initial survey results request back-up surveys or confirmatory sampling as necessary.
- 6.2.9 Upon completion of on-site, out-of-plant survey operations direct the team(s) to report to OSC for exposure processing, de-briefing and re-assignment.

### 6.3 In-Plant Surveys

**NOTE:** In-Plant survey team(s) are coordinated and directed by the RPC (when manned) in the OSC via portable radio.

- 6.3.1 Direct the RPC (or any available RPT) to assemble survey team(s) as necessary, to perform in-plant surveys/sampling.
- 6.3.2 Direct the RPC to dispatch team(s) to selected survey areas and conduct surveys/sampling activities. Depending on the event, perform surveys in the following areas, as applicable.
  - A. In-plant area(s) that were locally evacuated based on Area Radiation Monitors (ARMs) or Continuous Air Monitors (CAMs) should be surveyed to verify the alarm condition.
  - B. In-plant area(s) that have higher than normal radiation levels (as indicated by ARM or CAM) to determine the reason for the elevated levels.
  - C. Pre-job surveys for areas in which work is planned or scheduled to occur in accordance with Form 5790-107-04 (EMERGENCY WORK REQUEST) and where radiological or environmental (steam area) conditions are NOT subject to rapid change.
- 6.3.3 Direct the RPC to notify the MSL of any significant changes in surveys/samples obtained from team.
- 6.3.4 Periodically up-date the team(s) on plant conditions, emergency classification changes, protective actions, etc. as information becomes available.
- 6.3.5 Upon completion of in-plant survey operations the team(s) should report to OSC for exposure processing, de-briefing and re-assignment.
- 6.3.6 Direct the RPC to forward survey results to the MSL by telephone or hardcopy via messenger.

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#### 6.4 Habitability and On-Site Protective Actions

**NOTE:** Initial habitability surveys should consist of general area dose rates. If significant releases are occurring or if the Continuous Air Monitors (CAM) alarms, initiate periodic air sampling (particulate and iodine) and smearable contamination surveys in the affected response centers.

- 6.4.1 Direct the RPC to perform habitability surveys in the following occupied areas:
  - A. Control Room
  - B. Operational Support Center (OSC)
  - C. Technical Support Center (TSC)
  - D. Access Control (including SAS)
  - E. Security Building
  - F. Designated on-site Assembly Point
  - G. Gate House
- 6.4.2 Review the habitability survey results and compare the results to the ON-SITE PROTECTIVE ACTION GUIDELINES, listed in FIGURE 7.1. Recommend on-site protective actions to the Radiological Emergency Coordinator (REC) as necessary.
- 6.4.3 Monitor effluent release paths. If effluent levels exceed the alarm setpoint(s) (alert levels in A.2.101) consider placing the EFT and EVS systems in service.
- 6.4.4 If loose surface contamination levels in manned response centers, within the Control Room EFT and TSC Emergency Ventilation System (EVS) envelopes reach 1000 dpm/100cm<sup>2</sup>, coordinate the establishment of strict contamination control measures for the EFT and EVS envelopes as follows:
  - A. Ensure the EFT and EVS boundaries doors are closed and properly posted in accordance with EPIP A.2-106, (ACTIVATION AND OPERATION OF THE TSC).
  - B. Direct the setup of a step-off pad and personnel frisking station at the designated entrance doors to the Control Room EFT and TSC EVS boundaries.
  - C. Process contaminated personnel in accordance with EPIP A.2-402 (ON-SITE RADIOLOGICAL MONITORING).

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D. Continue periodic habitability surveys in manned response centers.

6.4.5 If and when strict contamination control measures are implemented within the EFT and EVS envelopes consider restricting eating, drinking and chewing.

6.4.6 Recommend the issuance of personal dosimetry in manned response centers to the REC/ED if dose rate in manned response centers is increasing and expected to reach .5 mr/hr (refer to FIGURE 7.1). Coordinate the issuance of dosimetry in the Control Room, TSC and OSC. Form 5790-201-02 (DOSIMETRY ISSUANCE LOG) should be used to record personal dosimetry data in each response center when Pocket Ion Chambers are used.

**NOTE: Electronic dosimeters are the preferred choice of dosimetry.**

6.4.7 Ensure habitability survey results are posted on the Radiological Status Board in the TSC and OSC.

6.4.8 Recommend relocating TSC and OSC personnel to another location (i.e. Emergency Operations Facility, if operational), when dose rates in manned response centers  $\geq$  1000 mrem/hr.

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## 7.0 FIGURES

### FIGURE

#### **7.1 On-Site Protective Action Guidelines**

##### DDE BODY EXPOSURE RATES (mrem/hr)

0.5	2.5	100	1000
Issue dosimetry in occupied Response Centers. Evacuate unnecessary personnel and declared pregnant women (DPW)	Evacuate occupied areas not part of the emergency response.	Evaluate Personnel Doses. Implement A.2-401 for vital personnel, evacuate all others.	Consider evacuation of all affected areas except the Control Room

##### SMEARABLE SURFACE CONTAMINATION (dpm/100 cm<sup>2</sup>)

1000	5000
Establish EFT and EVS contamination control. Evacuate occupied areas within the Clean Area not part of the emergency response effort. Control eating, drinking, and smoking in occupied Response Centers.	Consider Implementing Protective Clothing use in Response Centers.

##### AIRBORNE RADIOACTIVITY DERIVED AIR CONCENTRATION

##### DAC-Ratio

.3	1.0	10
Evacuate occupied areas not part of the emergency response effort.	Evaluate personal DAC Hours. Consider respirator use.	Evacuate ALL personnel not vital to the emergency response effort. Consider KI use.

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## FIGURE

### **7.2 Forms Utilized in this Procedure**

- |    |             |                                    |
|----|-------------|------------------------------------|
| 1. | 5790-201-04 | PROTECTED AREA SURVEY POINTS       |
| 2. | 5790-202-01 | OFF-SITE SURVEY RESULTS DATA SHEET |
| 3. | 5790-201-02 | DOSIMETRY ISSUANCE LOG             |
| 4. | 5790-107-04 | EMERGENCY WORK REQUEST             |

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## 1.0 PURPOSE

The purpose of this procedure is to provide general instructions and guidance to the Radiation Emergency Coordinator (REC) in order to ensure the activities of the Radiation Protection Group are performed in a thorough, consistent manner during an emergency.

## 2.0 APPLICABILITY

2.1 An emergency condition corresponding to an ALERT or higher emergency classification has been declared at the Monticello Nuclear Plant.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

3.1 The REC is responsible for:

- 3.1.1 Implementation of this procedure.
- 3.1.2 Making on-site Protective Action Recommendations to the Emergency Director.
- 3.1.3 Making off-site Protective Action Recommendations (PARs) to State and/or County authorities (prior to turnover of this responsibility to the Radiation Protection Support Supervisor (RPSS)).
- 3.1.4 Overall direction of Radiation Protection and Chemistry Group activities.
- 3.1.5 Assist the ED in coordinating the transfer of off-site responsibilities to the EOF.

3.2 The REC Assistant is responsible for:

- 3.2.1 Assisting the REC in implementing this procedure.
- 3.2.2 Directing and coordinating Radiation Protection Group activities.

3.3 The Monitoring Section Leader (MSL) is responsible for:

- 3.3.1 Direction and control of Field Teams until turned over to the EOF.
- 3.3.2 Direction and control of on-site monitoring and habitability surveys.



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3.4 The Chemistry Section Leader (CSL) is responsible for:

3.4.1 Overall direction for sampling and analysis.

3.4.2 Overall coordination of Chemistry Group activities.

#### **4.0 DISCUSSION**

None

#### **5.0 PRECAUTIONS**

None

#### **6.0 INSTRUCTIONS**

##### **6.1 Initial Actions**

6.1.1 Report to the Technical Support Center (TSC) and assume control of the Radiation Protection Group.

6.1.2 Initiate Form 5790-209-01 (REC CHECKLIST).

6.1.3 Determine the current status of the plant, the emergency conditions and radiological conditions within the plant.

6.1.4 If Stack, Reactor Building Vent, or Hard Pipe Vent release rates are above the alarm setpoint(s), consider placing the EFT and EVS systems in service. Direct the Support Group Leader to establish the EFT, and EVS boundaries in accordance with EPIP A.2-106 (ACTIVATION AND OPERATION OF THE TSC).

6.1.5 If applicable, obtain Area Radiation Monitor readings from the SPDS Terminal (or Control Room) to determine in-plant radiation levels.

6.1.6 Ensure access control is activated in accordance with EPIP A.2-107 (ACTIVATION AND OPERATION OF THE OSC) and A.2-108 (ACCESS CONTROL DURING EMERGENCIES).

6.1.7 If a local, plant or site evacuation is imminent, initiate the respective evacuation response in accordance with EPIP A.2-301 (EMERGENCY EVACUATION).

6.1.8 Ensure the appropriate on-site and off-site monitoring is initiated in accordance with section 6.2, 6.3 and 6.4.

6.1.9 Ensure the off-site dose projection (MIDAS) is initiated in the TSC in accordance with A.2-406 (OFF-SITE DOSE PROJECTION).

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6.1.10 Evaluate Radiation Protection Group staffing. When adequately staffed, and the EOF is activated, dispatch Radiation Protection personnel to the EOF as follows:

- A. Dispatch a qualified REC to assume the duties of Radiation Protection Support Supervisor at the EOF if not staffed by Training Center personnel.
- B. Dispatch a qualified Dose Assessment (MIDAS) operator to operate the MIDAS system at the EOF and report to the RPSS.
- C. Dispatch a qualified EOF Count Room Chemistry technician to activate the EOF Count Room and report to the RPSS.

6.1.11 Initiate the REC Log in accordance with EPIP A.2-502 (RECORD KEEPING DURING AN EMERGENCY).

**NOTE:** Section 6.2 through 6.9 are activities for which the REC is responsible but may be delegated to the Assistant REC, MSL or CSL. These are continuing actions which implies the activity should be repeated regularly, as necessary, while the emergency condition exists.

## **6.2 On-Site Habitability**

- 6.2.1 Direct habitability surveys for the TSC, OSC, Control Room, Access Control, Assembly Point, CAS, SAS, Security Officer (on access road) in accordance with A.2-201 (ON-SITE PROTECTIVE ACTION).
- 6.2.2 Make on-site protective action recommendations in accordance with A.2-201.
- 6.2.3 Direct the posting of response center habitability survey results on the Radiation Protection status board in the TSC. Ensure radiation protection personnel performing habitability surveys post the results on the status board(s) in the OSC.
- 6.2.4 Monitor effluent release paths. If effluent levels exceed the alarm setpoint(s) (alert levels in A.2.101 (CLASSIFICATION OF EMERGENCIES)), consider placing the EFT and EVS systems in service.
- 6.2.5 If loose surface contamination levels in manned response centers within the Control Room Emergency Filtration Train and the Technical Support Center envelopes reach 1000 dpm/100cm<sup>2</sup>, consider the establishment of strict contamination control measures for the EFT & EVS envelope as follows:
  - A. Select the entrance doors (normally the west door by elevator for EVS boundary and the south door to the Control Room for EFT boundary;

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- B. Direct the Support Group Leader to close and post all EFT and EVS boundary doors (in accordance with EPIP A.2-106);
- C. Direct the setup of a step-off pad and personnel frisking station at the designated entrance door;
- D. Process contaminated personnel in accordance with current Radiation Protection Procedures (RPP);
- E. Recommend manual activation of the Control Room EFT if conditions warrants (automatic activation occurs at radiation levels of 1 mrem/hr).

6.2.6 Continue periodic habitability surveys in manned response centers.

### **6.3 Radiological Monitoring During Airborne Releases**

**NOTE:** The responsibility for off-site radiological monitoring may be transferred to the RPSS when the EOF is activated and adequately staffed. The Emergency Director and Emergency Manager should coordinate the transfer of this responsibility.

- 6.3.1 Direct on-site monitoring in accordance with procedures A.2-201 and A.2-402 (ON-SITE RADIOLOGICAL MONITORING).
- 6.3.2 Direct off-site monitoring in accordance with procedures A.2-202 (OFF-SITE MONITORING DURING AN EMERGENCY) and A.2-410 (OUT-OF-PLANT SURVEYS).
- 6.3.3 Approximate plume location and perform plume tracking on off-site Survey Map (notify the EOF if the plume is in the EOF sector);
- 6.3.4 Verify dose projections with monitoring team survey results.
- 6.3.5 Include applicable survey information on Follow-up Message form.
- 6.3.6 Record on-site and off-site survey results on appropriate survey results forms.
- 6.3.7 The MSL should monitor in-plant repair teams, direct in-plant monitoring teams and on-site out-of-plant monitoring teams and assure the OSC is apprised of all up-coming activities.
- 6.3.8 After the responsibility for off-site radiological monitoring is transferred to the EOF, the Field Team Communicator in the TSC should continue to monitor communication between the EOF and off-site monitoring team and should coordinate all on-site out-of-plant monitoring as directed by the MSL.

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#### **6.4 Radiological Monitoring During Liquid Releases**

- 6.4.1 Direct sampling of the river at the discharge canal sample station in accordance with EPIP A.2-203 (Radioactive Liquid Releases).
- 6.4.2 Include applicable sampling information on Follow-up Message form.
- 6.4.3 Record on-site and off-site sampling results on Form 5790-202-01 (OFF-SITE SURVEY RESULTS DATA SHEET).

#### **6.5 Off-Site Dose Assessment (MIDAS)**

**NOTE:** The responsibility for Off-site Dose Projections may be transferred to the RPSS when the EOF is activated and adequately staffed. The Emergency Director, Emergency Manager, REC, and RPSS should coordinate the transfer of this responsibility.

- 6.5.1 Project off-site doses and dose rates in accordance with A.2-406.
- 6.5.2 Incorporate forecast meteorological conditions into the dose projection process as applicable.
- 6.5.3 Evaluate the estimated duration of any release and incorporate the release duration into the dose projection process.
- 6.5.4 Determine the radioiodine component of the release and incorporate the proper I/NG ratio into the dose projection process as appropriate.
- 6.5.5 Include applicable dose projection information on the Follow-up Message form.
- 6.5.6 Post dose projection results on the Radiation Protection Status Board.
- 6.5.7 Once the MIDAS control has been transferred to the EOF, direct the MIDAS operator in the TSC to review all follow-up messages (faxed from the EOF) and ensure the Radiological Status Board is kept current.

#### **6.6 Accident Assessment**

**NOTE:** The direction of process sampling, analysis and Core Damage Assessment may be delegated to the Chemistry Section Leader.

- 6.6.1 Review emergency classifications, specifically those which are radiological in nature, to ensure the classification is in accordance with A.2-101.
- 6.6.2 Direct the appropriate process sampling and analysis in accordance with A.2-408 (SAMPLE COORDINATION DURING EMERGENCIES).

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6.6.3 Direct Core Damage Assessment to be performed in accordance with A.2-208 (CORE DAMAGE ASSESSMENT).

6.6.4 If a radioactive release has occurred, sample and analyze for the radioiodine component.

## **6.7 Communications**

6.7.1 Complete periodic Follow-up Messages, Form 5790-102-03 (EMERGENCY NOTIFICATION FOLLOW-UP MESSAGE), and forward to the Emergency Director for approval;

**NOTE: The minimum frequency of Follow-up Messages should be every 30 minutes or as specified by the State.**

6.7.2 As necessary, complete Protective Action Recommendations, Form 5790-204-01 (MONTICELLO OFF-SITE PROTECTIVE ACTION RECOMMENDATION CHECKLIST) and forward to the Emergency Director for approval;

6.7.3 Provide frequent radiological status updates to:

- A. Emergency Director and TSC staff as requested
- B. RPC (in OSC)
- C. On-site Assembly Point
- D. Off-site Radiological Monitoring Team(s)
- E. RPSS (EOF)

6.7.4 Respond to and man the Health Physics Network (HPN) phone as required.

6.7.5 After the responsibility for off-site radiological monitoring is transferred to the EOF, the Field Team Communicator in the TSC should continue to monitor communication between the EOF and off-site monitoring team and should coordinate all on-site out-of-plant monitoring as directed by the MSL.

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## 6.8 Emergency Classification Changes

**NOTE:** The responsibility for emergency classification change notifications may be transferred to the RPSS when the EOF is activated and adequately staffed.

- 6.8.1 When informed of a potential change in emergency classification, obtain a blank Form 5790-102-02 (MONTICELLO EMERGENCY NOTIFICATION REPORT FORM) and the applicable emergency guideline labels from an emergency communicator.
- 6.8.2 When the Emergency Director declares the new emergency classification, complete the form as follows:
  - A. Check the applicable blanks indicating the new emergency classification.
  - B. Record the time and date the Emergency Director declared the new emergency classification.
  - C. Indicate whether the event involves a radioactive release.
  - D. Identify the appropriate Off-Site Protection Action Recommendation. If the new emergency classification is a GENERAL EMERGENCY:
    1. Recommend evacuate all sectors out to 2 miles.
    2. Fill in the applicable Sectors (A-R) and downwind distances to which the PAR applies.
    3. Using the wind direction (from in degrees) and the SECTOR/SUBAREA CONVERSION CHART (on page 2 of the form), determine the geopolitical subarea(s) to which the PAR applies. Circle the affected subareas.
  - E. Identify the appropriate Emergency Action Level Guideline number and provide a brief description of why the emergency classification is changing. The labels provided in the following forms should be used to provide the description:
    1. 5790-102-08 (NUE GUIDELINE LABELS)
    2. 5790-103-05 (ALERT GUIDELINE LABELS)
    3. 5790-104-05 (SITE AREA EMERGENCY GUIDELINE LABELS)

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4. 5790-105-05 (GENERAL EMERGENCY GUIDELINE LABELS)

F. Complete the meteorological section using current information (from MIDAS or most recent Emergency Notification Follow-up Message) including:

1. Wind direction (from)
2. Wind speed (mph)
3. Temperature
4. Precipitation
5. Stability class (A-G)
6. Affected Sectors (A-R)

6.8.3 Submit the completed form to the Emergency Director for review and approval signature. If off-site protective actions are being recommended, review the basis for the recommendations with the Emergency Director.

6.8.4 Ensure the completed, approved form is delivered immediately to the Lead Emergency Communicator for transmittal to off-site authorities (within 15 minutes of the emergency classification change) in accordance with A.2-501 (COMMUNICATIONS DURING AN EMERGENCY).

6.8.5 If off-site protective action recommendations are included on the form, initiate a call to the State Planning Chief (or State Duty Officer prior to EOC activation) at the State EOC to explain the basis for the recommendations.

**6.9 On-Site Protective Actions Recommendations**

6.9.1 Make on-site protective action recommendations in accordance with A.2-201.

6.9.2 If dosimetry issuance is required in manned response centers (i.e., dose rates in manned response centers reach .5 mr/hr, or less at REC and/or ED discretion) make an announcement to that effect in the TSC. Direct dosimetry issuance to be conducted in the OSC, Control Room and Security Building.

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6.9.3 When directed, coordinate evacuation activities as follows:

- A. Assume control of entries to the affected area for exposure control purposes.

**NOTE:** When the hazardous conditions have cleared, allow normal access to the area or establish appropriate access control measures for restricted use.

<b>CAUTION</b>
<p>Prior to initiating an evacuation, it should be determined that evacuation is the protective action that will result in the lowest personnel exposure. Considerations are: 1) radiological conditions at the Assembly Point on-site and along evacuation routes and 2) whether these conditions can be mitigated prior to personnel receiving significant exposures.</p> <p>Plant or Site evacuations should be initiated either before or after the passage of a release, and evacuation routes should be chosen such that personnel travel away from the path of the plume.</p>

#### B. PLANT EVACUATION

1. Provide personnel (1 RPT minimum) for monitoring and assistance at the Assembly Point.
2. Assume control of access to the affected area(s) for exposure control purposes and implement procedures A.2-407 (PERSONNEL AND VEHICLE MONITORING AND DECONTAMINATION), A.2-201, and A.2-411 (ESTABLISHMENT OF A SECONDARY ACCESS CONTROL POINT).
3. If, and when directed, coordinate the evacuation of unnecessary personnel from the site. Contact the RPSS in the EOF (if staffed) for assistance with the following activities:
  - a. Assist in determining which personnel in the response centers (OSC, TSC, Assembly Point, etc.) are NOT required for emergency response activities. Personnel not required for emergency response should be released, subject to recall.
  - b. Determine whether the unnecessary personnel should be directed to an Off-site Assembly Point or sent home.



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- c. If an Off-Site Assembly Point is used, select an appropriate evacuation route for personnel leaving the site. Consider wind direction and other conditions such as radiological conditions (potential for release, release activity, etc.) in the route selection process.
- d. Advise the EOF (if activated) of the selected route.
- e. Inform the State and local authorities of the Off-site Assembly Point location, the evacuation route and the approximate time the evacuation will be initiated.
- f. Determine if Personnel/Vehicle monitoring will be required at the Off-Site Assembly Point and if so, coordinate with the EOF to ensure Radiation Protection personnel are available to assist at the Off-Site Assembly Point.

#### **C. SITE EVACUATION**

1. Assist in selecting an Off-Site Assembly Point. Wind direction SHOULD be the primary consideration in the selection process although other conditions such as radiological conditions (potential for release, release activity, etc.) and potential Assembly Point habitability problems may be considered.
2. Assist in selecting an appropriate evacuation route for personnel leaving the site. Consider wind direction and other conditions such as radiological conditions (potential for release, release activity, etc.) in the route selection process.
3. Advise the EOF (if activated) of the selected route.
4. Inform the State and local authorities of the Off-Site Assembly Point location, the evacuation route and the approximate time the evacuation will be initiated.
5. Determine if personnel/vehicle monitoring will be required at the Off-Site Assembly Point and if so, ensure Radiation Protection personnel are available to assist at the Off-Site Assembly Point.
6. Conduct personnel/vehicle radiological monitoring in accordance with EPIP A.2-407.

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7. Assume control of access to the affected area(s) for exposure control purposes and implement procedures A.2-407, A.2-201 and A.2-411.

#### **6.10 Off-Site Protective Action Recommendations**

**NOTE:** The responsibility for Off-Site Protective Action Recommendations may be transferred to the RPSS when the EOF is activated and adequately staffed. The Emergency Director, Emergency Manager, REC and RPSS should coordinate the transfer of this responsibility.

- 6.10.1 Formulate off-site protective action recommendations in accordance with EPIP A.2-204 (OFF-SITE PROTECTIVE ACTION RECOMMENDATIONS).
- 6.10.2 As necessary, complete Form 5790-204-01 and forward to the Emergency Director for approval.
- 6.10.3 When issuing any off-site Protective Active Recommendation (PAR) to the State, initiate a telephone call to the State Planning Chief to explain the basis for the recommendation. The call should be initiated prior to or in conjunction with transmitting the PAR (via telecopy) to the State.

**NOTE:** Refer to the Monticello and Prairie Island Emergency Preparedness Telephone Directory for the State Planning Chief's telephone number.

- 6.10.4 Post Off-Site Protective Actions implemented on the Radiation Protection Status Board in the TSC.
- 6.10.5 Continue to monitor plant conditions for changing PAR condition, update the RPSS of changing conditions.

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## 7.0 FIGURES

None

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## 1.0 PURPOSE

The purpose of this procedure is to provide instructions and guidance on conducting in-plant radiological air sampling during an emergency that could involve high dose rates, airborne concentrations or surface contamination.

## 2.0 APPLICABILITY

- 2.1 An emergency has been declared at the Monticello Nuclear Generating Plant,  
AND
- 2.2 In-plant radiological sampling has been requested by the Emergency Director or the Radiological Emergency Coordinator (REC),  
AND
- 2.3 The Post Accident Sampling System (PASS) is not operable or capable of obtaining the desired samples.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

- 3.1 The Radiological Emergency Coordinator (REC) is responsible for:
  - 3.1.1 Overall coordination of the Radiation Protection and Chemistry Group activities.
  - 3.1.2 Determining sample priorities.
- 3.2 The Radiation Protection Coordinator (RPC) is responsible for:
  - 3.2.1 Implementation of this procedure.
  - 3.2.2 Coordination of air sampling activities during an emergency event.
- 3.3 The Chemistry Coordinator is responsible for:
  - 3.3.1 Coordination of Chemistry Group activities in the Chemistry Lab.
  - 3.3.2 Coordination of sample logging, identification and documentation.
- 3.4 Radiation Protection Technicians (RPT) are responsible for:
  - 3.4.1 Implementation of this procedure.
  - 3.4.2 Obtaining in-plant radiological air samples in accordance with applicable instructions contained in this procedure and as directed by the RPC.

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3.4.3 Analysis of samples.

3.4.4 Recording results and properly storing samples.

#### 4.0 **DISCUSSION**

This procedure provides instructions for airborne radioactivity sampling during an emergency condition when normal sampling methods (i.e., RPPs) are inappropriate due to elevated radiation, airborne and/or contamination levels. This procedure satisfies the requirements of NUREG 0737, Item III.D.3.3 which specifies that utilities **SHALL** provide equipment, associated training and procedures for adequately determining airborne iodine concentrations in in-plant areas that may be occupied during an accident.

#### 5.0 **PRECAUTIONS**

- 5.1 Exposures of survey team personnel **SHALL** be in accordance with administrative control levels. Survey team members must remain alert to their own exposure and request relief if their cumulative exposure approaches these levels. The Emergency Director may authorize exposure limit extensions, if necessary in accordance with A.2-401 (EMERGENCY EXPOSURE CONTROL). All exposures **SHALL** be maintained as low as reasonable achievable (ALARA) by employing the following methods:
  - 5.1.1 Limit team personnel to the minimum required to perform the sampling/surveys in a safe, efficient manner;
  - 5.1.2 Plan the survey and conduct a briefing with team members;
  - 5.1.3 Ensure the team has all the necessary equipment prior to deployment;
  - 5.1.4 Use extendable instruments (i.e., Teletector, etc.) to minimize exposure;
  - 5.1.5 Use equipment or structures in the survey area as shielding whenever available.
- 5.2 The "buddy" system should be employed for all entries into the affected area whenever necessary to ensure the physical safety of survey team personnel.
- 5.3 The following precautions should be considered when planning in-plant emergency radiological surveys/sampling:
  - 5.3.1 The location and magnitude of sources of radiation may be unknown;
  - 5.3.2 Physical safeguards may have been destroyed;
  - 5.3.3 The physical process or reaction that caused the emergency condition may still be occurring or could recur.

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## 6.0 INSTRUCTIONS

**GENERAL NOTE:** The MSL/RPC should determine the appropriate airborne sampling methods based on area radiation monitor readings, anticipated radioactive airborne concentrations, and the availability of alternate sampling methods.

### 6.1 Particulate and Iodine Sampling

- 6.1.1 Obtain a battery air sampler with a Staplex (4") filter holder or AC powered air sampler with a (2") filter holder.
- 6.1.2 Check the calibration sticker on the sampler and verify the calibration is current (if not, obtain another air sampler).
- 6.1.3 Perform an operational test of the sampler prior to departing Access Control.
- 6.1.4

#### **CAUTION**

**A Staplex filter head with 4" particulate filter must be used with battery powered air samplers to ensure adequate sample flow rate.**

Obtain a particulate filter and silver zeolite cartridge from the emergency locker and install the filters in the sampler head.

- 6.1.5 Determine the appropriate sample time, based on anticipated dose rates and airborne concentration.
- 6.1.6 Proceed to the designated sample area with the prepared air sampler and start the air sampler.
- 6.1.7

#### **CAUTION**

**Appropriate radiological precautions should be observed when handling highly radioactive and/or contaminated samples.**

When sampling is complete, return to Access Control with the air sampler and collected samples.

- 6.1.8 Remove, properly bag and label the particulate and silver zeolite filters.
- 6.1.9 Analyze the samples in accordance with the instructions in Section 6.3 and Section 6.4 of the procedure.

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## 6.2 Gaseous Sampling (100cc Gas Chamber)

- 6.2.1 Obtain a 100cc gas sample chamber, suction bulb and filter assembly.
- 6.2.2 Install a new 25mm particulate filter in the filter holder.
- 6.2.3 Connect the suction bulb, sample chamber and filter assembly such that air passes through the filter assembly into the sample chamber, then to the suction bulb.
- 6.2.4 Proceed to the designated sample area with the prepared sample assembly.
- 6.2.5 Open the sample chamber stop cocks, squeeze the suction bulb ten (10) times to obtain a representative sample, then shut the stop cocks on the sample chamber.
- 6.2.6

### **CAUTION**

**Appropriate radiological precautions should be observed when handling highly radioactive and/or contaminated samples.**

When sampling is complete, return to Access Control with the collected sample.

- 6.2.7 Disassemble the sample assembly, properly bag and label the 100cc sample chamber.
- 6.2.8 Analyze the sample in accordance with the instructions in Section 6.5 of this procedure.

## 6.3 Particulate Filter Analysis

- 6.3.1 Analyze the filter using one of the following methods:
  - A. Analyze the filter using the instructions in Radiation Protection Procedure R.02.04 (ANALYSIS OF AIRBORNE RADIOACTIVITY SAMPLES). For filters counted on the HpGe system, choose the "ES" menu option.



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- B. Count the filter using a count rate meter (RM-14 or equivalent) with pancake probe and calculate the airborne concentration using the following formulas:

1. Convert the sample volume to cc as follows:

$$\begin{aligned} \text{cc} &= (\text{ft}^3/\text{min}) (2.83\text{E}+4) (\text{sample time in minutes}), \text{ or} \\ &= (\text{lpm}) (1000) (\text{sample time}) \end{aligned}$$

2. Using the sample volume in cc, determine the uCi/cc as follows:

$$\text{ACTIVITY } (\mu\text{Ci/cc}) = \frac{(\text{NET CPM}) \times (4.5 \text{ E-7 } \mu\text{Ci/DPM})}{(\text{PROBE EFFICIENCY}) \times (\text{SX VOLUME in CCs}) \times (\text{CF})}$$

**NOTE 1:** Probe Efficiency - 0.1 (10%) for Count Rate Meter with a 2" pancake probe.

**NOTE 2:** Correction Factor (CF) = 0.3 for 4" filter paper counted with a 2" pancake probe or 1.0 for 2" filter paper counted with a 2" pancake probe.

**NOTE 3:** The following formula is based on .5 Mev gammas and .5 gammas / disintegration.

- C. For filters reading GREATER THAN 50,000 CPM and GREATER THAN 10% Dead Time, obtain a 1' dose rate from the filter using an ion chamber dose rate meter and calculate the airborne concentration using the following formulas:

1. Convert the sample volume to cc as follows:

$$\begin{aligned} \text{cc} &= (\text{ft}^3/\text{min}) (2.83\text{E}+4) (\text{sample time in minutes}), \text{ or} \\ &= (\text{lpm}) (1000) (\text{sample time}) \end{aligned}$$

2. Using the sample volume in cc, determine the uCi/cc as follows:

$$\frac{(1' \text{ Dose Rate mr/hr}) (610 \text{ uCi/mr/hr})}{(\text{Sample Volume})} = \text{uCi/cc}$$

- 6.3.2 Record the sample analysis results on the appropriate Radiation Protection form (specified in R.02.04) and submit the results to the REC or RPSS.

#### **6.4 Silver Zeolite Cartridge Analysis**

- 6.4.1 Survey the cartridge to determine the gross activity rate on the cartridge.

- 6.4.2 If the dose rate on the cartridge is greater than 10 mr/hr attempt to purge the cartridge with air in the Chemistry Lab fume hood for approximately five (5) minutes prior to sample analysis.

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6.4.3 Analyze the cartridge using one of the following methods:

- A. Analyze the cartridge on the HPGe system using the instructions in Radiation Protection Procedure R.02.04 (ANALYSIS OF AIRBORNE RADIOACTIVITY SAMPLES). For cartridges counted on the HpGe system, choose the "ES" option.
- B. Obtain a 1' dose rate from the cartridge using an ion chamber dose rate meter and calculate the airborne concentration using following formulas:
  1. Convert the sample volume to cc as follows:

$$\begin{aligned} \text{cc} &= (\text{ft}^3/\text{min}) (2.83\text{E}+4) (\text{sample time}), \text{ or} \\ &= (\text{lpm}) (1000) (\text{sample time}) \end{aligned}$$

2. Using the sample volume in cc, determine the uCi/cc as follows:

$$\frac{(1' \text{ Dose Rate mr/hr}) (420 \text{ uCi/mr/hr})}{(\text{Sample Volume})} = \text{uCi/cc}$$

6.4.4 Record the sample analysis results on the appropriate Radiation Protection forms (specified in R.02.04) and submit the results to the REC or RPSS.

## 6.5 Gaseous Sample (100cc Gas Chamber) Analysis

6.5.1 Analyze the chamber using one of the following methods:

**NOTE:** HPGe system "dead time" should not exceed 10%.

- A. Analyze the gas chamber in accordance with I.3.39 (MCA OPERATION/GAMMA ISOTOPIC ANALYSIS), using option "ES."
- B. Count the chamber using a count rate meter (RM-14 or equivalent) with pancake probe and calculate the airborne concentration using the Gas Chamber Table in FIGURE 7.1.
- C. If the chamber is greater than 50,000 CPM AND the "dead time" is greater than 10%, obtain a 1' dose rate from the chamber using an ion chamber dose rate meter and report the results in mR/HR.

6.5.2 Record the sample analysis results on the appropriate Radiation Protection forms and submit the results to the REC or RPSS.

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## 7.0 FIGURES

### FIGURE

**7.1 Gas Chamber Table**  
**Using Count Rate Meter with 2 Inch Pancake Probe and 100 cc S.S. Gas Chamber**

NCPM	$\mu\text{Ci/cc}$ (Xe-133 equiv.)	NCPM	$\mu\text{Ci/cc}$ (Xe-133 equiv.)
100	1.0E-05	2500	4.5E-04
150	1.5E-05	3000	5.5E-04
200	2.0E-05	3500	6.5E-04
250	2.5E-05	4000	8.0E-04
300	3.2E-05	4500	9.0E-04
350	4.0E-05	5000	1.1E-03
400	4.5E-05	5500	1.3E-03
450	5.1E-05	6000	1.5E-03
500	6.0E-05	8000	1.8E-03
600	7.5E-05	10000	2.5E-03
800	1.1E-04	12000	3.0E-03
1000	1.5E-04	14000	3.5E-03
1200	1.7E-04	16000	4.0E-03
1400	2.0E-04	18000	4.7E-03
1600	2.5E-04	20000	5.5E-03
1800	3.0E-04	25000	7.5E-03
2000	3.5E-04	30000	9.5E-03

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## 1.0 PURPOSE

This procedure provides instructions to the Monticello Duty Shift Manager and Radiation Protection Group for response to a declared emergency at the Prairie Island Plant.

## 2.0 APPLICABILITY

- 2.1 An Unusual Event (NUE) has been declared at the Prairie Island Plant, which involves actual or potential radioactive releases, and Monticello Radiation Protection assistance has been requested, or
- 2.2 An emergency (Alert or higher classification) has been declared at the Prairie Island Nuclear Plant.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

- 3.1 The Duty Shift Manager is responsible for:
  - 3.1.1 Implementation of Section 6.1 of this procedure when requested by the Prairie Island Plant.
  - 3.1.2 Notification of RP-Chemistry Manager (or designee (another qualified REC)).
- 3.2 The RP-Chemistry Manager (or REC) is responsible for:
  - 3.2.1 Implementation of Sections 6.2 and/or 6.3 of this procedure when directed by the Duty Shift Manager.
  - 3.2.2 Overall coordination of the Monticello Radiation Protection Group emergency response.
- 3.3 Radiation Protection Technicians (RPTs) are responsible for:
  - 3.3.1 Emergency response activities at the Prairie Island EOF including off-site radiological monitoring and sampling under the direction of the PI RPSS.
  - 3.3.2 Emergency response activities at the Relocation Center including personnel and vehicle monitoring and decontamination.

## 4.0 DISCUSSION

In the event of an emergency condition at the Prairie Island Plant, which involves a radioactive release to the environment and/or off-site protective actions, Monticello Radiation Protection personnel would respond to the PI EOF and Reception Center.

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The sister plant response is in accordance with a reciprocal agreement, made between the Monticello and Prairie Island Plants, in which each plant would supply Radiation Protection personnel (and equipment) to supplement the affected plant's emergency response capabilities.

This procedure provides instructions for the initial notification of Monticello Radiation Protection personnel (performed by the Duty Shift Manager or Control Room Supervisor (CRS)) and the assembly and deployment of Off-site Radiological Monitoring teams (Field Teams) to the Prairie Island EOF and Reception Center.

Per this procedure, two monitoring teams (consisting of one RPT each) with one REC qualified team leader (optional) should be dispatched to the PI EOF. In addition, another team, consisting of two RPTs and one REC (if available), should be dispatched to the Reception Center if activated.

## 5.0 **PRECAUTIONS**

- 5.1 Exposures of monitoring team personnel **SHALL** be in accordance with administrative control levels. They **SHALL** have proper dosimetry, which is frequently checked, remain alert to their own exposure and request relief if cumulative exposure approaches administrative control levels.
- 5.2 During portable radio communications, keep all communications brief, factual and free of exclamatory or alarming expressions. Carefully word transmissions to minimize confusion, in particular, avoid abbreviations such as "mRem," which could be misinterpreted at "Rem."

## 6.0 **INSTRUCTIONS**

### 6.1 **Initial Notifications (SM or CRS Instructions)**

- 6.1.1 Notify the duty RPT, RP-Chemistry Manager or qualified REC as follows:

**NOTE:** Refer to Form #5790-001-01 (EMERGENCY RESPONSE ORGANIZATION) for a listing of qualified Radiological Emergency Coordinators (RECs).

- A. During normal working hours, contact the RP-Chem Manager (or another qualified REC) by plant extension or PA system.
- B. During non-working hours notify and instruct the duty RPT to contact the RP-Chemistry Manager or other qualified REC. (Refer to the Monticello and Prairie Island Nuclear Emergency Telephone Directory for the home telephone and pager numbers).
- 6.1.2 When contacted, inform the duty RPT (or RP-Chemistry Manager/REC) that an event has occurred at Prairie Island, which requires Monticello Radiation Protection assistance, and provide the following information if known:

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- A. The nature of the event and magnitude of any radiological releases.
- B. The emergency classification (e.g., Alert, etc.).
- C. If Monticello RP assistance is required at the Reception Center.

- 6.1.3 When notified that the Monticello Radiation Protection teams are departing for Prairie Island, determine their estimated time of arrival at the Prairie Island EOF (about 2 hours and 15 minutes after departure time).
- 6.1.4 Contact the Prairie Island TSC or EOF (phone numbers are in the Monticello and Prairie Island Nuclear Emergency Preparedness Telephone Directory or Form 5790-501-02 (EMERGENCY TELEPHONE LIST)) and inform them of the estimated time of arrival at the PI EOF.

**6.2 Response Team Activation (duty RPT or RP-Chemistry Manager/REC Instructions)**

- 6.2.1 Upon notification that PI has requested assistance, determine the following:
  - A. If the event involves a radioactive release and the magnitude of any releases.
  - B. The emergency classification (e.g., Alert, etc.).
  - C. Whether Monticello RP assistance is required at the Reception Center.
- 6.2.2 Notify RP-Chemistry Manager (or qualified REC).
- 6.2.3 Based on the information in 6.2.1, determine the applicable number of RPTs to form the Radiation Protection response teams as follows:
  - A. For off-site radiological monitoring teams (Field Teams), form two teams (each consisting of one RPT). In addition, another REC or MSL should be contacted (if available).

**NOTE: The off-site monitoring teams will acquire drivers at the Prairie Island EOF.**

- B. For the Reception Center, form one team consisting of 2-3 RPTs and one REC or MSL (if available).

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- 6.2.4 Notify the necessary Radiation Protection personnel. If the event is occurring off-hours, refer to the Monticello and Prairie Island Nuclear Emergency Preparedness Telephone Directory for home telephone and pager numbers. Verify the fitness-for-duty of response team members when contacted and assemble only individuals who meet the FFD requirements.

**NOTE: Other arrangements may be made (i.e., picking up response personnel en route to Prairie Island) provided their fitness-for-duty is verified, they obtain proper dosimetry and it does not significantly delay the response time to PI.**

- 6.2.5 Direct the response team personnel to assemble at the Monticello Security Building (or EVES building) and once assembled:
- A. Obtain individual TLDs (from security badge) and an electronic dosimeter or the DRDs from the emergency kit (per RWP 902).
  - B. Confirm fitness-for-duty of emergency team members. Request the assistance of a Security Supervisor if breathalyzer testing is required.
  - C. Verify at least one member of each response team has a company ID card in his or her possession (may be required for access to affected off-site areas).
- 6.2.6 Determine the vehicle(s) to be used by each response team. The two Off-site Radiological Monitoring Teams (Field Teams) should use the dedicated emergency vehicles, and the Reception Center Response Team (if required) should use personal vehicles.
- 6.2.7 Direct the assembled teams to obtain the emergency vehicle keys and proceed to the Emergency Equipment and Vehicle Storage building (EVES) and ready the necessary emergency kits and equipment as follows:
- A. The two Off-site Radiological Monitoring Teams should initiate EPIP A.2-410 (OUT-OF-PLANT SURVEYS) and obtain the necessary Instrument and Equipment Kits in accordance with that procedure.
  - B. If a Response Team is being dispatched to the Reception Center, they should obtain the following:
    - 1. One Instrument Case (aluminum case)
    - 2. One Equipment Case (grey molded case)
    - 3. One portable mobile radio & antenna (black case)
    - 4. One frisker and one RO meter from the instrument cabinet



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### **6.3     Response to the Prairie Island EOF**

- 6.3.1    Ensure all operability checks on survey/monitoring instruments are performed prior to loading the equipment into the vehicle(s).
- 6.3.2    Load the designated emergency vehicles (these may be personal vehicle(s)) with the emergency kits/equipment.
- 6.3.3    Perform operability checks on the mobile radios prior to departing the EVES building.
- 6.3.4    Prior to departing the MNGP site, contact the Monticello Duty Shift Manager (or CRS). Inform him of the response team departure time and estimated time of arrival at the Prairie Island EOF. Instruct the CRS to contact the Prairie Island TSC or EOF (phone numbers are in the Monticello and Prairie Island Nuclear Emergency Preparedness Telephone Directory or Form 5790-501-02) and inform them of the estimated time of arrival of the Monticello Radiation Protection teams to the PI EOF.
- 6.3.5    Proceed to the Prairie Island EOF by one of the following routes:
  - A.    Highway I-94 to Highway 61, 61 south to Highway 316 (in Hastings), left on 316 to Highway 61, left on 61 to 18 (PI sign), left on 18 to Prairie Island.
  - B.    Highway I-94 to I-494, continue on I-494 to Highway 55, south on Highway 55 to Hastings, right on Highway 61 (in Hastings by school) to 316, left on 316 to Highway 61, left on 61 to 18 (PI sign on right side of road), left on 18 to Prairie Island.
  - C.    Highway I-94 to I-694, I-694 to I-494, I-494 to Highway 61, 61 south to Highway 316 (in Hastings), left on 316 to Highway 61, left on 61 to 18 (PI sign), left on 18 to Prairie Island.
- 6.3.6    En route to the Prairie Island EOF, monitor the radio transmissions from PI (TSC or EOF) on PI Rad Team Channel and refer to the 0-10 Mile EPZ Survey Point Map (for PI).
- 6.3.7    When approaching the boundary of the Prairie Island 10 mile EPZ, attempt to contact the Field Team Communicator (at the TSC or EOF) using the cellular phones or mobile radios. Phone numbers for TSC/EOF can be found in the the Monticello and Prairie Island Nuclear Emergency Preparedness Telephone Directory or Form 5790-501-02. Identify yourself as the Monticello Field Teams (Field Teams 3 & 4) and request an update of:
  - A.    Current plant status (containment integrity, etc.).
  - B.    Radiological releases in-progress (or potential).

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C. Current meteorological conditions (wind direction and speed).

D. Other information related to the emergency.

6.3.8 If determined that the plume may be encountered while en route, conduct a search for the plume in accordance with EPIP A.2-410 and proceed directly to the EOF (use an upwind travel route if possible). Report the results of en route surveys to the Field Team Communicator.

6.3.9 Upon arrival to the EOF, note the EOF Access Point (e.g., front door or back door). Proceed into the EOF and contact the Radiation Protection Support Supervisor (RPSS) for the assignment of drivers.

6.3.10 Depart the EOF to perform off-site surveys in accordance with A.2-410 as directed by the RPSS.

#### **6.4 Response to the Reception Center**

6.4.1 Ensure all operability checks on survey/monitoring instruments are performed prior to loading the equipment into the vehicle(s).

6.4.2 Load the designated emergency vehicles (these may be personal vehicle(s) ) with the emergency kits/equipment.

6.4.3 Perform operability checks on the mobile radios prior to departing the EVES building.

6.4.4 Prior to departing the MNGP site, contact the Monticello Duty Shift Manager (or CRS). Inform him of the response team departure time and estimated time of arrival at the Reception Center. Instruct the CRS to contact the Prairie Island TSC or EOF (phone numbers are in the Monticello and Prairie Island Nuclear Emergency Preparedness Telephone Directory or Form 5790-501-02) and inform them of the estimated time of arrival of the Monticello Radiation Protection team to the Reception Center.

6.4.5 Proceed to the Reception Center via the following route:

A. Proceed east on I-94 to Highway 10/61 (past St. Paul). Go south on Highway 10/61 to 80th. Turn right onto 80th and go to Belden Boulevard. Turn right onto Belden Boulevard to the Cottage Grove National Guard Armory (8180 Belden Boulevard, Cottage Grove).

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- 6.4.6 Monitor the radio en route in an attempt to gain any of the following information:
  - A. Current emergency classification (Alert, etc.).
  - B. Status of radiological releases (or potential).
  - C. Current meteorological conditions (wind direction).
  - D. Affected EPZ Sectors (Subareas) and the status of any off-site protective actions implemented.
  - E. Estimated population (numbers) affected by off-site protective actions (refer to PI map NF-114230, PI EPZ POPULATION MAP).
- 6.4.7 Upon arrival at the Reception Center, report to the individual in charge. Identify yourselves as the Radiation Protection Response Team from MNGP (show company ID if necessary).
- 6.4.8 Review the status of emergency response actions taken (or in-progress) at the Reception Center including:
  - A. Reception Center setup (personnel and vehicle flow-path if applicable, contamination control boundaries established, etc.).
  - B. Personnel and/or vehicle monitoring status (e.g., contamination found, decontamination procedures used, etc.).
- 6.4.9 Obtain copies of the Reception Center procedures for Monticello RP use.
- 6.4.10 Provide RP assistance, as directed, in the Reception Center as necessary IAW established procedures.

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## 7.0 FIGURES

None

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## 1.0 **PURPOSE**

This procedure outlines the duties and responsibilities of the Emergency Manager and provides instructions and guidance for the conduct of Emergency Manager activities during a declared emergency at the Monticello Nuclear Generating Plant.

Steps in this procedure satisfy commitment M90125A. Procedure steps satisfying these commitments are identified with a \$.

## 2.0 **APPLICABILITY**

2.1 A Notification of Unusual Event (NUE) has been declared at the Monticello plant and the Emergency Manager is required to notify an Xcel Energy Communications representative and the Chief Nuclear Officer.

2.2 An emergency (Alert or higher classification) has been declared at the Monticello Nuclear Plant and the EOF is activated.

## 3.0 **ORGANIZATION AND RESPONSIBILITIES**

3.1 The Emergency Manager is responsible for:

- 3.1.1 Implementation of this procedure and management of emergency response activities at the EOF.
- 3.1.2 Overall direction and coordination of MNGP's emergency response activities (after turnover from the Emergency Director).
- 3.1.3 Off-site communications with state and local authorities and federal agencies (after turnover from the TSC) including utility and NMC Executive Management at the JPIC.
- 3.1.4 Notification of new emergency classifications, after turnover from the TSC, (the Emergency Director retains primary responsibility to classify or re-classify emergencies).
- 3.1.5 Making off-site Protective Action Recommendations (PARs) to state and/or county authorities (after transfer from the Emergency Director).

## 4.0 **DISCUSSION**

This procedure provides instructions for the various duties and responsibilities of the Emergency Manager at the Monticello EOF. In some cases, this procedure references other procedures which provide more detailed instructions for the performance and coordination of Emergency Manager tasks (e.g., Event Termination/Recovery).

The instructions contained within each section of this procedure are presently in the "most probable" sequential order and, although presented in this sequence, they are intended to be implemented as the emergency situation dictates and as determined by the Emergency Manager.

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## 5.0 PRECAUTIONS

None

## 6.0 INSTRUCTIONS

### 6.1 Response to an Unusual Event

6.1.1 When contacted by the SEC, obtain/provide the following information:

- A. A general description of the event including the following information (if applicable):
  - 1. The cause of the event and immediate corrective actions taken.
  - 2. Plant status before (and after) the event occurred (i.e., operating, shutdown, reduced power, etc.).
  - 3. On-site personnel status (i.e., injuries, contaminations, overexposures).
  - 4. If the event involves any radioactive releases above allowable limits.
- B. The SEC will ask if (precautionary) notification of an EOF Coordinator is necessary. Instruct the SEC to contact an EOF Coordinator if (in your opinion) the event has significant potential to degrade resulting in an escalation to a higher emergency classification. The Duty Shift Manager or Shift Supervisor may be consulted to make this determination.
- C. Provide the SEC with the telephone (or pager) number at which you can be contacted (if you will not be reporting to the Plant).

**NOTE: There is no requirement that the Emergency Manager report to the Plant (or EOF) during an NUE.**

- 6.1.2 Immediately after notification by the SEC, contact an Xcel Energy Communications Department representative (via office/home telephone or pager) and:
  - A. Inform him/her that an Unusual Event has been declared at the Monticello Plant.
  - B. Provide the event description and other details outlined in 6.1.1.
  - C. Determine if the Xcel Energy Communications Department will be making a press release.

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D. Provide the telephone (or pager) number at which you can be contacted.

6.1.3 Immediately after notification of Xcel Energy Communications, contact the Chief Nuclear Officer (via office/home/car telephone or pager) and:

A. Inform him that an Unusual Event has been declared at the Monticello Plant.

B. Provide the event description and other details outlined in 6.1.1.

C. Inform him if Xcel Energy Communications is planning a press release (or not).

D. Provide the telephone (or pager) number at which you can be contacted.

6.1.4 Upon completion of your notifications, contact the SEC and inform him/her that Xcel Energy Communications and the Chief Nuclear Officer have been notified and whether Communications is planning a press release (or not).

**NOTE:** Whether the utility will be making a press release (or not) is included on Form 3195 (EVENT NOTIFICATION WORKSHEET) used by the SEC for notification of NRC Headquarters within one hour of the NUE declaration.

6.1.5 Maintain a heightened state of awareness throughout the event. If conditions degrade, respond accordingly. If the emergency classification escalates (to Alert or higher), refer to Section 6.2 of this procedure.

## **6.2 Response to an Alert (or higher)**

**NOTE:** At an Alert classification (or higher), the first Emergency Manager to respond (to the pager activation) has the responsibility for notification of Xcel Energy Communications and the Chief Nuclear Officer. If the event began at an NUE, the Emergency Manager contacted (for the NUE) should assume these responsibilities (through communication with the SEC).

6.2.1 Upon receipt of the pager activation, all designated Emergency Managers should immediately contact the SEC.

6.2.2 The first Emergency Manager who calls or the designated Emergency Manager (originally contacted if the event started at an NUE) will be instructed to notify Xcel Energy Communications and the Chief Nuclear Officer. All other Emergency Managers should report immediately to the Emergency Operations Facility (EOF).



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- 6.2.3 If informed (by the SEC) that you are responsible for the notifications, obtain a description of the event from the SEC including the following information (if applicable):
- A. Current plant status (e.g., shutdown, % power, etc.).
  - B. Status of any radioactive releases in excess of allowable limits.
  - C. Any Off-site Protective Action Recommendations that have been made by the Plant.
  - D. On-site personnel status (e.g., injuries, contaminations, overexposures, etc.).
- 6.2.4 Immediately contact an Xcel Energy Communications Department representative (via office/home telephone or pager) and:
- A. Inform him/her that an Alert, Site Area or General Emergency has been declared at the Monticello Plant.
  - B. Provide an event description and other details outlined in 6.2.3.
  - C. Inform him/her that you will be proceeding to the Emergency Operations Facility.
  - D. Obtain the telephone (or pager) number that the Communications representative may be contacted at (for use after you arrive at the EOF).
- 6.2.5 Immediately after notification of Xcel Energy Communications, contact the Chief Nuclear Officer (via office/home/car telephone or pager) and:
- A. Inform him that an Alert, Site Area or General Emergency has been declared at the Monticello Plant.
  - B. Provide an event description and other details outlined in 6.2.3.
  - C. Inform him that you will be proceeding to the Emergency Operations Facility.
- 6.2.6 Upon completion of the notifications, report to the EOF immediately.

### **6.3 EM Activation and Staffing at the EOF**

- 6.3.1 Upon arrival at the EOF, proceed immediately to the EOF Command Center.
- 6.3.2 Refer to the EOF Tag Board and if no one has assumed the EM position, turn the EM tag and sign in as Emergency Manager.

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- 6.3.3 Assume the duties of the Emergency Manager and initiate Form 5790-801-01 (EMERGENCY MANAGER ACTIVATION CHECKLIST).
- 6.3.4 Contact the Emergency Director to determine current plant status, emergency response actions under way, and the status of off-site emergency response activities in progress or planned and not yet implemented (e.g., off-site communications, protective action recommendations, etc.).
- 6.3.5 Monitor the progress of EOF activation and staffing activities (the EOF Coordinator will assume this responsibility, when staffed).
- 6.3.6 When the Emergency Manager Recorder position is staffed (by an EOF Technical Support Group member), direct the recorder to maintain the EM Log and record significant information in accordance with Section 6.4 of this procedure.
- 6.3.7 As EOF staffing progresses, begin assessing the event using available information from the following sources:
  - A. Periodic discussions with the Emergency Director.
  - B. Review of EMERGENCY NOTIFICATION REPORT FORM(S), EMERGENCY NOTIFICATION FOLLOWUP MESSAGE FORM(S), and OFF-SITE PROTECTIVE ACTION RECOMMENDATION FORM(S) transmitted from the TSC to the EOF telecopy machine(s).
  - C. Review of critical plant parameters, plant process monitor and in-plant radiological data on SPDS.
  - D. (CR-TSC-OSC-EOF) Technical Communicator link (when staffed).
  - E. EOF/TSC counterpart communications (e.g., RPSS/REC, Tech Support Supervisor/Engineering Group Leader, etc.) when the positions are staffed.
- 6.3.8 When the key EOF positions are staffed (and most other EOF positions), conduct an initial status update in the EOF Command Center. Refer to Form 5790-801-02 (EMERGENCY MANAGER STATUS UPDATE CHECKLIST) to identify key topics. The update should include:
  - A. Identification of key EOF position assignments (by name).
  - B. A summary of the emergency event (based on the available information).
  - C. The status of EOF staffing and activation (provided by key EOF positions for their respective areas).

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- 6.3.9 When the EOF Coordinator reports that minimum staffing requirements are met, using Form 5790-802-02 (EOF STAFFING AND ORGANIZATION CHART), declare the EOF "staffed and operational." Make an announcement in the EOF Command Center to that effect.
- 6.3.10 When the EOF is declared operational, contact the Emergency Director. Inform the ED that the EOF is operational and transfer of responsibility for off-site communications (dose projection and field monitoring, etc.) may be initiated (when the EM, ED, REC and RPSS concur). Refer to Section 6.5 for detailed transfer instructions.
- 6.3.11 Continuously, during the course of the emergency, perform the duties of Emergency Manager in accordance with the applicable section(s) of this procedure.

#### **6.4 Emergency Manager Recordkeeping**

- 6.4.1 Upon activation (at Alert classification or higher), initiate the Emergency Manager Log book.
- 6.4.2 When EOF staff are available, designate (or have the EOF Coordinator assign) an individual to perform the duties of Emergency Manager Recorder (EM Recorder) and maintain the Emergency Manager Log. When staffed, the EM Recorder should be positioned near the Emergency Manager to facilitate the flow of information in a timely and accurate fashion.
- 6.4.3 Record significant events and make other entries into the Emergency Manager Log in accordance with the following criteria:
  - A. Significant events and the time(s) which they occur including changes in plant conditions, radiological releases, and adverse plant parameter trends.
  - B. The general context of reports made to the Emergency Manager and/or discussions (in-person and telephone) between the EM and other personnel (including the NRC, if present).
  - C. Emergency notifications (e.g., classification changes, Off-site Protective Action Recommendations) and the time(s) the notification forms were approved.
  - D. Summarize major decisions made by the Emergency Manager including the time the decision was communicated and its basis.
- 6.4.4 Periodically monitor the distribution of completed, approved forms in the EOF (specifically to the EM and NRC) to ensure prompt dissemination of information (forms control and distribution is the responsibility of the EOF Coordinator).
- 6.4.5 Ensure all completed forms are filed in the appropriate container provided and retained as emergency records.

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## 6.5 Transfer of Off-site Responsibilities

**NOTE:** When transferring off-site responsibilities from the TSC to the EOF, the various functions should be transferred simultaneously due to their interdependence (i.e., transferred as a package, at the same time, and not independently).

- 6.5.1 When the EOF is operational, consider transfer of the following responsibilities from the TSC to the EOF.
  - A. Performance of off-site dose projection (MIDAS) activities.
  - B. Coordination of off-site radiological monitoring teams (including the Field Teams dispatched by PI and Sample Couriers) for the purpose of MIDAS results comparison and validation.
  - C. Off-site communications including the issuance and transmittal of the following emergency forms (all initiated by the RPSS):
    1. EMERGENCY NOTIFICATION REPORT FORMS (for re-classification of the emergency and PARs at a General Emergency).
    2. EMERGENCY NOTIFICATION FOLLOWUP MESSAGES (generated by MIDAS and issued periodically to the State Health Department).
    3. OFF-SITE PROTECTIVE ACTION RECOMMENDATION CHECKLIST (for off-site protective action recommendations based on projected dose).
  - D. Responsibility for emergency class notification. (This responsibility is assumed by the Emergency Manager concurrent with the responsibility for off-site communications.)
- 6.5.2 Consult with the Emergency Director regarding the transfer of off-site responsibilities. Suggest the Emergency Director consult with the REC regarding the proposed transfer.
- 6.5.3 Consult with the Radiation Protection Support Supervisor (RPSS) and direct the RPSS to confer with the REC on the proposed transfer.

**NOTE:** If possible, the transfer should be conducted when no off-site communications are being processed by the TSC (e.g., Followup Messages, etc.).

- 6.5.4 Direct the Emergency (Off-site) Communicators (and EOF Coordinator) to prepare to assume responsibility for off-site communications.

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- 6.5.5 When all parties are prepared, assume responsibility for off-site communications (and other off-site related activities outlined in 6.5.1) and make an announcement to that effect in the EOF Command Center.
- 6.5.6 Confirm successful completion of the transfer with the RPSS and Emergency (Off-site) Communicators.
- 6.5.7 Direct the Emergency (Off-site) Communicators to immediately contact the appropriate state and county authorities and inform them that the EOF has assumed responsibility for off-site communications.
- 6.5.8 Direct the EM Recorder to record the transfer of off-site responsibilities to the EOF in the EM Log.
- 6.5.9 Upon completion of the transfer, consider conducting a status update in the EOF Command Center which includes a status report in the following areas:
  - A. From the RPSS:
    - 1. MIDAS operational status and the latest dose projection results.
    - 2. Off-site Monitoring team status including locations, recent survey results and the progress of the PI Radiation Protection response.
    - 3. Estimate of when the next EMERGENCY NOTIFICATION FOLLOWUP MESSAGE will be prepared for review (first followup transmission from the EOF).
  - B. From the EOF Coordinator (or Emergency (Off-site) Communicators):
    - 1. Status of notifying the state and counties of the transfer of off-site responsibilities.
    - 2. The status of state and county EOC activations (i.e., which EOCs are staffed and operational and which are not).
    - 3. Communications equipment operational status including the status of any transmissions currently in progress.
- 6.5.10 Review, approve and issue the various forms used for off-site emergency communications in accordance with the applicable section of this procedure.

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- 6.5.11 In the event of an EOF evacuation, or if other circumstances dictate, transfer the responsibility for off-site communications (specified in 6.5.1) back to the TSC by reversing the transfer process outlined in this section.

## **6.6 EOF Status Updates and EM Briefings**

- 6.6.1 During EOF activation and staffing, make periodic status announcements in the EOF Command Center which include:
- A. The current emergency classification.
  - B. A narrative summary of the event (when known) including emergency response actions under way or planned and the present status of the reactor.
  - C. The status of any on-site or off-site protective actions taken or initiated (e.g., plant evacuation, etc.).
  - D. The Fitness-for-Duty verification of personnel responding to the EOF (during off-hours activation only).
- 6.6.2 Announce significant events in the EOF Command Center as they occur (verses waiting for formal status updates). For important events, such as significant increases in radiological release rates, etc., ensure all personnel in the EOF Command Center are aware of the occurrence.
- 6.6.3 During routine EOF operation, conduct periodic status updates (about every 30 minutes) as follows:
- \$ A. Prior to the update, make an announcement in the EOF Command Center that an update will be conducted in 1-5 minutes. This will allow key EOF (NRC, and off-site officials) personnel time to prepare their input.
  - B. Initiate Form 5790-801-02. Record the date and time of the status update on the form.
  - C. Announce the beginning of the update in the EOF Command Center and request personnel keep background noise (in the Command Center) to a minimum during the entire update.
  - D. Using Form 5790-801-02 (as a guide), conduct the update by requesting status reports from the following key (MNGP) EOF personnel:
    1. RPSS
    2. Technical Support Supervisor

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- E. As personnel provide status reports in their respective area(s), note significant items and ask questions to ensure the current status is understood. (Form 5790-801-02 may be used for notes.)
  - \$ F. If the NRC is present (in the EOF), they should provide their status reports (in each functional area) immediately after their MNGP counterpart.
  - G. If other off-site agencies are represented in the EOF (e.g., State Health Department, counties, etc.), their key representative(s) should be asked if they have anything to contribute to the status update.
  - H. Upon completion of the status update, announce the estimated time of the next scheduled update in the EOF Command Center.
  - I. Direct the EM Recorder to note the update in the Emergency Manager Log and retain the completed EMERGENCY MANAGER STATUS UPDATE CHECKLIST as emergency records.
- 6.6.4 Upon completion of EOF status update(s), contact executive management and provide a status report (with current information obtained during the EOF update).
- 6.6.5 Ensure the RPSS, Technical Support Supervisor and EOF Coordinator update their personnel (e.g., Field Teams, etc.) with current information obtained during the EOF status update.
- 6.6.6 Direct the EOF Coordinator to conduct periodic general status announcements in the Training Center (and EOF) via Training Center PA system. The announcements should include the following information (if applicable):
- A. The current emergency classification and status of the plant (reactor).
  - B. The extent of any off-site radiological releases and status of on-site and off-site protective actions taken.
  - C. The habitability of the EOF including general area dose rates (if applicable).
- \$ 6.6.7 If the need arises for private conference(s) outside the EOF Command Center (e.g., with NRC officials, EM turnover briefings, etc.), Classroom 14 (immediately outside the Command Center) may be used.

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- 6.6.8 If the emergency event is such that local, state and/or national media are present at the Training Center, consider using the Multi-purpose Room for the conduct of press briefings. Coordinate these activities with the Excel Energy Communications Department representative (who should be present at the EOF if this occurs).

**NOTE:** Under normal circumstances, media personnel should not be present at the EOF, and all media inquiries should be referred to the Joint Public Information Center (JPIC). However, under some emergency situations (in which the media is not prevented from traveling to the EOF), it is reasonable to assume that the media may impact operation at the EOF. In this case, consideration should be given to controlling media activities in the Multi-purpose Room.

## **6.7 EOF Operations**

- 6.7.1 Direct the EOF Coordinator to coordinate activities in the EOF throughout the emergency in accordance with EPIP A.2-802 (ACTIVATION AND OPERATION OF THE EOF) including:
- A. Coordination of initial EOF activation and staffing, Fitness-for-Duty evaluation and ERO shift scheduling for the EOF in accordance with EPIP A.2-802.
  - B. Supervision of off-site communications conducted in accordance with A.2-803 (EMERGENCY COMMUNICATIONS AT THE EOF).
  - C. Coordination of EOF Security activities conducted in accordance with EPIP A.2-809 (EOF SECURITY).
  - D. Coordination of EOF support and logistics including food, off-site vendor support and procurement in accordance with EPIP A.2-804 (EOF SUPPORT AND LOGISTICS).
- 6.7.2 Direct the EOF Coordinator to continuously maintain the Organizational Status Board in the EOF Command Center.
- 6.7.3 Ensure the EOF Coordinator coordinates the distribution of copies of completed forms and transmittals to key EOF personnel in accordance with Section 6.4 of this operations manual.
- \$ 6.7.4 If off-site agencies or organizations respond to the EOF (e.g., NRC, State Health Department, etc.), direct the EOF Coordinator to serve as the liaison for these organizations in accordance with EPIP A.2-812 (OFF-SITE AGENCY LIAISON AT THE EOF).
- \$ 6.7.5 Serve as the utility "point-of-contact" for senior off-site officials present in the EOF (e.g., NRC Director of Site Operations, Site Team Leader, etc.) and:
- A. Include the officials in EOF Status Updates, Emergency Manager briefings, discussions and EM turnover activities.



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B. Confer with the officials on formulation of off-site protective action recommendations.

C. Ensure the officials receive copies of completed forms and transmittals distributed in the EOF.

6.7.6 If radiological control and/or protective actions are required in the EOF (e.g., transfer of EOF access, use of PCs, EOF evacuation, etc.), ensure the necessary actions are initiated in accordance with the applicable section(s) of this procedure.

6.7.7 Conduct periodic status briefings in the EOF Command Center throughout the emergency in accordance with Section 6.6 of this procedure.

6.7.8 Direct the EOF Coordinator to provide a status report on EOF operations during periodic EOF Command Center briefings in accordance with the guidance of Form 5790-801-02.

6.7.9 When the criteria for event termination or recovery are met, direct the EOF Coordinator to coordinate compiling the short-term and long-term recovery action lists developed by the EOF Group Leaders.

## **6.8 Technical Assessment**

6.8.1 Direct the Technical Support Supervisor (TSS) to perform engineering and operational assessments of the event in accordance with EPIP A.2-805 (TECHNICAL SUPPORT IN THE EOF) and:

- A. Continuously monitor critical plant parameters and indications (using SPDS and 3-way Technical Communicator link).
- B. Continuously man the EOF-TSC-OSC-CR Technical communications link and maintain the Operational Status Board in the EOF Command Center.
- C. Trend selected plant parameters critical to the event to determine adverse trends and predict (or anticipate) plant transients or potential releases (e.g., containment pressure, etc.).
- D. Evaluate the engineering and operational aspects of the event including the assessment of inoperable components and/or systems critical to accident mitigation and the determination of alternative methods or corrective actions to restore those capabilities.

6.8.2 Direct the Technical Support Group to serve as the liaison (or primary contact) with off-site engineering and technical vendors and services required by the EOF or TSC (e.g., General Electric Emergency Support, A/E vendor, etc.).

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- 6.8.3 If 24-hour staffing is required, direct the Technical Support Supervisor to coordinate the establishment of an ERO shift schedule for the EOF Technical Support Group with the EOF Coordinator.
- 6.8.4 Direct the Technical Support Group to continuously compare plant parameters, indications, events and trends with the Emergency Action Levels (EALs) contained in EPIP A.2-101 (CLASSIFICATION OF EMERGENCIES) and to make recommendations on classification changes immediately upon verification of indications.
- 6.8.5 Ensure the Technical Support group continuously mans the Emergency Notification System (ENS) link with NRC Headquarters (when required) and provides technical and operational information to the NRC as requested.
- 6.8.6 Direct the Technical Support Supervisor to provide a status report on engineering and operational assessment during periodic EOF Command Center briefings in accordance with the guidance of Form 5790-801-02.
- 6.8.7 If applicable, ensure the Technical Support Group follows the implementation of the EOPs (by the Control Room) to predict significant operational evolutions (e.g., containment venting) and verify proper EOP implementation.
- 6.8.8 If applicable, ensure the Technical Support Group follows the implementation of the Severe Accident Management Guidelines (by the TSC) to predict significant operational evolutions (e.g., containment venting) and verify proper SAMG implementation.
- 6.8.9 Direct the Technical Support Supervisor to coordinate providing technical support to the TSC in the following areas:
  - A. The evaluation of inoperable systems or components, related to accomplishing accident mitigation objectives, and the determination of alternate methods to accomplish those objectives.
  - B. Obtaining off-site technical vendor, A/E vendor support as requested by the TSC staff.
  - C. Evaluate the operational aspects of postulated accident scenarios or transients (i.e., what ifs) on the plant simulator to determine response characteristics for known (existing) simulator models.

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- 6.8.10 Ensure the Technical Support Group maintains a list of inoperable components, systems and/or facility damage identified throughout the event. When the criteria for event termination (or recovery) are met, direct the Technical Support Supervisor to coordinate the development of short-term and long-term recovery item lists identifying those tasks required to return the plant (and/or immediate site) to a pre-accident state.

## **6.9 Radiological Assessment**

- 6.9.1 Direct the RPSS to coordinate the activities of the EOF Radiation Protection Support staff including:
- A. Coordination of EOF RP Group staffing and emergency response activities in accordance with EPIP A.2-806 (RADIATION PROTECTION SUPPORT IN THE EOF).
  - B. Radiological accident assessment including the coordination of off-site dose projections, dose assessment and the formulation of off-site Protective Action Recommendations in accordance with EPIP A.2-807 (OFF-SITE DOSE ASSESSMENT AND PROTECTIVE ACTION RECOMMENDATIONS).
  - C. Radiological habitability monitoring and control in the EOF including the formulation of protective action recommendations for EOF personnel in accordance with EPIP A.2-808 (RADIOLOGICAL MONITORING AND CONTROL AT THE EOF).
- 6.9.2 Ensure the RPSS implements radiological monitoring and controls at the EOF. Refer to Section 6.13 for Emergency Manager instructions regarding:
- A. Radiological monitoring and control at the EOF.
  - B. Transfer of access to the EOF Receiving area.
  - C. EOF habitability and protective actions for EOF personnel.
  - D. Emergency exposure authorizations for EOF personnel.
- 6.9.3 Ensure the Radiation Protection Group continuously performs off-site dose projections throughout the event and formulates off-site protective action recommendations (as necessary). Refer to Section 6.12 of this procedure for Emergency Manager instructions regarding the formulation and issuance of off-site protective action recommendations.
- 6.9.4 If 24-hour staffing is required, direct the RPSS to coordinate the establishment of an ERO shift schedule for the EOF Radiation Protection Support Group with the EOF Coordinator.

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- 6.9.5 Direct the Radiation Protection Group to continuously monitor and compare actual (and potential) radiological releases (e.g., release rate, etc.) indications, events and trends with the Emergency Action Levels (EALs) contained in EPIP A.2-101 (CLASSIFICATION OF EMERGENCIES) and to make recommendations on classification changes based on radiological conditions.
- 6.9.6 Direct the RPSS to continuously update the Radiological Status Board in the EOF Command Center using data from approved Emergency Notification Followup Messages and other appropriate sources.
- 6.9.7 Direct the RPSS to provide a status report on radiological assessment, meteorological conditions and EOF habitability during periodic EOF Command Center briefings in accordance with the guidance of Form 5790-801-02.
- 6.9.8 When the RPSS submits Form 5790-102-03 (EMERGENCY NOTIFICATION FOLLOWUP MESSAGE) for approval, process the form in accordance with Section 6.10 of this procedure.
- 6.9.9 If making a change in emergency classification, review and approve Form 5790-102-02 (MONTICELLO EMERGENCY NOTIFICATION REPORT FORM), submitted by the RPSS, in accordance with Section 6.11 of this procedure.
- 6.9.10 If (and when) the RPSS submits Form 5790-204-01 (MONTICELLO OFF-SITE PROTECTIVE ACTION RECOMMENDATION CHECKLIST) for approval, process the form in accordance with Section 6.12 of this procedure.
- 6.9.11 Ensure the Radiation Protection Group continuously mans the Health Physics Network (HPN) link with the NRC (when required) and provides radiological and meteorological information to the NRC as requested.
- 6.9.12 If the plant conducts a Site Evacuation (or removal of non-essential personnel from the site following a Plant Evacuation), direct the RPSS to coordinate the procession of evacuees from the site with the REC (and off-site authorities if off-site protective actions such as evacuation or sheltering have been implemented).
- 6.9.13 If EOF habitability, environmental radiological conditions or other conventional hazards dictate, consider implementation of protective actions for EOF personnel based on RPSS recommendations. Refer to Section 6.12 of this procedure for Emergency Manager instructions regarding EOF protective actions including:
  - A. Use of protective anti-contamination clothing.
  - B. Issuance and use of Potassium Iodide (KI) to EOF personnel.

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C. Emergency exposure authorizations (in excess of MNGP or NRC Limits).

D. EOF evacuation.

6.9.14 When the criteria for event termination or transition to recovery is met, direct the RPSS to coordinate the development of recovery item list(s) which identify short-term and long-term radiological considerations to be taken into account during the recovery phase.

6.9.15 If off-site radiological releases have occurred (in excess of Tech Spec limits) and when significant releases have been terminated, consider increasing the frequency (and scope) of the Radiological Environmental Monitoring Program (REMP). Direct the RPSS to contact a plant REMP Rad Prot Tech and contract Laboratories to initiate REMP activities.

#### **6.10 Emergency Notification Follow-up Messages**

**NOTE:** Emergency Notification Followup Message Forms are generated by computer (MIDAS) and transmitted to the State Planning and Assessment Center to aid in their dose projection calculations. Followup Messages should be issued about every 30 minutes and/or when significant changes in emergency classification, plant conditions or radiological releases occur.

6.10.1 Upon receipt of an Emergency Notification Followup Message (from the RPSS), review the form for completeness and:

- A. Note the date and time (at the top of page 1) which indicates when the form was generated by MIDAS (question the RPSS on the issuance of followup messages that are more than 1-hour old).
- B. Ensure the proper (current) emergency class is indicated.
- C. Note the wind direction and affected sectors indicated on the form. Briefly compare the affected sectors and/or wind direction to those previously indicated to determine if new affected sectors are identified (due to wind shifts).
- D. Review the projected integrated dose section (bottom of page 1) to determine if any projected off-site dose exceeds the Protective Action Guides (PAGs). If so, discuss the formulation of Off-site Protective Action recommendations, based on projected dose, with the RPSS.

\$ 6.10.2 If the NRC is present (in the EOF), briefly review the completed form with your NRC counterpart (if available) before issuing the form.

6.10.3 Discuss any questions regarding the information on the form with the RPSS.

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- 6.10.4 Upon completion of the review (and when satisfied that the information contained on the form is accurate), sign, date and time the form (at the bottom of page 2).
- 6.10.5 Either return the signed form to the RPSS (with instructions to have it transmitted) or have the form delivered to the Emergency (Off-Site) Communicators for transmittal.

#### **6.11 Emergency Classification Changes**

##### **CAUTION**

**Emergency classification changes must be transmitted to the state and counties within 15 minutes.**

- 6.11.1 When informed of plant parameters, radiological release levels or events which indicate that a change in emergency classification may be appropriate, evaluate the re-classification as follows:
- A. Confirm that the indications have been verified using redundant or coincidence indications.
  - B. Review the applicable guideline(s), initiating condition(s) and Emergency Action Level(s) (EALs) in EPIP A.2-101 to determine the appropriate emergency class (if not already done by the TSC or EOF staffs).
  - C. If multiple events and/or indications are involved, re-classify the emergency based on the event (or indication) that results in the highest (most conservative) emergency classification.
  - D. Consider the effect that combinations of events have that, if taken individually, would constitute a lower emergency classification, but collectively may exceed the criteria for a higher classification.
- 6.11.2 Make an announcement in the EOF Command Center that a change in emergency classification is being considered based on indications, events, etc. Instruct EOF personnel to prepare for processing a classification change.

**NOTE: The preliminary announcement of a potential classification change will aid the RPSS and Emergency (Off-site) Communicators in preparing to make the required 15-minute notifications to the state and counties when the re-classification actually occurs.**

- 6.11.3 Confer with the Emergency Director (if not already done) regarding the proposed change in emergency class.
- \$ 6.11.4 If the NRC is present (in the EOF), review the proposed re-classification with your NRC counterpart (this review is for information only and not to obtain concurrence).

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6.11.5 If the Emergency Director concurs and the evaluation outlined in 6.11.1 has been completed (indicating a change in emergency classification is warranted), re-classify the emergency as follows:

- A. Announce the new emergency classification in the EOF Command Center.
- B. Inform the RPSS of the new emergency class and the time the classification was declared (the time should correspond to the time of the announcement in the EOF Command Center).
- C. Direct the RPSS to complete an Emergency Notification Report Form indicating the new emergency classification and submit the form for review and approval.

#### **CAUTION**

**If the new emergency classification is General Emergency, Off-site Protective Action Recommendations are required and *SHALL* be specified on the Emergency Notification Report Form which transmits the classification change.**

- D. Review the completed Emergency Notification Report Form and:
  - 1. Verify the appropriate emergency classification is indicated.
  - 2. Verify the time of the emergency classification.
  - 3. If the new emergency class is General Emergency, verify Off-site Protective Action Recommendations are specified on the form (refer to Section 6.12 of this procedure for additional instructions after completing this section).
  - 4. Sign, date and time the form in the space provided.

6.11.6 Have the approved Emergency Notification Report Form delivered promptly to the Emergency (Off-site) Communicators for immediate transmittal to the state and counties (within 15 minutes of the re-classification).

6.11.7 Contact the Emergency Director and inform the ED of the new emergency classification and the time the new emergency class was declared.

6.11.8 Direct the EM Recorder to record the emergency re-classification in the EM Log Book.

6.11.9 Ensure the new emergency classification is posted on the Operational Status Board in the EOF Command Center.

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6.11.10 If the Emergency Notification Report Form includes Off-Site Protective Action Recommendations prior to (or simultaneously with) its transmittal, a telephone call should be initiated (by the EM or RPSS) to the Planning Chief (at State EOC) or State Duty Officer prior to State EOC activation to explain the basis for the recommendations (refer to Section 6.12 of this procedure for additional instructions). If no recommendations were made or upon completion of Section 6.12, return and complete the remaining steps in this section.

6.11.11 Direct the Technical Support Supervisor or Emergency Notification System (ENS) Communicator to complete Form 3195 reflecting the classification change and submit the completed form for review and approval.

6.11.12 Upon receipt of the completed Form 3195:

- A. Review the form for completeness.
- B. Sign, date and time the form in the space provided (SM signature box).
- C. Promptly return the approved form to the Technical Support Supervisor (or ENS Communicator) with instructions to immediately transmit the information to NRC Headquarters (via the ENS).

## **6.12 Off-site Protective Action Recommendations**

### **CAUTION**

**Off-site Protective Action Recommendations must be transmitted to the state and counties within 15 minutes.**

6.12.1 Continuously project off-site doses throughout the duration of the event (Integrated Dose section of the Emergency Notification Followup Message).

6.12.2 Direct the RPSS to formulate Off-site Protective Action Recommendations based on the following:

- A. Projected off-site dose(s) compared to Protective Action Guides (PAGs).
- B. The flowchart for General Emergency Off-site Protective Actions Recommendations.



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6.12.3 Transmit Off-site Protective Action Recommendations (PARs) using the following forms:

- A. Off-site Protective Action Recommendations made (required) upon declaration of a General Emergency **SHALL** be specified on Form 5790-102-02 and transmitted with the emergency classification change notification (within 15 minutes of the GE declaration).
- B. Off-site Protective Action Recommendations made based on projected doses should be specified on Form 5790-204-01.

6.12.4 When the RPSS submits Off-site Protective Action Recommendations, review the applicable form and:

- A. Verify the form is complete.

#### **CAUTION**

**If protective actions are being recommended for Sub-Area 5N, special protective actions may be required for Sherco Plant personnel (located in the southwest corner of 5N).**

- B. Note the affected sectors (A-R) and affected Sub-Areas (e.g., 2, 5E, 5N, etc.) identified on the form.

\$ 6.12.5 Briefly discuss the basis for the recommendations with the RPSS, NRC (if present), and state or county authorities present at the EOF. Consider review of the following information as necessary:

- A. The decision process used when following the flowchart for General Emergency PARs.
- B. The Emergency Notification Followup Message (or MIDAS printout) which projected off-site doses exceeding the PAGs.
- C. The current (or forecast) meteorological conditions (e.g., wind shifts) which affect the recommendation.
- D. Identify population centers affected by the recommendations including:
  1. When the population will be affected based on plume direction, wind speed, etc.
  2. Evacuation time estimates for the affected population.
  3. Special groups or facilities within the affected population of area that may require special consideration (e.g., hospitals, nursing homes, etc.).

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- E. Review the protective actions required for Sherco Plant personnel if the recommendations include Sub-Area 5N.
- 6.12.6 When the basis for the recommendations is understood, sign, date and time the form in the space provided.
- 6.12.7 Determine who (Emergency Manager or RPSS) will contact the State EOC to explain the basis for the recommendations.
- 6.12.8 Promptly either return the signed form to the RPSS (with instructions to have it transmitted) or have the form delivered to the Emergency (Off-site) Communicators for immediate transmittal to the state (or counties prior to State EOC Activation).
- 6.12.9 Prior to (or simultaneous with) the transmittal of Off-site Protective Action Recommendations to the state, ensure a call is initiated (by the EM or RPSS) to the State Planning Chief or State Duty Officer prior to State EOC activation to explain the basis for the recommendations.
- 6.12.10 If the recommendations include Sub-Area 5N, contact utility executive management to determine the best course of action regarding the Sherco Plant in accordance with the criteria in EPIP A.2-807.
- 6.12.11 Ensure the protective action recommendations made are indicated on the Radiological Status Board in the EOF Command Center.
- 6.12.12 Ensure the TSC (Emergency Director) and JPIC are informed of the Off-Site Protective Action Recommendations being made.
- 6.12.13 Ensure the RPSS informs the NRC regarding the Off-site Protective Actions via the HPN system.
- 6.12.14 Direct the ENS Communicator to inform NRC Headquarters of the Off-site Protective Actions via the ENS.
- 6.12.15 Direct the RPSS to monitor and follow up on the implementation of the recommendations (with the State) and indicate the status of implementation on the Status Board and PAR Map in the EOF Command Center.
- 6.12.16 Periodically check on the status of protective action implementation. If, after 1 hour, protective actions have not been initiated (e.g., PANS not activated on the PANS computer in the TSC), direct the RPSS to contact the state and determine the status of initiating protective actions.
- 6.12.17 If the protective actions actually implemented are different than those recommended ensure the TSC and JPIC are promptly informed of the protective actions taken.
- 6.12.18 Direct the RPSS to continue with off-site dose assessment and formulate subsequent Off-site Protective Action Recommendations based on projected dose and MNGP Protective Action Guides (PAGs).

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6.12.19 Issue additional Off-site Protective Action Recommendations (as necessary) in accordance with the instructions in this section.

### **6.13 EOF Radiological Monitoring and Control**

- 6.13.1 Ensure the RPSS continuously monitors radiological conditions in the EOF and immediate environs by:
  - A. Conduct of periodic habitability surveys in occupied areas of the EOF.
  - B. Operation of the portable ARM in the EOF Command Center.
- 6.13.2 Ensure all EOF personnel are issued dosimetry which is periodically checked (prompt Command Center personnel during status updates).
- 6.13.3 If personnel exposures approach MNGP annual administrative limits direct the RPSS to evaluate exposures and provide recommendations in accordance with EPIP A.2-808 including:
  - A. Evacuation of less essential EOF personnel.
  - B. Logging of exposures and re-zeroing dosimeters or issuance of high range dosimetry to essential personnel.
  - C. Authorization of emergency exposures for essential personnel.
- 6.13.4 If significant releases are occurring (in excess of the Alert levels specified in EPIP A.2-101, ensure the EOF Coordinator coordinates the transfer of EOF access to the Receiving Area entrance.
- 6.13.5 If (and when) EOF access is transferred to the Receiving Area, ensure the RPSS establishes strict contamination control measures in the EOF including:
  - A. Whole body frisking of personnel entering the EOF.
  - B. Periodic contamination surveys of the Receiving Area and other areas of the EOF susceptible to contamination spread.

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#### **6.14 EOF Protective Actions and Evacuation**

- 6.14.1 If elevated contamination levels are detected in the uncontrolled areas of the EOF, consider implementing the following protective actions based on RPSS recommendations in accordance with the criteria in EPIP A.2-808.
- A. Direct the RPSS to post and control contaminated areas (and decontaminate if possible).
  - B. Consider protective clothing use in the EOF.
  - C. Ensure the RPSS (and EOF Radiation Protection Support staff) initiates strict contamination control measures including monitoring of food stuffs, etc., prior to consumption.
  - D. Direct the RPSS to initiate personnel decontamination procedures, as necessary.
- 6.14.2 If elevated radiation levels exist in the EOF, consider implementing the following protective actions based on RPSS recommendations in accordance with the criteria of EPIP A.2-808.
- A. Evacuation of non-EOF areas of the Training Center complex.
  - B. Evacuation of non-essential personnel from the EOF.
  - C. Initiate exposure tracking and emergency exposure authorizations for essential EOF personnel.
- 6.14.3 If elevated airborne radiation levels exist in the EOF, consider implementing the following protective actions based on RPSS recommendations in accordance with the criteria of EPIP A.2-808.
- A. Evacuation of non-EOF areas of the Training Center complex.
  - B. Evacuation of non-essential personnel from the EOF.
  - C. Initiate tracking of DAC-Hours and emergency exposure authorizations for essential EOF personnel.
- 6.14.4 If thyroid doses of EOF personnel are projected to exceed 25 rem (FDA recommended level for KI use), consider issuance of Potassium Iodide (KI) to essential personnel (including Field Teams) and evacuation of non-essential EOF personnel.

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6.14.5 If radiological conditions (in excess of the criteria contained in A.2-808 for EOF evacuation) or other conventional hazards exist, consider evacuation of the EOF. Refer to EPIP A.2-810 (TRANSFER TO THE BACKUP EOF) for specific EOF evacuation instructions.

#### **6.15 Emergency Manager Turnover**

6.15.1 Upon arrival at the EOF, the oncoming Emergency Manager should initiate Form 5790-801-03 (EMERGENCY MANAGER TURNOVER CHECKLIST).

#### **6.16 Event Termination or Recovery**

6.16.1 Continue to assess plant and environmental conditions throughout the event. When all of the following criteria are met, consider termination of the emergency or the transition to the Recovery Phase:

- A. The plant is in a stable condition with at least one fission product barrier intact.
- B. No radioactive releases are being made to the environment in excess of plant OCDM limits.
- C. The potential for future degradation of plant conditions is small.

6.16.2 When the above conditions are satisfied, implement the applicable Section(s) of EPIP A.2-811 (EVENT TERMINATION OR RECOVERY IN THE EOF).

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## 7.0 FIGURES

### 7.1 Forms Utilized in Procedure

1. 5790-102-02 MONTICELLO EMERGENCY NOTIFICATION  
REPORT FORM
2. 5790-102-03 EMERGENCY NOTIFICATION FOLLOW-UP  
MESSAGE
3. 5790-204-01 MONTICELLO OFF-SITE PROTECTIVE ACTION  
RECOMMENDATION CHECKLIST
4. 5790-801-01 EMERGENCY MANAGER ACTIVATION CHECKLIST
5. 5790-801-02 EMERGENCY MANAGER STATUS UPDATE  
CHECKLIST
6. 5790-801-03 EMERGENCY MANAGER TURNOVER  
CHECKLIST
7. 5790-802-02 EOF STAFFING AND ORGANIZATION CHART

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## 1.0 **PURPOSE**

This procedure provides instructions and guidance to the Radiation Protection Support Supervisor for the direction and coordination of EOF Radiation Protection Support Group activities.

Steps in this procedure satisfy commitment M90125A. Procedure steps satisfying this commitment are identified with a \$.

## 2.0 **APPLICABILITY**

2.1 An Alert has been declared at the Monticello plant and the EOF has been activated.

## 3.0 **ORGANIZATION AND RESPONSIBILITIES**

3.1 The Emergency Manager is responsible for:

3.1.1 Overall direction and coordination of the MNGP emergency response activities (after turnover from the Emergency Director).

3.2 The Radiation Protection Support Supervisor (RPSS) is responsible for:

3.2.1 Implementation of this procedure.

3.2.2 Overall direction and coordination of EOF RP Support Group activities including off-site dose projection and assessment, EOF Countroom operation, EOF radiological control and EOF personnel monitoring.

3.2.3 Making recommendations regarding off-site Protective Actions to the Emergency Manager and discussing the basis for off-site Protective Action Recommendations with the State Planning Chief.

3.2.4 The establishment of ERO shift schedules for the EOF Radiation Protection Support Group when requested by the EOF Coordinator.

3.3 The Assistant RPSS is responsible for:

3.3.1 Assisting the RPSS with the coordination of EOF Radiation Protection Support Group activities in accordance with this and other procedures.

## 4.0 **DISCUSSION**

This procedure provides instructions for the initial activation, staffing and continuing coordination of EOF Radiation Protection Group activities throughout the course of an emergency. When fully staffed, the primary responsibilities of the EOF Radiation Protection Support staff are to provide radiological advice and support to the Emergency Manager and serve as the primary interface with off-site (State and local governments) regarding off-site dose assessment and protective actions.



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In addition, the EOF Radiation Protection Support Group is responsible for monitoring and control in the EOF and, in certain cases, assisting the TSC Radiation Protection staff with the coordination of activities such as evacuation.

## **5.0 PRECAUTIONS**

None

## **6.0 INSTRUCTIONS**

### **6.1 Initial Activation and Staffing**

- 6.1.1 Upon notification of an Alert (or higher) emergency classification, RPSS qualified individuals should report directly to the EOF and coordinate the staffing of the RPSS position with the Radiological Emergency Coordinator (REC).
- 6.1.2 Upon arrival in the EOF, refer to the EOF Tag Board and determine the initial RPSS assignment as follows:
  - A. If no one has assumed the RPSS position, turn the RPSS tag and sign in as RPSS.
  - B. If the RPSS position is already staffed, refer to other EOF positions (for which you're qualified) to determine staffing need in those areas. If unfilled positions exist, turn the applicable tag and assume that position. If not, report directly to the RPSS.
- 6.1.3 Contact the REC in the TSC and coordinate the staffing of the RPSS position with the REC.

**NOTE:** The Rad Prot Sup Supv position may be staffed by Training Center or plant personnel that are REC qualified. The staffing of the REC and RPSS positions should be coordinated to optimize available personnel resources (i.e., experience and qualification) and pace qualified resources based on the estimated duration of the event.

- 6.1.4 Assume the duties of RPSS and initiate Form 5790-806-01 (RPSS ACTIVATION CHECKLIST).
- 6.1.5 Obtain the RPSS Log Book, ballcap, and necessary administrative supplies from the EOF storage cabinet and setup residence at the Rad Prot Sup Supv area in the EOF Command Center.
- 6.1.6 Initiate the RPSS Log Book and maintain the log and record significant information in accordance with section 6.3.
- 6.1.7 Assess Radiation Protection Group staffing and augment as necessary by contacting additional group personnel by telephone. Request the assistance of EOF Support Group personnel (if present).

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**NOTE:** Form 5790-001-01 (EMERGENCY RESPONSE ORGANIZATION) contains the list of qualified EOF Radiation Protection Support Group personnel. The Monticello and Prairie Island Nuclear EP Telephone Directory contains home/pager telephone numbers for all ERO personnel.

- 6.1.8 As Radiation Protection Group personnel report, verify their fitness-for-duty through questioning and/or during initial EOF Command Center status announcements (conducted by the EOF Coordinator).

**NOTE:** The fitness-for-duty of individuals should be assessed prior to their engaging in safety-related emergency response activities. The assessment should include, at a minimum, a determination of whether individuals have consumed alcohol within the last 5 hours.

- 6.1.9 Monitor Radiation Protection Group staffing and, as personnel become available, assign individuals to perform the following activities:

**NOTE:** During initial EOF activation Radiation Protection Group assignments are established by use of the EOF ERO Tagboard; however, the RPSS should monitor initial staffing and coordinate as necessary.

- A. Ensure an Assistant RPSS is assigned to assist with RPSS duties including the coordination of EOF personnel monitoring and habitability surveys in accordance with A.2-808 (RADIOLOGICAL MONITORING AND CONTROL AT THE EOF).
- B. Ensure the EOF Radiation Protection Tech (RPT) position is filled (from the plant or PI) to conduct EOF habitability surveys and general radiation protection duties in the EOF. Contact the REC to coordinate staffing the EOF RPT position.
- C. Ensure the MIDAS Operator position is staffed (by a plant Chemistry Tech (CT) and prepared to conduct off-site dose projections in accordance with A.2-406 (OFF-SITE DOSE PROJECTION).
- D. Assign a Radiation Protection Status Board Keeper (from the EOF Support Group or Radiation Protection Group) to maintain the EOF Radiation Protection Status Board. Coordinate staffing with the EOF Coordinator, if necessary.
- E. Ensure the EOF Countroom Tech position is staffed (by a plant CT) and activates the EOF Countroom in accordance with A.2-424 (EOF COUNT ROOM PROCEDURES).

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- F. Assign a Health Physics Network (HPN) Communicator to man the FTS-HPN when requested by the NRC and provide radiological information and data to the NRC in accordance with A.2-803 (EMERGENCY COMMUNICATIONS AT THE EOF). Prior to continuous manning of the HPN the communicator may be assigned to assist with other Radiation Protection activities as necessary. Coordinate staffing with the EOF Coordinator, if necessary.
  - G. Ensure the Field Team Coordinator position is staffed (from the EOF Support Group or Radiation Protection Group) to direct off-site monitoring activities in accordance with A.2-807 (OFF-SITE DOSE ASSESSMENT AND PROTECTIVE ACTION RECOMMENDATIONS).
  - H. Ensure the Field Team Communicator position is staffed (from the EOF Support Group or Radiation Protection Group) to coordinate off-site monitoring activities (via radio) as directed by the Field Team Coordinator in accordance with A.2-807.
  - I. Ensure two plant personnel are provided (by the OSC) to function as Field Team Drivers for the Prairie Island Field Teams (when they arrive). These positions should be staffed prior to PI F/T arrival (approximately 3 hours after declaration of an Alert). Coordinate staffing with the OSC Coordinator, if necessary.
  - J. Ensure one (or two) plant personnel are provided (by the OSC) to function as Sample Couriers for the Field Teams in accordance with A.2-410 (OUT-OF-PLANT SURVEYS). This position should be staffed anytime Field Teams are conducting off-site monitoring activities and samples may be returned to the EOF Countroom for analysis.
- 6.1.10 If necessary, contact the REC to coordinate the staffing of the EOF RPT, EOF Countroom CT, and MIDAS Operator positions.
  - 6.1.11 When all Radiation Protection Group positions are filled, inform the Emergency Manager and the EOF Coordinator that Radiation Protection Group staffing is complete.
  - 6.1.12 Contact the REC or Assistant REC to determine plant conditions, the extent of radiological surveys completed, off-site dose estimates, and any off-site protective actions recommended or implemented.
  - 6.1.13 Obtain any Emergency Notification Report Form(s) and/or Emergency Notification Followup Messages (transmitted by the TSC) from the EOF fax and direct the Radiation Protection Status Board Keeper to begin updating the Radiation Protection Status board with information from the forms and/or SPDS.

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- 6.1.14 Direct the Field Team Coordinator (and Communicator) to establish radio contact with the Monticello Field Teams and begin monitoring Field Team activities (as directed by the TSC). The Survey Point Map and Off-site Survey Results Board should be updated with information obtained by monitoring radio communications.
- 6.1.15 Direct the EOF Countroom Tech to activate the EOF Countroom and prepare for analysis of samples in accordance with A.2-424.
- 6.1.16 Perform an initial assessment to determine if radiological monitoring and controls should be immediately established in the EOF by reviewing the current Stack and Vent release rates on SPDS (or contacting the REC). If releases in excess of the Alert levels (specified in A.2-101 (CLASSIFICATION OF EMERGENCIES), Guideline 1 for Stack and Vent effluents) has occurred or is occurring (or is imminent based on deteriorating plant conditions):
  - A. Recommend the EOF Coordinator shift the EOF ventilation system to the emergency mode.
  - B. Direct the EOF RPT to obtain periodic air samples.
  - C. Direct the EOF RPT to position and activate the EOF Dosimeter Area Radiation Monitor (DARM) in the EOF Command Center in accordance with A.2 808.
- 6.1.17 If radiological releases have occurred (or are occurring) or if contaminated personnel or samples will be arriving at the EOF, advise the EOF Coordinator to establish access to the EOF at the Receiving Area entrance. Direct the EOF RPT to assist with setup of the Receiving Area in accordance with A.2-808.
- 6.1.18 Direct the EOF MIDAS Operator to establish contact with the TSC MIDAS Operator and begin monitoring dose projection activities (conducted by the TSC) including obtaining Emergency Notification Followup Messages transmitted (faxed) to the EOF.
- 6.1.19 When directed by the Emergency Manager, coordinate the transfer of responsibility for off-site dose assessment (MIDAS, Field Team direction and off-site communications) with the REC (and EOF Coordinator) in accordance with section 6.2.
- 6.1.20 Determine the status of the Prairie Island Field Team response to the Monticello EOF by contacting the PI Shift Supervisor (or Control Room).

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- 6.1.21 Evaluate available data and information relative to the event to determine the actual and potential implications of the event (from a radiation protection perspective) in accordance with the applicable sections of this procedure, A.2-807 and A.2-808.
- 6.1.22 Complete Form 5790-806-01 and file in the container provided for emergency records.

## **6.2 Turnover of Off-site Dose Assessment From the TSC**

- 6.2.1 When the EOF is fully staffed and operational, assist in coordinating the transfer of off-site responsibilities (from the TSC) to the EOF as follows:
  - A. Verify the Field Team Communicator position is manned and an operational check of the EOF radio console is complete.
  - B. Verify the MIDAS Operator position is manned and the MIDAS terminal is operable.
  - C. Ensure a sufficient supply of controlled forms (used for off-site notifications and PARs) are available.
  - D. Check the status (timing) of Emergency Followup Message transmissions with the REC.
- 6.2.2 Inform the EOF Coordinator and Emergency Manager when prepared to assume responsibility for MIDAS and the control of the Field Teams.
- 6.2.3 When directed by the Emergency Manager, assume the responsibility for MIDAS and the Field Teams. Ensure the MIDAS Operator and Field Team Communicator is aware of the transfer and coordinate with their respective counterparts in the TSC.
- 6.2.4 Direct the Field Team Communicator to inform all Field Teams of the transfer of responsibility and direct off-site monitoring activities in accordance with A.2-807.
- 6.2.5 Direct the MIDAS Operator to perform off-site dose projections (in accordance with A.2-406 and generate Form 5790-102-03 (EMERGENCY NOTIFICATION FOLLOWUP MESSAGE).
- 6.2.6 Inform the Emergency Manager and EOF Coordinator when the transfer of MIDAS and control of the Field Teams is complete.
- 6.2.7 Notify the State Planning Chief in the State EOC of the transfer of off-site responsibilities.
- 6.2.8 Note the time of the transfer in the RPSS Log Book.

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- 6.2.9 Initiate and complete the associated forms for emergency classification changes, followup messages and off-site protective action recommendations in accordance with Section 6.8 of this procedure and A.2-807.

### **6.3 RPSS Recordkeeping**

- 6.3.1 Upon activation initiate the RPSS Log Book.
- 6.3.2 Record data, trends, and other information of radiological significance in the log in accordance with the following guidance:
- A. Significant events and the time(s) which they occur including changes in plant conditions, radiological releases, and trends.
  - B. Failures of plant systems, components or equipment crucial to achieving accident mitigation objectives and the time(s) those failures occur.
  - C. Summarize the results of radiological evaluations, dose projections, PARs and/or recommendations made to the Emergency Manager or REC.
  - D. Record key operational decisions and strategies developed (or implemented).
  - E. Log contacts with off-site agencies (e.g., State Planning and Assessment Center, etc.) technical vendors or contractors and consultants (e.g., contract health physics services) whose services have been requested including status reports of their response to the site.
- 6.3.3 Periodically monitor the distribution of completed forms in the Radiation Protection area (of the EOF) to ensure accurate, consistent, approved information is used by Radiation Protection personnel.
- 6.3.4 Ensure all completed forms are filed in the appropriate container provided and retained as emergency records.

### **6.4 Radiation Protection Support Group Shift Scheduling**

- 6.4.1 If the duration of the event could exceed 12 hours, evaluate Radiation Protection Group staffing required to support 24-hour coverage.
- 6.4.2 If and when requested by the EOF Coordinator, coordinate the assignment of ERO shifts for the group by completing Form 5790-802-05 (ERO SHIFT SCHEDULE - EOF SUPPORT GROUP) and forwarding the completed schedule to the EOF Coordinator.

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6.4.3 If 24-hour coverage is required, coordinate the departure of "next shift" Technical Support Group personnel as follows:

- A. Ensure ERO personnel are informed of their next ERO shift in accordance with the ERO Shift Schedule.
- B. Ensure personnel are instructed to contact the EOF if their final destination, after departing the site, is a location other than their permanent residence. In this case, they should provide a telephone number at which they can be reached if needed sooner than their next scheduled shift.
- C. Ensure ERO personnel are instructed to carry their company ID card to gain access to the site (in the event road blocks are established by off-site authorities).

6.4.4 Next shift ERO personnel should depart the EOF as follows depending on the situation:

- A. If no releases (above ODCM limits) are occurring and no off-site protective actions are in effect, personnel may depart the EOF and site as normal.
- B. If significant releases are occurring and/or off-site protective actions are in effect, coordinate the departure of next shift ERO personnel with the local county authorities (Sheriff Dispatcher or County EOC). The departure route should take personnel upwind of any releases.

## **6.5 EOF Status Updates**

6.5.1 When notified of an EOF status update, use Form 5790-806-02 (RPSS STATUS UPDATE CHECKLIST) to prepare for radiation protection portion of the update. Record the date and time of the status update in the spaces provided on the form.

6.5.2 During EOF updates, the RPSS should provide a status of the following topics using Form 5790-806-02 as a guide:

- A. Review the current radioactive release rates, release paths, recent trends in release rates, estimated release duration, source term, and the potential for changes in the magnitude of the source term.
- B. Review the potential for emergency classification changes (escalations) based on radiological conditions.
- \$ C. Review the most recent off-site dose projection results (Followup Message) including projected doses and dose rates and the results of any dose projection model comparisons with the State and/or NRC.

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- D. Review the most recent off-site survey results from Radiation Protection Status Board, Followup Message, or Survey Results board and any comparative survey results from the State Field Teams, EPA or DOE.
- E. Review the current and forecast meteorology including wind speed, direction precipitation and the potential for change.
- F. Review the status of off-site protective actions recommended to or implemented by the State (or Counties).
- G. Review current EOF habitability conditions including dose rates, DAC ratios, ARM readings and the potential for protective actions in the EOF (e.g., PC use, evacuation, etc.).
- H. Review personnel status including overexposures and/or personnel contaminations.
- I. Review current Radiation Protection Group staffing and potential staffing needs including the status of ERO shift scheduling (if applicable).

- \$ 6.5.3 If the NRC is present (in the EOF), your NRC counterpart should provide input immediately after the RPSS portion of the status update.
- 6.5.4 On Form 5790-806-02, note significant items reviewed during the TSS, EOF Coordinator and EM portion of the status update.
- 6.5.5 Upon completion of the status update, note the time of the next status update (if established by the EM).

## **6.6 General Instructions**

- 6.6.1 Continuously assess radiological conditions and provide advice to the Emergency Manager (and other EOF Group Leaders).
- 6.6.2 Continuously maintain the RPSS Log and enter significant events/decisions as they occur throughout the event.
- 6.6.3 Ensure the Dose Assessment Room is continuously staffed and the Survey Point Map and Off-site Survey Results board are maintained current.
- 6.6.4 Ensure the EOF Countroom is continuously staffed and off-site sample analysis results are delivered to the RPSS (or Assistant RPSS) for review.
- 6.6.5 Ensure the Radiation Protection Status Board in the EOF is continuously updated throughout the event with information obtained from approved Emergency Notification Follow-up Messages, the SPDS terminal and the Field Team Survey Results Board.



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- 6.6.6 If, and when requested by the EOF Coordinator, establish a 24 hour shift schedule for the EOF Radiation Protection Support Group by completing Form 5790-802-03 (ERO SHIFT SCHEDULE - EOF RADIATION PROTECTION SUPPORT GROUP) in accordance with Section 6.4.
- 6.6.7 Throughout the event, maintain a communication link (via hotline or commercial telephone) with the State Planning Chief at the State EOC.
- 6.6.8 Coordinate the manning of the Health Physics Network (HPN) link with the TSC. Ensure the FTS-HPN is continuously manned (as requested by the NRC) in accordance with the applicable section of A.2-803).
- 6.6.9 Through contact with the State Planning Chief, evaluate the need for additional Prairie Island Radiation Protection personnel assistance at the Public Reception Center (Osseo Jr. High School).
- 6.6.10 If the plant is conducting a Plant (or Site) evacuation, coordinate the removal of non-essential personnel from the site and provide radiation protection assistance (for off-site personnel and vehicle monitoring and decon) as requested by the REC in accordance with Section 6.9
- 6.6.11 Serve as the "point-of-contact" with off-site Health Physics vendor and contract technical services requested by the EOF or TSC. Request off-site vendor/technical services in accordance with the instructions in A.2-804 (EOF SUPPORT AND LOGISTICS).
- 6.6.12 Interface with NRC technical analysts (e.g., Protective Measures Coordinator, Environmental Dose Assessment Coordinator, etc.) present in the EOF (or by telephone if the NRC site incident response team is not present).
- 6.6.13 Continuously re-evaluate priorities for the Radiation Protection Support Group and redirect the group's efforts as necessary.
- 6.6.14 When the immediate emergency has been mitigated and the Emergency Manager is considering termination or making the transition to Recovery, initiate Section 6.11.

## **6.7 Radiological Assessment**

**NOTE:** This section provides instructions for the conduct of radiological assessment activities for which the RPSS (EOF Radiation Protection Group) is responsible. These assessment activities should be conducted by the RPSS throughout the event as necessary.

- 6.7.1 If radiological conditions in the EOF are a concern continuously assess EOF habitability through the conduct of periodic habitability surveys and operation of the DARM in accordance with A.2-808.
- 6.7.2 Ensure proper dosimetry is issued, collected and recorded for all EOF ERO personnel in accordance with A.2-808 and A.2-809 (EOF SECURITY).

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- 6.7.3 Throughout the event, evaluate the need to activate (or continue operation) of the EOF ventilation system in the emergency mode (i.e., release rates above the Alert EAL level). The EOF Coordinator is responsible for operation of the EOF Ventilation System in accordance with A.2-802 (ACTIVATION AND OPERATION OF THE EOF).
- 6.7.4 Evaluate the need to relocate the EOF access point to the Receiving Area entrance (i.e., if releases have or are occurring or if contaminated samples/personnel will be received). The EOF Coordinator, EOF Security, and EOF Countroom Tech are responsible for relocating the access point and setup of the Receiving Area.
- 6.7.5 If radiological conditions in the EOF warrant, make protective action recommendations (for EOF personnel) to the Emergency Manager in accordance with the criteria in A.2-808.
- 6.7.6 If necessary, consider emergency exposure authorizations for EOF personnel (if expected to exceed MNGP Administrative or Federal exposure limits). If emergency exposures are required, implement A.2-401 (EMERGENCY EXPOSURE CONTROL).
- 6.7.7 If contaminated personnel are received in the EOF (Receiving Area), implement personnel monitoring and decontamination in accordance with A.2-407 (PERSONNEL AND VEHICLE MONITORING AND DECONTAMINATION).
- 6.7.8 If off-site releases are occurring, project off-site doses using MIDAS (or backup method) throughout the event in accordance with A.2-406.
- 6.7.9 Coordinate off-site monitoring activities (Field Teams) via radio and ensure Field Team survey/sample results are posted on the Survey Results and Radiation Protection Status Boards in the EOF in accordance with A.2-807.
- 6.7.10 Ensure off-site survey results are compared to MIDAS dose projections (for the same period) and that MIDAS and survey results are shared with the State Planning Chief in the State EOC in accordance with A.2-807.
- 6.7.11 As necessary, review off-site sample analysis results from the EOF Countroom.
- 6.7.12 Periodically (about every 30 minutes) update the State Planning Chief by transmitting Form 5790-102-03 and reviewing the message contents with the State Health Department in accordance with A.2-807.
- 6.7.13 Based on dose projections, off-site surveys, or the emergency classification (General Emergency) recommend off-site protective actions to the State (or counties if the State EOC is not activated) in accordance with A.2-807.

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6.7.14 If off-site protective actions are recommended, monitor the progress of implementation (by the State and counties) through discussions with the State Planning Chief in the State EOC. Ensure the recommended and implemented PARs are posted on the Radiation Protection Status Board in the EOF.

6.7.15 If off-site protective actions are recommended (or are imminent), evaluate the need to recommend protective actions for the Sherco Plant to the corporate management at the JPIC in accordance with A.2-807.

6.7.16 If the event involves a radiological release to the environment, notify the Site Radiological Services Group. Contract REMP Labs will provide resources for environmental sampling and analysis.

## **6.8 Emergency Classification Changes**

6.8.1 When informed of a potential change in emergency classification, obtain a blank Form 5790-102-02 (MONTICELLO EMERGENCY NOTIFICATION REPORT FORM).

**NOTE: Complete as much of the form as possible with current information prior to the actual declaration of the new emergency classification.**

6.8.2 When the Emergency Manager declares the new emergency classification, complete the form as follows:

- A. Check the applicable blanks indicating the new emergency classification.
- B. Record the time and date the Emergency Manager declared the new emergency classification.
- C. Indicate whether the event involves a radioactive release.
- D. Identify the appropriate Off-Site Protection Action Recommendation. If the new emergency classification is a GENERAL EMERGENCY:
  1. Recommend evacuate all sectors out to 2 miles.
  2. Fill in the applicable Sectors (A-R) and downwind distances to which the PAR applies.
  3. Using the wind direction (from in degrees) and the SECTOR/SUBAREA CONVERSION CHART (on page 2 of the form), determine the geopolitical subarea(s) to which the PAR applies. Circle the affected subareas.

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E. Identify the appropriate Emergency Action Level Guideline number and provide a brief description of why the emergency classification is changing. The labels provided in the following forms should be used to provide the description:

1. 5790-102-08 (NUE GUIDELINE LABELS)
2. 5790-103-05 (ALERT GUIDELINE LABELS)
3. 5790-104-04 (EMERGENCY CALL LIST-ALERT/SITE AREA/GENERAL)
4. 5790-105-05 (GENERAL EMERGENCY GUIDELINE LABELS)

F. Complete the meteorological section using current information (from MIDAS or most recent Emergency Notification Follow-up Message) including:

1. Wind direction (from)
2. Wind speed (mph)
3. Temperature
4. Precipitation
5. Stability class (A-G)
6. Affected Sectors (A-R)

- 6.8.3 Submit the completed form to the Emergency Manager for review and approval signature. If Off-Site Protective Actions are being recommended, review the basis for the recommendations with the Emergency Manager.
- 6.8.4 Ensure the completed approved form is delivered immediately to the Off-Site Communicator(s) for transmittal to off-site authorities (within 15 minutes of the emergency classification change) in accordance with Form 5790-803-01 (EOF RECLASSIFICATION IN CALL-LIST).
- 6.8.5 If Off-Site Protective Action recommendations are included on the form, initiate a call to the State Planning Chief (or State Duty Officer prior to EOC activation) at the State EOC to explain the basis for the recommendations.

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## **6.9 Plant/Site Evacuation Instructions**

- 6.9.1 If an evacuation of the EOF is required, refer to A.2-810 (TRANSFER TO THE BACKUP EOF).
- 6.9.2 If a Plant (or Site) evacuation is conducted, assist the REC with coordinating the following aspects of the evacuation:
  - A. Selection of the evacuation route from the site upwind of any releases (if possible).
  - B. Notification of the counties (Sheriff's Dispatchers or EOCs) to assist with the evacuation (e.g., traffic control, road block passage, etc.).
  - C. Selection of the Off-site Assembly Point (if used).
  - D. Providing resources (Field Teams) for evacuee and vehicle monitoring and decontamination in accordance with A.2-407.
- 6.9.3 Coordinate the conduct of personnel monitoring and decontamination if evacuees are sent to the EOF (as an Off-site Assembly Point).
- 6.9.4 Provide periodic updates to the Emergency Manager on the progress of the evacuation and personnel monitoring results (i.e., number of contaminated evacuees, etc.).
- 6.9.5 Provide periodic updates to the counties on the status of the evacuation.

## **6.10 RPSS Shift Turnover**

- 6.10.1 Upon arrival at the EOF, the on-coming RPSS should review the:
  - A. Chronological Events Flipchart to become familiar with key events that have occurred.
  - B. The RPSS Log book entries (for the previous 12 hours if applicable).
- \$ 6.10.2 Review the following information with the existing RPSS. If the NRC is present, include the RPSS counterpart (Protective Measures Coordinator) in the turnover review if possible:
  - A. Review the status of current Radiation Protection Support Group staffing and future staffing needs.
  - B. Review the current plant status including the extent of radioactive releases, reactor status and other radiological issues related to the event (e.g., core damage estimates, etc.).

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- C. The status of EOP implementation (if applicable) and other operational information related to the event (i.e., releases, containment venting, etc.).
  - D. The status of any off-site dose projections in progress (or completed).
  - E. Off-site PARs recommended and/or implemented.
  - F. The status of any Health Physics vendor/contractor support requested.
  - \$ G. The status of radiation protection communications links (HPN, Field Teams, etc.) and off-site agency interface (e.g., State Planning and Assessment Center, NRC incident response, etc.).
- 6.10.3 If the Emergency Manager is conducting a turnover briefing, attend the EM briefing as requested.
- 6.10.4 The on-coming RPSS should contact the REC (in the TSC) to review the current status and determine any assistance the EOF Radiation Protection Support Group can provide.
- 6.10.5 Upon completion of the turnover discussions, the on-coming RPSS should formally assume the duty and note the turnover in the RPSS Log Book.
- 6.10.6 Inform the Emergency Manager the RPSS turnover is complete.
- 6.10.7 Make an announcement in the EOF Command Center regarding the turnover of RPSS responsibilities.

## **6.11 Event Termination or Recovery**

- 6.11.1 Evaluate radiological releases and plant conditions throughout the event. When the conditions listed in A.2-811 (EVENT TERMINATION OR RECOVERY IN THE EOF) are met, advise the Emergency Manager that the event may be terminated or the transition to Recovery made (based on off-site releases and/or other radiological conditions).
- 6.11.2 When the conditions for event termination or Recovery are met, consult (or participate in consultation) with the State Planning Chief to determine if event termination (or Recovery) are feasible based on off-site conditions and/or protective actions still in place.

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- \$ 6.11.3 When the EM, ED, NRC and State concur on event termination (or Recovery), initiate Form 5790-102-02 for the emergency classification change in accordance with section 6.8 and:
- A. Submit the completed form for Emergency Manager review and approval.
  - B. Ensure the form is transmitted to the off-site authorities (by Off-site Communicators) in accordance with Form 5790-803-01.
- 6.11.4 When directed by the Emergency Manager, compile a list of radiation protection issues which require action or evaluation to return the site and environs to their pre-accident condition as follows:
- A. Use Form 5790-602-01 (RECOVERY ACTION ITEM FORM) to compile the list of radiation protection related items (e.g., facility decontamination, contract HP support for outages, etc.).
  - B. Refer to A.2-811, Section 6.2, to identify items to consider when compiling the Radiation Protection Recovery Action Item list.
  - C. Coordinate the development of the Recovery Action Item list with the Radiological Emergency Coordinator (in the TSC).
  - D. On the Recovery Action Item list include a description of the action required (for each item).
- 6.11.5 Submit the completed Recovery Action Item list to the Technical Support Supervisor for inclusion in the master Recovery Action List(s) and the Emergency Manager turnover to the Recovery Manager.
- 6.11.6 Participate in the transition to recovery and turnover discussions as requested by the Emergency Manager.

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## 7.0 FIGURES

### FIGURE

#### 7.1 Forms Utilized in Procedure

<u>Procedure Number</u>	<u>Title</u>
1. 5790-806-01	RPSS ACTIVATION CHECKLIST
2. 5790-102-03	EMERGENCY NOTIFICATION FOLLOWUP MESSAGE
3. 5790-802-05	ERO SHIFT SCHEDULE - EOF SUPPORT GROUP
4. 5790-802-03	ERO SHIFT SCHEDULE - EOF RADIATION PROTECTION SUPPORT GROUP
5. 5790-806-02	RPSS STATUS UPDATE CHECKLIST
6. 5790-102-02	MONTICELLO EMERGENCY NOTIFICATION REPORT FORM
7. 5790-102-08	NUE GUIDELINE LABELS
8. 5790-103-05	ALERT GUIDELINE LABELS
9. 5790-104-04	EMERGENCY CALL LIST-ALERT/SITE AREA/GENERAL
10. 5790-105-05	GENERAL EMERGENCY GUIDELINE LABELS
11. 5790-803-01	EOF RECLASSIFICATION CALL-LIST
12. 5790-602-01	RECOVERY ACTION ITEM FORM



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## 1.0 PURPOSE

This procedure provides instructions and guidance for radiological monitoring and control in the EOF including the conduct of radiological habitability surveys in the EOF, personnel monitoring and exposure control and setup and operation of the EOF, ARM and Receiving Area.

## 2.0 APPLICABILITY

2.1 An Alert (or higher) has been declared at the Monticello Plant and the EOF has been activated and staffed.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

3.1 The Radiation Protection Support Supervisor (RPSS) is responsible for:

3.1.1 Overall direction and coordination of EOF RP Support Group activities including off-site dose projection and assessment, EOF Count Room operation, EOF radiological control and EOF personnel monitoring.

3.2 The Assistant RPSS is responsible for:

3.2.1 Ensuring implementation of this procedure (as necessary).

3.2.2 Assisting the RPSS with the coordination of EOF RP Support Group activities.

3.3 The EOF Radiation Protection Tech (RPT) and EOF Count Room Tech are responsible for:

3.3.1 The conduct of periodic habitability surveys in occupied areas of the EOF as directed by the RPSS (or Assistant RPSS) in accordance with the applicable section(s) of this procedure.

3.3.2 The setup, activation and operation of the EOF Dosimeter Area Radiation Monitor (DARM) in accordance with the applicable section(s) of this procedure.

3.3.3 Coordinate the setup and operation of the EOF Receiving Area for the receipt of radioactive samples and/or contaminated personnel.

## 4.0 DISCUSSION

This procedure provides guidance for the RPSS (Assistant RPSS) for radiological monitoring and control in the EOF. It provides specific instructions for the conduct of habitability surveys, and setup and operation of radiation monitoring instrumentation in the EOF.

The RPSS (or Assistant RPSS) is responsible for ensuring the applicable sections of this procedure are implemented (as necessary) by RPTs assigned to the EOF.

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This procedure also contains Protective Action Guidelines (PAGs) for the protection of EOF personnel. Throughout an event which involves radiological releases the RPSS (and/or Assistant RPSS) should periodically compare the results of EOF habitability surveys to the Protective Action Guidelines for EOF personnel contained in this procedure to determine what (if any) protective actions should be recommended to the Emergency Manager.

## **5.0 PRECAUTIONS**

- 5.1 Exposure of EOF personnel should be in accordance with administrative control levels. Personnel **SHALL** have proper dosimetry which is frequently checked, remain alert to their own exposure, and request relief if cumulative exposure approaches administrative control levels.

## **6.0 INSTRUCTIONS**

### **6.1 Habitability Surveys in the EOF**

- 6.1.1 Upon activation of the EOF (and throughout the event), the RPSS (or Assistant RPSS) should monitor the Stack and Vent release rates. If a radioactive release in excess of the Alert levels (specified in A.2-101 (CLASSIFICATION OF EMERGENCIES), Guideline 1 for Stack and Vent effluents) has, or is occurring, periodic habitability surveys should be conducted including:
  - A. Setup and activation of the EOF Dosimeter Area Radiation Monitor (DARM) in accordance with Section 6.5 of this procedure.
- 6.1.2 If required, habitability surveys should be conducted by the EOF RPT, EOF Count Room Tech, or other EOF staff member qualified in radiation protection.
- 6.1.3 If habitability surveys are required (i.e., radioactive releases in excess of Alert levels are/or have occurred), the RPSS (or Assistant RPSS) should ensure:
  - A. The EOF Ventilation system is placed in the emergency mode (by the EOF Coordinator) in accordance with A.2-802 (ACTIVATION AND OPERATION OF THE EOF).
  - B. Access to the EOF is transferred to the EOF Receiving Area (by the EOF Coordinator) in accordance with A.2-802.
- 6.1.4 If habitability surveys are required they should be conducted in all occupied areas of the Training Center Complex.
- 6.1.5 Habitability surveys in the EOF should consist of:
  - A. Gamma and beta dose rate surveys.

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- B. Smear surveys in suspect areas where the potential for loose surface contamination spread is greatest (e.g., Receiving Area Step-Off-Pads, EOF Count Room, EOF HVAC Room, etc.).
- C. Checking the EOF ARM readings.
- D. Air sampling (and analysis).

- 6.1.6 Habitability survey results should be documented on Form 5790-808-01 (EOF RADIOLOGICAL SURVEY FORM), FIGURE 7.1, and submitted to the RPSS (or Assistant RPSS) for review.
- 6.1.7 The RPSS (or Assistant RPSS) should ensure EOF habitability survey results are posted on the EOF RP Status Board.
- 6.1.8 The RPSS (or Assistant RPSS) should compare habitability survey results with the EOF Protective Action Criteria contained in FIGURE 7.1 to determine the need for any protective actions for EOF personnel. Implement necessary protective actions in accordance with Section 6.7 of this procedure.
- 6.1.9 If protective actions for EOF personnel are warranted (based on the criteria in FIGURE 7.1), the RPSS should make protective action recommendations to the Emergency Manager.

## **6.2 Exposure Control in the EOF**

- 6.2.1 If personnel exposures are expected to exceed 10 mRem (DDE) in the EOF, ensure all personnel in (or entering) the EOF are issued dosimetry (which consists of one TLD and one 0-200 mR Pocket Ion Chamber) in accordance with A.2-809 (EOF SECURITY).
- 6.2.2 All dosimetry information (e.g., dosimeter reading in, dosimeter reading out, TLD number, etc.) should be recorded on Form 5790-809-02 (EOF SIGN-IN/OUT LOG) in accordance with A.2-809.
- 6.2.3 The RPSS (or Assistant RPSS) should obtain a current Daily Exposure Report from the REC to aid in determining exposure limits for EOF personnel.

### **NOTE: Daily Exposure Report can be Obtained via PMETS**

- 6.2.4 Issue dosimetry and initiate exposure records for temporary (non-NMC) emergency response personnel reporting to the EOF as follows:
  - A. Direct each individual to complete a Form 5525 (PERSONAL HISTORY).
  - B. Issue the individual dosimetry and record the dosimetry data in the EOF SIGN-IN/OUT LOG in accordance with A.2-809.

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- C. Determine the individual's available exposure based on information from the PERSONAL HISTORY as follows:
    - 1. If the individual has unverified current year exposure or no previous years exposure estimate then limit the individual to 250 mrem/year.
    - 2. If the individual has a completed NRC Form 4 on file in accordance with Radiation Protection Procedure R.14.11, then limit the individual to 2000 mrem/year.
  - D. Enter the PERSONAL HISTORY data and available exposure data into the computer system (PMETS) in accordance with existing Radiation Protection Procedures.
- 6.2.5 When an individual's dosimeter reaches 3/4 scale (150 mrem), Security at the EOF Access Point should record and rezero the dosimeter as follows:
- A. Record the dosimeter reading in the DOSE OUT column and complete the individual's data line entry on the EOF SIGN-IN/OUT LOG including exposures received.
  - B. Rezero the individual's dosimeter and re-issue.
  - C. Start a new data line entry on the EOF SIGN-IN/OUT LOG and record the individual's name, TLD number and dosimeter (DOSE IN) reading.
- 6.2.6 To increase an individual's exposure limit (above the established annual limit), complete/initiate the following forms:
- A. To allow exposure in excess of 250 mrem (TEDE), the individual must have a completed NRC Form 4 on file, which shows all prior occupational exposure history per RPP-R.14.11.
  - B. To authorize exposures in excess of 2000 mrem (TEDE) implement A.2-401 (EMERGENCY EXPOSURE CONTROL) and complete Form 5790-401-01 (EMERGENCY EXPOSURE AUTHORIZATION FORM). The Emergency Manager must authorize exposures in excess of MNGP Administrative limits.
- 6.2.7 The RPSS (or Assistant RPSS) should coordinate with the Radiation Protection Group the entry of exposure data into the PMETS computer system each shift (i.e., at the end of each ERO shift) and generation of a new available exposure list for the next ERO shift in accordance with existing Radiation Protection Procedures.
- 6.2.8 If the PMETS computer system is not available, exposure data, for each individual, should be recorded and tracked on Form 5790-808-02.

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- 6.2.9 If thyroid exposures in excess of 25 REM CDE (~1000 DAC-hrs DEI) are anticipated or projected, the RPSS should recommend the issuance of Potassium Iodide (to affected EOF personnel) to the Emergency Manager. If directed, the RPSS should coordinate the issuance of KI in accordance with A.2-304 (THYROID PROPHYLAXIS).

### **6.3 Contamination Control in the EOF**

- 6.3.1 Upon activation of the EOF (and throughout the event), the RPSS (and/or Assistant RPSS) should monitor the Stack and Vent release rates. If a radioactive releases in excess of the Alert levels (specified in A.2-101, Guideline 1 for Stack and Vent effluents) has or is occurring, the RPSS should recommend transferring EOF access to the Receiving Area.
- 6.3.2 If EOF access is transferred to the Receiving Area, the EOF RPT and/or EOF Count Room Tech should coordinate the setup and operation of the EOF Receiving Area in accordance with Section 6.6 of this procedure.
- 6.3.3 When EOF access is established at the Receiving Area, all personnel entering the EOF facility should be monitored for contamination using a Count rate meter (frisker) with 2" pancake probe and:
- A. Personnel that do not indicate < 100 CPM (above background) should be considered not contaminated and allowed immediate access to the EOF facility.
  - B. Personnel that indicate >100 CPM (above background) on the count rate meter should be considered contaminated and personnel decontamination performed (in accordance with Section 6.4) prior to allowing access to the EOF facility.
- 6.3.4 The EOF RPT (or EOF Count Room Tech) should supervise all personnel monitoring and decontamination activities.
- 6.3.5 If a radioactive release is occurring, or has occurred, and samples are being sent to the EOF Count Room for analysis, ensure all samples are surveyed (smear and frisked) and rebagged (if necessary) prior to being brought into the EOF Count Room.
- 6.3.6 If contamination spread is detected in the EOF facility, the RPSS (or Assistant RPSS) should consider the implementation of strict contamination control measures including:
- A. Isolating, barricading, and posting contaminated areas within the facility.
  - B. Controlling eating and drinking until foodstuffs and surfaces are surveyed and cleared of contamination.

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C. The use of anti-contamination protective clothing by EOF personnel.

6.3.7 If strict contamination control measures are implemented in the EOF, consideration should be given to evacuating non-essential EOF personnel.

#### **6.4 Personnel Monitoring and Decontamination**

6.4.1 Upon activation of the EOF Receiving Area access point, all personnel entering the EOF should be monitored for contamination.

6.4.2 Whole body frisking should be conducted using a Count Rate Meter (or equivalent) with 2" pancake probe.

6.4.3 The EOF Security Officer manning the Access Point should ensure all personnel entering the EOF are properly monitored. If personnel are found to be contaminated, the Count Room Tech (or EOF RPT) should be notified immediately.

6.4.4 The EOF Count Room Tech (or EOF RPT) should supervise follow-up monitoring and decontamination of contaminated personnel.

6.4.5 Form 5790-407-01 (WHOLE BODY SURVEY FORM) should be initiated for each contaminated individual and follow-up contamination surveys conducted as follows:

- A. Direct the individual to the posted, controlled area of the Receiving Area.
- B. Perform a whole body frisk of the individual.
- C. Record the results of the initial survey on Form 5790-407-01.
- D. If the individual's clothes are contaminated, direct the individual to remove the suspect clothing and resurvey the area. Properly bag and control all contaminated clothing.
- E. Survey around the individual's mouth and nose to identify potential inhalation/ingestion. Contamination levels of 1000 CPM around the nose or mouth require further bioassay information. If internal contamination is suspected, indicate BBA required on Form 5790-407-01 and direct the individual to obtain a BBA at the earliest convenience following the event.

6.4.6 If the individual's skin is contaminated, direct the individual wash the affected area with soap and water. Use the EOF decon shower facility if skin contamination covers a large area of the body. Decontamination supplies are available in the decon supply locker in the EOF Receiving Area.

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**NOTE:** The EOF decon shower drains to a 1000 gallon holding tank that is equipped with a high level alarm which alarms locally in the EOF Receiving Area. If the alarm is received, notify the RPSS and EOF Coordinator.

- 6.4.7 Resurvey the individual after decontamination. If the individual's clothing is confiscated (due to contamination), paper coveralls are available in the decon supply locker in the EOF Receiving Area.
- 6.4.8 Complete Form 5790-407-01 after decontamination. Provide the pink copy to the individual and retain the white copy as emergency records in the EOF Count Room.

## **6.5 EOF Dosimeter Area Radiation Monitor (DARM) Instructions**

### **CAUTION**

**The DARM is calibrated for use only with the external detector. DO NOT use the unit with only the internal detector.**

- 6.5.1 Obtain the Dosimeter Corporation Area Radiation Monitor (DARM) from the Instrument Cabinet in the Count Room and setup in either the EOF Command Center if not already set up.
- 6.5.2 Ensure the DARM is operational by holding in the "CHECK" button. Verify the alarm sounds and light flashes.
- 6.5.3 Adjust the alarm to 0.5 mr/hr by turning the potentiometer labeled "ALARM SET" while holding in the "CHECK" button.
- 6.5.4 If radiation levels causes the DARM to continuously alarm, adjust the alarm setpoint to 10 mr/hr and notify the RPSS.

## **6.6 EOF Receiving Area Setup and Operation**

- 6.6.1 The EOF access point should be established (transferred) to the Receiving Area if any of the following conditions occur:
  - A. Emergency response personnel which may have been exposed to a plume or radioactive materials required access to the EOF.
  - B. A radioactive release (in excess of Alert levels) is/or has occurred and samples from the Field Teams are being brought to the EOF for analysis.
  - C. Radioactive samples are being brought from the plant to the EOF for analysis.
  - D. The EOF Receiving Area is required for decontamination of contaminated personnel.



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- 6.6.2 The EOF Coordinator, Security Coordinator, Count Room Tech, and EOF RPT (if necessary) should coordinate the setup and operation of the Receiving Area EOF Access Point.
- 6.6.3 The EOF Receiving Area and rear access point should be setup in accordance with 5790-802-07 (EOF RECEIVING AREA FLOOR PLAN).
- 6.6.4 The EOF Coordinator and EOF Security are responsible for the setup and operation of the EOF access point in accordance with A.2-809.
- 6.6.5 Upon activation of the Receiving Area Access Point, the EOF Security Coordinator should ensure all external doors to the EOF are posted directing personnel to the rear EOF entrance.
- 6.6.6 The EOF Count Room Tech (and EOF RPT if necessary) should setup the Receiving Area in accordance with A.2-424 (EOF COUNT ROOM PROCEDURES) and as follows:
  - A. Obtain the necessary stanchions, Step-Off-Pads, and barricade ropes from the supply locker in the Receiving Area.
  - B. Setup a Controlled Area in the Receiving Area in accordance with 5790-802-07.
  - C. Place a Step-Off-Pad in the hallway outside the Receiving Area double doors for personnel entering the EOF.
  - D. Obtain two Count Rate Meters (or equivalent) from the HP Instrument Locker in the EOF Count Room and setup two frisking stations in accordance with 5790-802-07.
  - E. If personnel decontamination may be required, setup the portable change stalls (stored in the Receiving Area shower) in accordance with 5790-802-07.
- 6.6.7 Manual frisking should be implemented.
- 6.6.8 When Receiving Area setup is complete, inform the EOF Coordinator and RPSS.
- 6.6.9 Security should direct all personnel entering the EOF to monitor for contamination prior to entering the EOF facility.
- 6.6.10 Personnel that have been monitored and are not contaminated (i.e. <100 CPM above background) should be allowed access to the EOF. Contaminated personnel should be directed to the posted, contaminated area (in the Receiving Area) for further monitoring and decontamination (if necessary).

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- 6.6.11 The EOF Count Room Tech or EOF RPT should direct personnel monitoring and decontamination activities in accordance with Section 6.4 of this procedure.
- 6.6.12 After decontamination, personnel should be resurveyed and allowed access to the EOF if not contaminated.
- 6.6.13 If samples are delivered to the EOF (for analysis), EOF Security should inform the Count Room tech (if not present) and ensure all samples are held in the Contaminated Area of the receiving Area until checked by the RPT.
- 6.6.14 The EOF Count Room Technician should ensure that all samples are properly surveyed (smears, dose rates and/or frisked) and rebagged (if necessary) prior to entering the uncontrolled areas of the EOF.
- 6.6.15 Analyzed samples should be stored in the Sample Storage Locker in the EOF Receiving area until needed for further analysis or proper disposal.
- 6.6.16 If analyzed samples are accumulating in the sample storage locker, periodic surveys should be conducted (included in routine EOF habitability surveys) to ensure the analytical equipment in the EOF Count Room is not affected by increased background radiation from stored samples.
- 6.6.17 The Count Room Tech (or EOF RPT) should conduct periodic smear surveys of established Step-Off-Pad areas to ensure no inadvertent spread of contamination into uncontrolled areas of the EOF occurs.

#### **6.7 Protective Actions for EOF Personnel**

- 6.7.1 Throughout the event the RPSS (or Assistant RPSS) should review habitability survey results and compare the results to the EOF Protective Action Guidelines in FIGURE 7.1.
- 6.7.2 If implementation of protective actions for EOF personnel are warranted, the RPSS should make the appropriate recommendations to the Emergency Manager.
- 6.7.3 If the protective actions involve strict contamination control in the EOF:
  - A. Obtain the assistance of the EOF Coordinator (or Assistant EOF Coordinator) to isolate the affected EOF areas and relocate personnel (to alternate work locations) if necessary.
  - B. Recommend appropriate protective clothing use for EOF personnel.
  - C. Control eating and drinking in the EOF until foodstuffs and surfaces can be surveyed and cleared of contamination.

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- D. Consider the evacuation of non-essential personnel from the EOF if airborne radioactivity is a concern.
- 6.7.4 If the protective actions involve the evacuation of non-essential personnel from the EOF, the RPSS (or Assistant RPSS) should:
- A. Determine a departure route from the EOF which takes the evacuees upwind of any releases (if possible).
  - B. If a release has occurred (or is occurring), select an off-site Assembly Point (Sherco or the Monticello Service Center) and coordinate the activation and setup of the Assembly Point with the REC.
  - C. If off-site protective actions are in effect, coordinate the departure and procession of evacuees with local authorities (County EOC or Sheriff) (i.e. ensure clearance through established road blocks, etc.).
  - D. If a release has occurred (or is occurring), provide evacuation instructions and directions to evacuees including closing car windows, securing ventilation, etc.
- 6.7.5 If evacuation of the EOF is warranted, refer to A.2-810 (TRANSFER TO THE BACKUP EOF).

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## 7.0 FIGURES

### FIGURE

#### 7.1 EOF Protective Action Guidelines

<b>External (DDE) Exposure Rates (mRem/HR)</b>	<b>Protective Action</b>	<b>Comments</b>
greater than 1	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization and Declared Pregnant Women. Consider evacuation of women and nonessential personnel.	
greater than 100	<u>Consider relocating to the backup EOF. Execute exposure authorization for those personnel approaching administrative limits and deemed by the Emergency Manager as vital to the emergency response effort. Evacuate all others.</u>	<b>CAUTION:</b> Consider only if levels are expected to be sustained for significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.
greater than 1000	Evacuation to the Backup EOF.	
<b>Smearable Surface Contamination Levels (DPM/100 cm<sup>2</sup>)</b>	<b>Protective Action</b>	<b>Comments</b>
greater than 100	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization. Control eating, drinking and smoking.	
greater than 1000	Consider use of protective clothing, evacuate nonessential personnel.	Operation may continue as long as restrictions on personnel movements to limit the spread of contamination do not become limiting to operations.
greater than 5000	Ensure use of protective clothing.	

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## FIGURE

### 7.1 EOF Protective Action Guidelines (Cont'd)

Airborne Radioactive Levels	Protective Action	Comments
<b>Particulate</b>		
1. $1 \times 10^{-9}$ uCi/cc	No protective action necessary.	
2. $>1 \times 10^{-9}$ uCi/cc, but $< 1 \times 10^{-6}$ uCi/cc	Consider evacuation of unnecessary personnel and establish a program of regular air samples and counting to determine the DAC.	
a. If air sample results $> .30$ DAC	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization.	This measure is to ensure that classrooms and other non-EOF areas do not contain personnel being trained, i.e., badging classes, visitors, consultants, etc.
b. If air sample results $> 1$ DAC	Consider evacuation of non-essential personnel.	Prolonged exposure to excessive airborne levels without protection that would lead to exposure of 5000 mRem Committed Effective Dose Equivalent in one year should be avoided.
c. If air sample results $> 10$ DAC	Evacuate all personnel not deemed by the Emergency Manager as vital to the emergency response effort. Consider relocation of the EOF to the back-up EOF.	<b>CAUTION:</b> Consider evacuation only if levels are expected to be sustained for a significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.
3. $> 1 \times 10^{-6}$ uCi/cc	Consider evacuation to the Backup EOF.	
a. If air sample results $> 40$ DAC	Evacuate to Backup EOF	

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## FIGURE

### 7.1 EOF Protective Action Guidelines (Cont'd)

Airborne Radioactive Levels	Protective Action	Comments
<b>Iodine</b>		
1. If air sample results > 1 DAC	Consider evacuation of non-essential personnel and limit exposures to less than 40 DAC-hrs per week, if possible.	Prolonged exposure to excessive airborne levels without protection that would lead to a whole body exposure of 5000 mRem committed effective dose equivalent in one year should be avoided.
2. If air sample results > 10 DAC	Consider evacuation to the Backup EOF.	<b>CAUTION:</b> Consider evacuation only if levels are expected to be sustained for a significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.
3. If air sample results > 40 DAC Evacuate to the Backup EOF.		
<b>NOTE:</b> The RPSS should recommend the use of potassium iodide tablets (thyroid blocking agent) if the projected thyroid exposure approaches 25 rem CDE (~1000 DAC-hrs DEI). See A.2-304 to determine projected thyroid doses.		

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## **1.0 PURPOSE**

This procedure provides instructions for the Emergency Manager and EOF staff in the event the EOF has to be evacuated and the EOF functions transferred to the backup EOF.

## **2.0 APPLICABILITY**

- 2.1 An Alert has been declared at the Monticello Plant and the EOF has been activated and staffed, AND
- 2.2 Radiological or conventional hazards in the EOF environs dictate the EOF be evacuated and EOF functions transferred to the Backup EOF.

## **3.0 ORGANIZATION AND RESPONSIBILITIES**

- 3.1 The Emergency Manager (EM) is responsible for:
  - 3.1.1 Implementation of this procedure.
  - 3.1.2 Overall direction and coordination of EOF activities when transferring to the backup EOF.
- 3.2 The EOF Coordinator is responsible for:
  - 3.2.1 Assisting the Emergency Manager in the transfer process.
- 3.3 The Radiation Support Supervisor (RPSS) is responsible for:
  - 3.3.1 Directing and coordinating the Field Teams.
  - 3.3.2 Assisting the EM in transferring EOF responsibilities to the Backup EOF.
- 3.4 The Technical Support Supervisor (TSS) is responsible for:
  - 3.4.1 Assisting the EM in transferring EOF responsibilities to the Backup EOF.

## **4.0 DISCUSSION**

This procedure provides guidance for the EOF staff for the evacuation of the EOF and transfer of EOF functions to the backup EOF. Two methods of transfer are described by this procedure, direct and indirect transfer. Section 6.1 provides instructions for the indirect transfer of EOF functions to the Backup EOF via the TSC. This method is appropriate for situations in which little or no lead-time is available to staff the Backup EOF prior to the transfer of EOF functions. In this case, the EOF functions should be transferred to the TSC initially, and then to the Backup EOF when staffed. Section 6.2 provides instructions for the direct transfer of EOF functions directly to the Backup EOF.



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The determination to evacuate EOF personnel should be based on the following considerations:

- The integrated dose personnel would receive if they remain in a radiological affected area.
- The calculated total dose which would accumulate over the period of EOF operation.
- The potential loss of the ability to utilize key technical personnel due to radiation exposure limits.
- The effectiveness of the emergency organization operating in condition of reduced mobility or communication due to use of protective clothing and equipment.
- The potential exposure received during evacuation as compared to the potential exposure received by not evacuating.

## **5.0 PRECAUTIONS**

- 5.1 Conditions requiring an evacuation of the EOF may vary significantly based on the extent of operations in progress, the severity of the radiation levels, the estimated time radiation levels will be elevated, and the integrated dose to personnel.
- 5.2 Non-essential personnel (those not directly involved in the activities of the EOF organization) should be evacuated first from any areas that exhibits elevated radiation or contamination levels.

## **6.0 INSTRUCTIONS**

### **6.1 Indirect Transfer to the Backup EOF (via the TSC)**

- 6.1.1 Inform the Emergency Director at the TSC and Utility Executive Management that the EOF will be transferring to the Backup EOF and the TSC needs to temporarily take over EOF responsibilities until the Backup EOF is staffed.
- 6.1.2 Direct the RPSS to establish an evacuation route upwind from any release or potential release that would limit the exposure of personnel while enroute to the Backup EOF or off-site assembly point.

**NOTE: If off-site assembly points (Monticello Service Center or Sherco) are uninhabitable use one of the Counties' Emergency Worker Monitoring and Decon Centers.**

- 6.1.3 Direct the RPSS to establish monitoring and decontamination teams at the the assembly point if necessary.

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- 6.1.4 Direct the RPSS to calculate the potential exposure received during evacuation as compared to the potential exposure received by not evacuating.
- 6.1.5 Direct the EOF Coordinator to establish an EOF organization by using either existing EOF staff or by setting up a new EOF staff to transfer or report to the Backup EOF respectively.

**NOTE:** If existing EOF staff is being transferred, contact a local bus company to transport the EOF staff to the Backup EOF. The Emergency Manager may take the cell phone located in the EOF equipment cabinet to maintain contact with the Emergency Director during transit to the Backup EOF.

- 6.1.6 Direct the EOF Coordinator to assemble materials and equipment to be transferred to the Backup EOF.

**NOTE:** Contaminated materials should not be transferred from the EOF.

- 6.1.7 Direct the EOF Coordinator to contact the Wright and/or Sherburne County Sheriff's Department(s) and request an escort to the off-site assembly point, County Decon Centers or out of the EPZ if reporting to the Backup EOF.
- 6.1.8 Ensure the evacuation route minimizes the time personnel would be exposed to off-site radioactive releases.
- 6.1.9 Direct the RPSS to transfer the MIDAS, Dose Projection and directing Field Team responsibilities back to the TSC.
- 6.1.10 Direct the RPSS to notify the State Planning and Assessment Center that off-site dose projection responsibilities will be transferred to the TSC until the Backup EOF is staffed.
- 6.1.11 Direct the RPSS to identify a collection point for Field Teams to deliver samples to. The field samples should be transported to the Prairie Island Plant or the State's lab for analysis.
- 6.1.12 Direct the EOF Coordinator to contact the Prairie Island Plant to arrange for a sample courier to pick up samples at the collection point and return them to the Prairie Island lab for analysis.
- 6.1.13 Direct the Technical Support Supervisor to transfer plant parameter trending and procurement activities to the TSC.
- 6.1.14 Direct the EOF Coordinator to secure the building when all personnel have been evacuated.
- 6.1.15 When all EOF activities have either been transferred or terminated, make an announcement in the EOF to evacuate the premises to the predetermined Off-Site Assembly Point or County Emergency Worker Monitoring and Decon Centers.

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## **6.2 Direct Transfer to the Backup EOF**

- 6.2.1 Inform the Emergency Director at the TSC and Utility Executive Management that the EOF will be transferring to the Backup EOF.
- 6.2.2 Direct the EOF Coordinator to establish a new EOF organization and arrange for the staff to report directly to the Backup EOF.
- 6.2.3 Direct the RPSS to establish an evacuation route upwind from any release or potential release that would limit the exposure of personnel while enroute to the Backup EOF or off-site assembly point.

**NOTE: If off-site assembly points (Monticello Service Center or Sherco) are uninhabitable use one of the Counties' Emergency Worker Monitoring and Decon Centers.**

- 6.2.4 Direct the RPSS to establish monitoring and decontamination teams at the assembly point if necessary.
- 6.2.5 Direct the RPSS to calculate the potential exposure received during the evacuation as compared to the potential exposure by not evacuating.
- 6.2.6 Direct the EOF Coordinator to assemble materials and equipment to be transferred to the Backup EOF.

**NOTE: Contaminated materials should not be transferred from the EOF.**

- 6.2.7 Direct the EOF Coordinator to contact the Wright and/or Sherburne County Sheriff's Department(s) and request an escort to the off-site assembly point or County Decon Centers.
- 6.2.8 Ensure the evacuation route minimizes the time personnel would be exposed to off-site radioactive releases.
- 6.2.9 When the Backup EOF is staffed with EOF personnel, direct the RPSS to transfer the MIDAS, Dose Projection and directing Field team responsibilities to the Backup EOF.
- 6.2.10 Direct the RPSS to notify the State Planning and Assessment Center that off-site dose projection responsibilities will be transferred to the Backup EOF.
- 6.2.11 Direct the RPSS to identify a collection point for the Field Team to deliver samples to. The field samples should be transported to the Prairie Island Plant or the State's lab for analysis.
- 6.2.12 Direct the EOF Coordinator to contact the Prairie Island Plant to arrange for a sample courier to pick up samples at the collection point and return them to the Prairie Island lab for analysis.

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- 6.2.13 Direct the Technical Support Supervisor to transfer plant parameter trending and procurement activities to the Backup EOF.
- 6.2.14 Direct the EOF Coordinator to secure the building when all personnel have been evacuated.
- 6.2.15 When all EOF activities have either been transferred or terminated, make an announcement in the EOF to evacuate the premises to the predetermined Off-Site Assembly Point or County Emergency Worker Monitoring and Decon Centers.

### **6.3 Activation of the Backup EOF**

- 6.3.1 Upon arrival of the Backup EOF, the Emergency Manager will contact the Emergency Director at the TSC to determine the current plant status and will initiate applicable portions of A.2-801 (RESPONSIBILITIES OF THE EMERGENCY MANAGER).
- 6.3.2 Direct the EOF Coordinator to initiate applicable portions of A.2-802 (ACTIVATION AND OPERATION OF THE EOF) and A.2-804 (EOF SUPPORT AND LOGISTICS). Direct the EOF Coordinator to work with the EOF Security Coordinator to ensure all persons who have reported to the Back-up EOF are FFD and anyone entering the Back-up EOF is FFD.
- 6.3.3 Direct the Off-Site Communicators and Emergency Communicators to initiate applicable portions of A.2-803 (EMERGENCY COMMUNICATIONS AT THE EOF).
- 6.3.4 Direct the Technical Support Supervisor to initiate applicable portions of A.2-805 (TECHNICAL SUPPORT AT THE EOF).
- 6.3.5 Direct the RPSS to initiate applicable portions of A.2-806 (RADIATION PROTECTION SUPPORT IN THE EOF), A.2-807 (OFF-SITE DOSE ASSESSMENT AND PROTECTIVE ACTION RECOMMENDATIONS) and to ensure the MIDAS system is operational, plant parameter information from SPDS is on-line and all communication equipment is functional.
- 6.3.6 Direct the EOF Security Coordinator to initiate applicable portions of A.2-809 (EOF SECURITY), ensure all persons that have reported to the Back-up EOF are FFD and to co-locate with the Corporate Security Officer at the entrance to the Back-up EOF and ensure others entering the Back-up EOF are FFD.
- 6.3.7 Determine when the Back-up EOF can function as a fully staffed and equipped EOF and contact the Emergency Director at the TSC or the Emergency Manager at the EOF if this is a direct transfer to arrange for a time when the Backup- EOF will take over the EOF functions.

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- 6.3.8 When the EOF activities have been turned over to the Back-up EOF, direct the EOF Coordinator to have the Off-Site Communicators inform the NRC, State and local governments of the change and that all communications will be coming from the Back-up EOF.
- 6.3.9 Direct the RPSS to inform the State Planning and Assessment Center that the Back-up EOF will be making the Protective Action Recommendations.

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**7.0 FIGURES**

None