

DATE: 03/16/01  
TIME: 08:59:49

AMEREN/UE  
DOCUMENT CONTROL SYSTEM  
DOCUMENT TRANSMITTAL

PAGE: 57  
ARDC8801

TRANSMITTAL NUMBER: 462109  
TO CONTROL NUMBER: 338U  
TITLE: OTHER  
DEPT: NUCLEAR REGULATORY COMM.  
LOCATION: USNRC - WASH DC  
TRANSMITTAL DATE: 20010316

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ADMINISTRATION RECORDS  
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CALLAWAY PLANT  
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TRAN	DOC			RET		ALT	ALT				
CODE	TYPE	DOCUMENT	NUMBER	REV	REV	MED	COPY	MED	COPY	AFFECTED	DOCUMENT
R	PROC	EIP-ZZ-C0010		023	022	C	1				
R	PROC	EIP-ZZ-00211		019	018	C	1				
R	PROC	EIP-ZZ-00240		026	025	C	1				

ACKNOWLEDGED BY:

DATE:

A045

CALLAWAY PLANT  
EMERGENCY PLAN IMPLEMENTING PROCEDURE  
EIP-ZZ-C0010  
EMERGENCY OPERATIONS FACILITY OPERATIONS

RESPONSIBLE DEPARTMENT EMERGENCY PREPAREDNESS

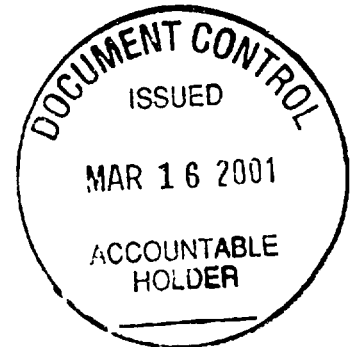
PROCEDURE OWNER S. J. Crawford

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DATE ISSUED 3-16-01



This procedure contains the following:

Pages	<u>1</u>	through	<u>6</u>
Attachments	<u>1</u>	through	<u>7</u>
Tables	<u>          </u>	through	<u>          </u>
Figures	<u>          </u>	through	<u>          </u>
Appendices	<u>          </u>	through	<u>          </u>
Checkoff Lists	<u>          </u>	through	<u>          </u>

This procedure has            checkoff list(s) maintained in the mainframe computer.

Conversion of commitments to TRS reference/hidden text completed by Revision Number:

Non-T/S Commitments 018

TABLE OF CONTENTS

<u>Section</u>		<u>Page Number</u>
1	PURPOSE AND SCOPE	1
2	RESPONSIBILITIES	1
3	INITIATING CONDITIONS	3
4	PROCEDURE	4
5	REFERENCES	5
6	RECORDS	6
	Attachment 1 – Recovery Manager Checklist	2 Pages
	Attachment 2 – Off-Site Liaison Coordinator Checklist	2 Pages
	Attachment 3 – Protective Measures Coordinator Checklist	4 Pages
	Attachment 4 – Plant Assessment Coordinator Checklist	4 Pages
	Attachment 5 – Logistics Support Coordinator Checklist	3 Pages
	Attachment 6 – Dose Assessment Coordinator Checklist	7 Pages
	Attachment 7 – Backup EOF Checklist	4 Pages

## EMERGENCY OPERATIONS FACILITY OPERATIONS

### 1 PURPOSE AND SCOPE

- 1.1 The purpose of this procedure is to provide guidance to Emergency Response Personnel who report to the Emergency Operations Facility (EOF) and Backup EOF (BEOF).

### 2 RESPONSIBILITIES

#### 2.1 RECOVERY MANAGER (RM)

- 2.1.1 The Recovery Manager is responsible for ensuring that the EOF/BEOF becomes operational after notification of an ALERT, SITE or GENERAL EMERGENCY classification and has overall command and control of the entire Ameren-UE Emergency Response Organization. Duties include the following: (COMN 3361, 3415)

<p><i>NOTE:</i> The responsibilities that the RM may delegate are indicated with an asterisk (*).</p>
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- 2.1.1.1 \* Establishing and maintaining communications with the Emergency Coordinator.
- 2.1.1.2 \* Requesting off-site support (i.e., NSSS, A/E, INPO, Federal, State and Local).
- 2.1.1.3 \* Ensuring responsibility for communications with off-site agencies is transferred from the Control Room to the EOF Emergency Response Organization (excluding NRC ENS communications).
- 2.1.1.4 Authorizing notifications to off-site agencies.
- 2.1.1.5 Assuming responsibility from the Control Room for making Protective Action Recommendations.
- 2.1.1.6 \* Maintaining command and control over personnel in the EOF and providing considerations necessary for their safety.
- 2.1.1.7 \* Ensuring coordinated emergency response among Ameren UE and off-site agencies

- 2.1.1.8 Authorizing personnel exposure in excess of 10CFR20 limits (the Emergency Coordinator also has this authority).
- 2.2 PROTECTIVE MEASURES COORDINATOR (PMC)
- 2.2.1 The PMC reports to the RM and is responsible for formulating Protective Action Recommendations and assisting the RM, State and Federal Officials in the interpretation of any plant related data.
- 2.3 PLANT ASSESSMENT COORDINATOR (PAC)
- 2.3.1 The PAC reports to the PMC and reviews plant conditions and EALs to verify the adequacy of the existing Protective Action Recommendations (PARs) and assists in formulating new PARs when necessary.
- 2.4 PLANT ASSESSMENT STAFF
- 2.4.1 The Plant Assessment Staff reports to the PAC and is knowledgeable in plant equipment, systems, and operations. They may provide additional technical expertise while maintaining status boards displaying plant conditions.
- 2.5 DOSE ASSESSMENT COORDINATOR (DAC)
- 2.5.1 The Dose Assessment Coordinator reports to the PMC (or the RM if the PMC has not arrived) and is responsible for providing dose projection calculations based on radiological effluent monitors and field data. The DAC directs Field Monitoring Teams (FMTs), reviews effluent based EALs and assists the PMC in formulating Protective Action Recommendations. **(COMN 3375)**
- 2.6 DOSE ASSESSMENT STAFF
- 2.6.1 The Dose Assessment Staff reports to the DAC and is responsible for FMT communications and updating radiological status boards. **(COMN 3355)**
- 2.7 FIELD MONITORING TEAMS (FMTs)
- 2.7.1 Field Monitoring Teams are dispatched by the DAC and are responsible for taking direct radiation measurements and collecting air, soil, water and vegetation samples.

2.8 LOGISTICAL SUPPORT COORDINATOR (LSC)

2.8.1 The LSC reports to the RM and is responsible for contracting with vendors for engineering services, materials, and services needed for emergency mitigation and restoration. The LSC also provides administrative and logistical support to the Emergency Response Organization (ERO).

2.9 LOGISTICAL SUPPORT STAFF

2.9.1 The Logistical Support Staff reports to the LSC and is responsible for the development of specifications for repair parts, equipment, and services, locating materials and services needed, and expediting their delivery to the site. They may initiate purchase orders, contracts for services, or use whatever procurement means approved by the RM to obtain goods and services to assist in mitigation and recovery of this situation. The Logistical Support Staff also provides administrative support to the EOF Emergency Response Organization.

2.10 OFF-SITE LIAISON COORDINATOR (OSL)

2.10.1 The OSL reports to the RM and assumes off-site notification responsibilities from the Communicator in the Control Room. The OSL is also responsible for keeping off-site authorities up-to-date regarding on-site emergency response activities, receiving responding representatives from off-site agencies, assisting in meeting their communications and logistic needs, and other duties as assigned by the RM. (COMN 3329)

2.11 EOF COMMUNICATORS

2.11.1 The EOF Communicators report to the Off-site Liaison Coordinator. EOF Communicators transmit PARs and emergency notification updates to State and Local agencies and other off-site authorities as directed by the Off-Site Liaison Coordinator.

3 INITIATING CONDITIONS

This procedure is initiated to startup the Emergency Operations Facility upon declaration of an ALERT or higher emergency classification. The EOF ERO may also be activated at the discretion of the EC for any classification.

## 4 PROCEDURE

### 4.1 STARTUP

- 4.1.1 Staff members arriving at the EOF are responsible for signing in with name and badge number on the facility sign-in board.
- 4.1.2 Coordinators should obtain their emergency packet and commence activation of their respective areas utilizing checklists 1 through 6.
- 4.1.3 The Control Room Staff should be expeditiously relieved of peripheral duties and communications not directly related to Control Room manipulations.

### 4.2 OPERATIONS

4.2.1 EOF personnel ensure the assumption of the following responsibilities:

- Notifications.
- Protective Action Recommendations.
- Dose Assessment.
- Requests for outside assistance.
- Interface with Federal, State and Local authorities.

#### 4.2.2 Declaration of Recovery

4.2.2.1 The Recovery Manager should coordinate the establishment of a Recovery Organization with the Emergency Coordinator per **EIP-ZZ-00260**, Event Closeout/Plant Recovery.

4.2.2.2 EOF personnel continue activities until the Recovery Organization is established.

#### 4.2.3 Event Closeout

4.2.3.1 The Recovery Manager should coordinate Closeout with the Emergency Coordinator per **EIP-ZZ-00260**, Event Closeout/Plant Recovery.

### 4.3 BACKUP EOF (BEOF)

4.3.1 If the EOF is uninhabitable, the Recovery Manager directs the Off-site Liaison Coordinator to ensure EOF responsibilities are transferred to the TSC and/or Control Room, EOF personnel are relocated, and the BEOF is activated in accordance with Attachment 7, Backup EOF Checklist (**COMN 5730, 42514**)

- 4.3.1.1 If time permits, operations should continue at the EOF until the designated individuals reach the BEOF and assume responsibilities. Then the remaining personnel should report to their designated facilities.
- 4.3.2 The Recovery Manager transfers responsibilities to the Emergency Coordinator until the Backup EOF is activated.

## 5 REFERENCES

- 5.1 **EIP-ZZ-00201**, Notifications
- 5.2 **EIP-ZZ-00211**, Field Monitoring
- 5.3 **EIP-ZZ-00212**, Protective Action Recommendations
- 5.4 **EIP-ZZ-00260**, Event Closeout/Plant Recovery
- 5.5 **EIP-ZZ-01211**, Management Action Guides for Nuclear Emergencies (MAGNEM)
- 5.6 **OOA-UB-EPG50**, EOF Diesel Emergency Start
- 5.7 **OOA-UB-00004**, Emergency Operations Center Ventilation
- 5.8 **HPCI 96-0007**, Emergency Response Facility Habitability Guidelines
- 5.9 **OOA-HD-00001**, EOF Chemical & RW Drain Tank (THD01) Level Indication Panel (HD001) Operation.
- 5.10 **HTP-ZZ-04101**, Operation of the Ludlum Model 177 Series Alarm Ratemeter.
- 5.11 **HTP-ZZ-04135**, Operation of the NNC Gamma-10 Portal Monitor.
- 5.12 **HTP-ZZ-04137**, Operation of the Eberline AMS-3



6 RECORDS

NOTE: All Facility Logs, SENTRY or MAGNEM screen prints, office memos, notes, etc. should be attached to the Coordinator Checklist and turned in to the Logistics Support Coordinator and/or the EP Department.

6.1 QA RECORDS

- 6.1.1 Attachment 1, Recovery Manager Checklist (File #K171.0010)
- 6.1.2 Attachment 2, Off-Site Liaison Coordinator Checklist (File #K171.0010)
- 6.1.3 Attachment 3, Protective Measures Coordinator (PMC) Checklist (File #K171.0010)
- 6.1.4 Attachment 4, Plant Assessment Coordinator (PAC) Checklist (File #K171.0010)
- 6.1.5 Attachment 5, Logistics Support Coordinator (LSC) Checklist (File #K171.0010)
- 6.1.6 Attachment 6, Dose Assessment Coordinator (DAC) Checklist (File #K171.0010)
- 6.1.7 Attachment 7, Backup EOF Checklist (File #K171.0010)

## RECOVERY MANAGER CHECKLIST

DATE: \_\_\_\_\_ TIME \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/>	1. Sign in on Facility Sign-in board. Obtain the RM package and clip on Recovery Manager badge. (If the EOF is uninhabitable, direct the OSL to initiate Attachment 7 and relocate to the BEOF.)
<input type="checkbox"/>	2. Initiate Facility Log Sheet.
<input type="checkbox"/>	3. Receive briefing by: <ul style="list-style-type: none"> <li><input type="checkbox"/> Off-Site Liaison Coordinator (facility conditions).</li> <li><input type="checkbox"/> Emergency Coordinator (plant conditions).</li> </ul>
<input type="checkbox"/>	4. Direct the OSL and DAC to begin turnover from the control room. <i>NOTE: DO NOT assume responsibility for communications and Dose Assessment until both the OSL &amp; DAC have completed turnover.</i>
<input type="checkbox"/>	5. Notify the Control Room and the EC prior to assuming responsibilities for Communications, Dose Assessment and PARs using the EML phone, if available.
<input type="checkbox"/>	6. Make a site wide announcement that, "The EOF has accepted emergency responsibilities for Offsite Notifications, Dose Assessment and PARs from the Control Room."
<input type="checkbox"/>	7. Upon arrival of the PMC and PAC, direct the PMC to coordinate Notifications with the PAC and DAC for your review and approval.
<input type="checkbox"/>	8. Ensure the following positions have been filled in the EOF <ul style="list-style-type: none"> <li><input type="checkbox"/> Communicator</li> <li><input type="checkbox"/> PMC</li> <li><input type="checkbox"/> PAC</li> <li><input type="checkbox"/> LSC</li> </ul>
<input type="checkbox"/>	9. Make a facility announcement; "EOF Coordinators should assess manpower requirements in your respective areas. Request for additional support staff should be addressed to the Logistics Coordinator for callout. All excess personnel should assemble in the Media Area and await further instructions."
<input type="checkbox"/>	10. Discuss any additional manpower support or supplies required with the Logistical Support Coordinator. Instruct the Logistical Support Coordinator to inform excess personnel to return home and remain near their phones for further instructions concerning shift relief schedules and report times.

<b>OPERATIONS</b>	
<i>(*) Steps are items that MUST be frequently reviewed</i>	
<input type="checkbox"/>	*1. Periodically update EOF personnel including priorities, habitability status and Site radiological conditions.
<input type="checkbox"/>	*2. Provide status reports to: <ul style="list-style-type: none"> <li><input type="checkbox"/> SEMA</li> <li><input type="checkbox"/> NRC</li> <li><input type="checkbox"/> Counties</li> <li><input type="checkbox"/> Corporate Spokesperson</li> </ul>
<input type="checkbox"/>	*3. If the EOF becomes uninhabitable, direct the OSL to initiate Attachment 7 and relocate to Backup Emergency Operations Facility.
<input type="checkbox"/>	*4. Authorize exposure in excess of 10CFR20 limits if required and requested from the HPC.

**RECOVERY MANAGER CHECKLIST**

<u><b>TURNOVER</b></u>	
<input type="checkbox"/> 1.	Incoming Recovery Manager briefed on EOF status and log reviewed.
<input type="checkbox"/> 2.	Emergency Coordinator and Shift Supervisor informed.
<input type="checkbox"/> 3.	Turnover announced to EOF staff.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA#732.

<u><b>RECOVERY</b></u>	
<input type="checkbox"/> 1.	EOF personnel continue activities per procedures until Recovery Organization established.
<input type="checkbox"/> 2.	Discuss the expected response of State and Federal agencies.
<input type="checkbox"/> 3.	Discuss availability of and provisions for State and Federal agencies with the Off-Site Liaison Coordinator and the Logistics Support Coordinator.
<input type="checkbox"/> 4.	Declare Recovery per <b>EIP-ZZ-00260</b> , Event Closeout/Recovery. <ul style="list-style-type: none"> <li><input type="checkbox"/> Emergency Coordinator contacted.</li> <li><input type="checkbox"/> Shift Supervisor contacted.</li> <li><input type="checkbox"/> NRC contacted.</li> </ul>
<input type="checkbox"/> 5.	Recovery organization established.
<input type="checkbox"/> 6.	Make a site wide announcement of Recovery Declaration.

<u><b>TERMINATION and SHUTDOWN</b></u>	
<input type="checkbox"/> 1.	Operations shutdown or transferred to the TSC, as applicable. <ul style="list-style-type: none"> <li><input type="checkbox"/> Notifications</li> <li><input type="checkbox"/> Protective Action Recommendations</li> <li><input type="checkbox"/> Requests for Outside Assistance</li> <li><input type="checkbox"/> Authorizing exposure in excess of 10CFR20 limits</li> </ul>
<input type="checkbox"/> 2.	Coordinators directed to shutdown EOF _____ Time.
<input type="checkbox"/> 3.	Make site wide announcement.

\_\_\_\_\_  
Recovery Manager Signature

## OFF-SITE LIAISON COORDINATOR CHECKLIST

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	Sign in on Facility Sign-in board. Obtain the OSL and Communicators packages and clip on the Off-Site Liaison badge.
<input type="checkbox"/> 2.	Inform Recovery Manager of your presence.
<input type="checkbox"/> 3.	Adjust Gai-tronics to an acceptable level.
<input type="checkbox"/> 4.	Ensure the EOF has power. <ul style="list-style-type: none"> <li><input type="checkbox"/> Normal power, (i.e. lights on, power available to computers, etc.).</li> <li><input type="checkbox"/> No Power-Start the EOF diesel per <b>OOA-UB-EPG50</b> or call for Equipment Operator if available.</li> </ul>
<input type="checkbox"/> 5.	Shift/verify the PC power supplies to the UPS position. <ul style="list-style-type: none"> <li><input type="checkbox"/> Communicator (2).</li> <li><input type="checkbox"/> Phone room (134) bridge.</li> <li><input type="checkbox"/> Telecommunications room (130) bridge located inside the ERFIS cabinet (not locked).</li> </ul>
<input type="checkbox"/> 6.	Check fax machine for any communications.
<input type="checkbox"/> 7.	Initiate Facility Log sheet.
<input type="checkbox"/> 8.	Ensure modems are energized (red indicating light is on in the modem box).
<input type="checkbox"/> 9.	Turn on, or reboot (WINDOWS key or CTRL-ALT-DELETE), the SENTRY Computer and synchronize the time with the Plant Computer.
<input type="checkbox"/> 10.	Check OSL and Communicator phone lines for dial tone.
<input type="checkbox"/> 11.	Turn on projected statusboard.
<input type="checkbox"/> 12.	Upon direction of the RM, using <b>EIP-ZZ-00201</b> Attachment 3 (CA#234), contact the Control Room Communicator to get a brief on the status of Communications (prepare to transfer communications to EOF). (If the EOF is uninhabitable, communications should remain in the Control Room until the BEOF is staffed.)
<input type="checkbox"/> 13.	Notify the RM when you are ready to assume your duties.      TIME: _____
<input type="checkbox"/> 14.	Obtain RM approval to transfer communications to the EOF, then relieve the control room communicator of communications and notifications. Ensure SENTRY is TERMINATED in the Control Room. (Communications and Dose Assessment should be transferred to the EOF at the same time.)
<input type="checkbox"/> 15.	Communicator: (as assigned) <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ Name</li> </ul>
<input type="checkbox"/> 16.	Contact County EMDs and assess the need for County Technical Representatives and dispatch Technical Representatives as needed. (Use list of JPIC Technical Representatives.)

### OPERATIONS

(\*) Steps are items that **MUST** be frequently reviewed.

<input type="checkbox"/> *1.	Using the flowchart from Attachment 3, <b>EIP-ZZ-00201</b> , Notifications, notify the required authorities and agencies.  <i>NOTE: Notifications of a new classification or Protective Action Recommendations must be made in 15 minutes. Follow up notifications are made approximately every 30 minutes.</i>
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## OFF-SITE LIAISON COORDINATOR CHECKLIST

<input type="checkbox"/> *2.	Provide support to Federal, State, and Local personnel in the EOF, as appropriate, including provisions for office space and communications.
<input type="checkbox"/> *3.	Ensure the Emergency Classification status board is properly updated.

### TURNOVER

<input type="checkbox"/> 1.	Brief the oncoming Off-Site Liaison Coordinator on the status of the facility and on-site and off-site emergency response activities. Review log.
<input type="checkbox"/> 2.	Brief the oncoming Communicator on the status, information transmitted and the frequency of updates.
<input type="checkbox"/> 3.	Inform the Recovery Manager.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA#733.

### RECOVERY

<input type="checkbox"/> 1.	Continue providing requested information.
<input type="checkbox"/> 2.	Continue activities per procedures and checklist until Recovery Organization is established or until directed otherwise by the Recovery Manager.

### EOF SHUTDOWN

<input type="checkbox"/> 1.	Ensure area is put into order and logs collected and give to the Logistics Support Coordinator.
<input type="checkbox"/> 2.	Ensure EOF operations, if any, as specified by the Recovery Manager are transferred to the plant operating staff or the TSC, if operational.
<input type="checkbox"/> 3.	Ensure that emergency equipment and supplies are returned and/or stored to their normal condition. <ul style="list-style-type: none"> <li><input type="checkbox"/> Radio</li> <li><input type="checkbox"/> Emergency Equipment Kits</li> <li><input type="checkbox"/> Emergency Diesel Generator</li> <li><input type="checkbox"/> Ventilation System</li> <li><input type="checkbox"/> Portable Monitoring Equipment</li> <li><input type="checkbox"/> Microfiche Reader</li> <li><input type="checkbox"/> Return ALL UPS's to LINE position.</li> </ul>
<input type="checkbox"/> 4.	After completion of the above steps, inform the Emergency Coordinator that the EOF has been shutdown.
<input type="checkbox"/> 5.	Ensure that all EOF emergency records are collected and given to the Logistics Support Coordinator/Emergency Preparedness Department.
<input type="checkbox"/> 6.	Ensure that State and Local officials are informed of the EOF shutdown.

\_\_\_\_\_  
Off-Site Liaison Coordinator Signature

**PROTECTIVE MEASURES COORDINATOR CHECKLIST**

DATE: \_\_\_\_\_ TIME \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	Sign in on Facility Sign-in board. Obtain the PMC package and clip on the Protective Measures Coordinator badge.
<input type="checkbox"/> 2.	Ensure the EOF has power. <input type="checkbox"/> Normal power, (i.e. lights on, power available to computers, etc.). <input type="checkbox"/> No Power-Start the EOF diesel per <b>OOA-UB-EPG50</b> or call for Equipment Operator if available
<input type="checkbox"/> 3.	Ensure the EOF HVAC system is in recirculation/filter mode per <b>OOA-UB-00004</b> . Keys to the HVAC room are in the OSL packet. .
<input type="checkbox"/> 4.	Check computer and printer power supplies have been shifted to the UPS position: <input type="checkbox"/> Computer <input type="checkbox"/> Color Printer
<input type="checkbox"/> 5.	Recovery Manager informed of your presence.
<input type="checkbox"/> 6.	Initiate Facility Log sheet.
<input type="checkbox"/> 7.	<input type="checkbox"/> Plant Assessment Coordinator (PAC) _____ Name <input type="checkbox"/> Dose Assessment Coordinator (DAC) _____ Name
<input type="checkbox"/> 8.	Check PMC phone lines for dial tone.
<input type="checkbox"/> 9.	Assist in the transfer of PARs to Plant Assessment Coordinator and dose assessment to the Dose Assessment Coordinator.
<input type="checkbox"/> 10.	Inform the Recovery Manager when your ready to assume duties.

**NOTE:** If the Plant Assessment Coordinator is not staffed, it is your responsibility to provide the Recovery Manager with Protective Action Recommendations (PARs) based on Plant Conditions per **EIP-ZZ-00212**, PROTECTIVE ACTION RECOMMENDATIONS. Ensure the Technical Assessment Coordinator in the TSC is aware of your presence in the EOF. Inquire of any PARs already in place.

<b>OPERATION</b>	
(* Steps are recurring items that need to be reviewed on a continual bases)	
<input type="checkbox"/> *1.	Evaluate input from plant conditions (PAC), dose assessment (DAC), and <b>EIP-ZZ-00212</b> , Protective Action Recommendations. Default to the most conservative recommendation, time is essential.
<input type="checkbox"/> *2.	Request release duration estimate from the PAC or Tech Assessment Coordinator (TAC) and provide updates to the DAC
<input type="checkbox"/> *3.	Review all notifications and obtain Recovery Manager approval for all notifications prepared by the EOF Communicator.  Notifications to the State and Counties are made within 15 minutes of a classification declaration or a change in Protective Action Recommendations and at approximately 30-minute intervals thereafter.

## PROTECTIVE MEASURES COORDINATOR CHECKLIST

<u>TURNOVER</u>	
<input type="checkbox"/> 1.	Brief the oncoming PMC on the status of the facility and on-site and off-site emergency response activities.
<input type="checkbox"/> 2.	Review log.
<input type="checkbox"/> 3.	Inform the Recovery Manager.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA# 737.

<u>RECOVERY</u>	
<input type="checkbox"/> 1.	Continue providing requested information.
<input type="checkbox"/> 2.	Continue activities per procedures and checklist until Recovery Organization established or until directed otherwise by the Recovery Manager.

<u>TERMINATION and SHUTDOWN</u>	
<input type="checkbox"/> 1.	When directed, assist with the EOF deactivation.
<input type="checkbox"/> 2.	Ensure area is put into order and logs collected and give to the Logistics Support Coordinator.

\_\_\_\_\_  
Protective Measures Coordinator

**PROTECTIVE MEASURES COORDINATOR CHECKLIST****PLANT COMPUTER GUIDE**Color and Description of Computer Point Quality Codes

The Plant Computer System (PCS) assigns a "Data Quality Code" to each field input and calculated variable at the time the point is processed. These quality codes are determined by a series of checks/tests performed during both input-data validation and point processing. A list of the quality codes follows which is ordered by severity:

1. **UNK** (Blue) – Unknown; point not yet processed. If a point is deleted from processing when SAIPMS is first activated, "UNK" quality code will be assigned. This quality code will also be displayed for calculated or derived points which have not yet cycled through their first processing period.
2. **DEL** (Blue) – Point has been deleted from processing. If a point was active when the SAIPMS software was activated, and was subsequently disabled from processing, the quality code "DEL" is assigned and no further engineering unit conversion is attempted.
3. **NCAL** (Blue) – Derived point not calculable. This quality code is assigned when it has been determined that insufficient inputs exist to accurately perform the associated equation or calculation.
4. **INVL** (Blue) – Invalid code is generated when a point's defined hardware channel address has not been selected, does not exist, or cannot be accessed. This usually indicates either an invalid hardware channel address, or a failed hardware component. For example, if a defined card slot address does not contain a card, all points assigned to that card will be tagged as INVL. Also, if a multiplexer has either failed or been taken offline, all points assigned to that multiplexer will be tagged as INVL.
5. **RDER** (Blue) – Sensor Read Error code is generated when no test return/input is received for a point in response to a scan command/output to a valid hardware channel address. This usually indicates a faulty sensor or a multiplexer communication problem. Whenever a quality code of RDER is observed, a hardware error condition exists.
6. **OTC** (Blue) – Open thermocouple.
7. **BAD** (Blue) – The BAD (Bad Scanned Value) code is generated when the "corrected" scanned value (i.e. adjusted for A/D gain and zero-drift error) exceeds the sensor range as defined by a point's "SENSOR LIMIT LOW" and "SENSOR LIMIT HIGH" values in the database.
8. **HRL** (Blue) – Point exceeds high reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined High Reasonable limit, a quality code of "HRL" is assigned.
9. **LRL** (Blue) – Point exceeds low reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined Low Reasonable limit, a quality code of "LRL" is assigned.
10. **REDU** (Cyan) – Point fails redundant point check. If a point has a defined Redundant Point and its current value does not match the defined point within the specified tolerance, it is assigned a quality code of "REDU".



**PROTECTIVE MEASURES COORDINATOR CHECKLIST****PLANT COMPUTER GUIDE**

11. **HIHI** (Red) – Point above high alarm limit. This condition is met when a point's current value has exceeded the defined High Alarm limit, and is assigned a quality code of "HIHI".
12. **LOLO** (Red) – Point below low alarm limit. This condition is met when a point's current value is less than the defined LOW Alarm limit, and is assigned a quality code of "LOLO".
13. **HALM** (Yellow) – Point above high warning limit. This condition is met when a point's current value has exceeded the defined High Operating limit, and is assigned a quality code of "HALM".
14. **LALM** (Yellow) – Point below low warning limit. This condition is met when a point's current value is below the defined Low Operating limit, and is assigned a quality code of "LALM".
15. **ALM** (Red) – State/Change-of-State alarm. Any logical-value point may be alarm monitored against either a defined logical state (i.e., "TRUE", or "FALSE"), or a defined change-of-state condition (i.e., "TRUE" to "FALSE", "FALSE" to "TRUE", or either state change). A quality code of "ALM" is assigned if the point meets any of the above conditions.
16. **SUB** (Cyan) – Substitute value inserted for point. If a substitute value has been entered for a point, the point is assigned a quality code of "SUB", and no further alarm checks or engineering unit conversions are made.
17. **DALM** (Cyan) – Point is deleted from alarm checks. If a point is currently disabled from alarm processing, it is assigned a quality code of "DALM", and no further alarm checks are made.
18. **INHB** (Green) – Point is inhibited from alarm by cut-out point. If a point has an assigned cut-out point, and the current state of the cut-out point matches the specified alarm inhibit state, the point is assigned a quality code of "INHB", and no alarm transaction is generated. While inhibited, the point value WILL continue to update, only the alarm condition is inhibited.
19. **GOOD** (Green) – Point passed all the above checks. The quality code "GOOD" indicates that all defined alarm conditions, states, or values have not been exceeded or met.

## PLANT ASSESSMENT COORDINATOR CHECKLIST

DATE: \_\_\_\_\_ TIME \_\_\_\_\_

<u>INITIATION</u>	
<input type="checkbox"/> 1.	Sign in on Facility Sign-in board. Obtain the PAC package and clip on the Plant Assessment Coordinator badge
<input type="checkbox"/> 2.	Ensure the EOF has power. <input type="checkbox"/> Normal power, (i.e. lights on, power available to computers, etc.). <input type="checkbox"/> No Power-Start the EOF diesel per <b>OOA-UB-EPG50</b> or call for Equipment Operator if available
<input type="checkbox"/> 3.	Ensure the EOF HVAC system is in recirculation/filter mode per <b>OOA-UB-00004</b> . Keys to the HVAC room are in the OSL packet..
<input type="checkbox"/> 4	Check computer and printer power supplies have been shifted to the UPS position. <input type="checkbox"/> Computer <input type="checkbox"/> Color Printer
<input type="checkbox"/> 5.	Protective Measures Coordinator informed of your presence.
<input type="checkbox"/> 6.	Initiate Facility Log sheet.
<input type="checkbox"/> 7.	<input type="checkbox"/> Plant Assessment Staff _____ Name _____ Name
<input type="checkbox"/> 8.	Turn on projected statusboards.
<input type="checkbox"/> 9.	Check PAC phone lines for dial tones.
<input type="checkbox"/> 10.	Contact the TAC in the TSC and request information on any EALs and PARs already in place, and request that preparations be made to transfer PARs to the EOF.
<input type="checkbox"/> 11.	Notify the PMC when you are ready to assume your duties, including PARs.
<input type="checkbox"/> 12.	Evaluate PSB1, PSB2, and PSB3 on the Plant Computer.
<input type="checkbox"/> 13.	Initiate Free Format Logs as needed.
<input type="checkbox"/> 14.	Formally accept PARs from the TSC.

<u>OPERATIONS</u>	
<i>(*) Steps are items that MUST be frequently reviewed</i>	
<input type="checkbox"/> *1.	Evaluate input from plant conditions and EIP-ZZ-00101 and EIP-ZZ-00212, Protective Action Recommendations.
<input type="checkbox"/> *2.	Provide the Protective Measures Coordinator with plant based Protective Action Recommendations.
<input type="checkbox"/> *3.	Request release duration from TAC.

**PLANT ASSESSMENT COORDINATOR CHECKLIST**

<u>TURNOVER</u>	
<input type="checkbox"/> 1.	Brief the oncoming PAC on the status of the facility and on-site and off-site emergency response activities.
<input type="checkbox"/> 2.	Review log.
<input type="checkbox"/> 3.	Inform the Protective Measures Coordinator.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA#735.

<u>RECOVERY</u>	
<input type="checkbox"/> 1.	Continue providing requested information.
<input type="checkbox"/> 2.	Continue activities per procedures and checklist until Recovery Organization established or until directed otherwise by the Protective Measures Coordinator/Recovery Manager.

<u>TERMINATION and SHUTDOWN</u>	
<input type="checkbox"/> 1.	When directed, assist the OSL with the EOF deactivation.
<input type="checkbox"/> 2.	Ensure area is put into order and logs collected and give to the Logistics Support Coordinator.

\_\_\_\_\_  
Plant Assessment Coordinator

**PLANT ASSESSMENT COORDINATOR CHECKLIST****PLANT COMPUTER GUIDE**Color and Description of Computer Point Quality Codes

The Plant Computer System (PCS) assigns a "Data Quality Code" to each field input and calculated variable at the time the point is processed. These quality codes are determined by a series of checks/tests performed during both input-data validation and point processing. A list of the quality codes follows which is ordered by severity:

1. **UNK** (Blue) – Unknown; point not yet processed. If a point is deleted from processing when SAIPMS is first activated, "UNK" quality code will be assigned. This quality code will also be displayed for calculated or derived points which have not yet cycled through their first processing period.
2. **DEL** (Blue) – Point has been deleted from processing. If a point was active when the SAIPMS software was activated, and was subsequently disabled from processing, the quality code "DEL" is assigned and no further engineering unit conversion is attempted.
3. **NCAL** (Blue) – Derived point not calculable. This quality code is assigned when it has been determined that insufficient inputs exist to accurately perform the associated equation or calculation.
4. **INVL** (Blue) – Invalid code is generated when a point's defined hardware channel address has not been selected, does not exist, or cannot be accessed. This usually indicates either an invalid hardware channel address, or a failed hardware component. For example, if a defined card slot address does not contain a card, all points assigned to that card will be tagged as INVL. Also, if a multiplexer has either failed or been taken offline, all points assigned to that multiplexer will be tagged as INVL.
5. **RDER** (Blue) – Sensor Read Error code is generated when no test return/input is received for a point in response to a scan command/output to a valid hardware channel address. This usually indicates a faulty sensor or a multiplexer communication problem. Whenever a quality code of RDER is observed, a hardware error condition exists.
6. **OTC** (Blue) – Open thermocouple.
7. **BAD** (Blue) – The BAD (Bad Scanned Value) code is generated when the "corrected" scanned value (i.e. adjusted for A/D gain and zero-drift error) exceeds the sensor range as defined by a point's "SENSOR LIMIT LOW" and "SENSOR LIMIT HIGH" values in the database.
8. **HRL** (Blue) – Point exceeds high reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined High Reasonable limit, a quality code of "HRL" is assigned.
9. **LRL** (Blue) – Point exceeds low reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined Low Reasonable limit, a quality code of "LRL" is assigned.

**PLANT ASSESSMENT COORDINATOR CHECKLIST****PLANT COMPUTER GUIDE**

10. **REDU** (Cyan) – Point fails redundant point check. If a point has a defined Redundant Point and its current value does not match the defined point within the specified tolerance, it is assigned a quality code of "REDU".
11. **HIHI** (Red) – Point above high alarm limit. This condition is met when a point's current value has exceeded the defined High Alarm limit, and is assigned a quality code of "HIHI".
12. **LOLO** (Red) – Point below low alarm limit. This condition is met when a point's current value is less than the defined LOW Alarm limit, and is assigned a quality code of "LOLO".
13. **HALM** (Yellow) – Point above high warning limit. This condition is met when a point's current value has exceeded the defined High Operating limit, and is assigned a quality code of "HALM".
14. **LALM** (Yellow) – Point below low warning limit. This condition is met when a point's current value is below the defined Low Operating limit, and is assigned a quality code of "LALM".
15. **ALM** (Red) – State/Change-of-State alarm. Any logical-value point may be alarm monitored against either a defined logical state (i.e., "TRUE", or "FALSE"), or a defined change-of-state condition (i.e., "TRUE" to "FALSE", "FALSE" to "TRUE", or either state change). A quality code of "ALM" is assigned if the point meets any of the above conditions.
16. **SUB** (Cyan) – Substitute value inserted for point. If a substitute value has been entered for a point, the point is assigned a quality code of "SUB", and no further alarm checks or engineering unit conversions are made.
17. **DALM** (Cyan) – Point is deleted from alarm checks. If a point is currently disabled from alarm processing, it is assigned a quality code of "DALM", and no further alarm checks are made.
18. **INHB** (Green) – Point is inhibited from alarm by cut-out point. If a point has an assigned cut-out point, and the current state of the cut-out point matches the specified alarm inhibit state, the point is assigned a quality code of "INHB", and no alarm transaction is generated. While inhibited, the point value WILL continue to update, only the alarm condition is inhibited.
19. **GOOD** (Green) – Point passed all the above checks. The quality code "GOOD" indicates that all defined alarm conditions, states, or values have not been exceeded or met.



## LOGISTICS SUPPORT COORDINATOR CHECKLIST

<input type="checkbox"/> *4	<p>Contact area Motels to begin prearranging lodging:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure motels being contacted are outside the Plume Exposure Pathway.</li> <li><input type="checkbox"/> Negotiate best available rates.</li> <li><input type="checkbox"/> Establish a list of motels with number of rooms available for each (the list should be generated for the next several days at a minimum).</li> <li><input type="checkbox"/> Request if some (your best estimate dividing between available motels) rooms may be held for 6:00PM cancellation daily for the next several days.</li> </ul>
<input type="checkbox"/> *5	<p>Meal Arrangements</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Contact area restaurants/caterers to determine availability of meals. (This should be coordinated with the Admin Coordinator in the TSC who shares this responsibility.)</li> </ul>
<input type="checkbox"/> *6	<p>Temporary facilities needed.</p>
<input type="checkbox"/> *7	<p>Contact the Emergency Procurement personnel at the Ameren GOB to establish a working relationship.</p>
<input type="checkbox"/> *8	<p>Review letters of agreement and the INPO Resources book for resources available from other plants.</p>
<input type="checkbox"/> *9.	<p>If requests for additional support personnel and services are made:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Keep Recovery Manager informed of request being made for additional support.</li> <li><input type="checkbox"/> Contact vendors and obtain the following information:             <ol style="list-style-type: none"> <li>1) Name(s) of personnel.</li> <li>2) Social Security Number(s).</li> <li>3) Point of Departure.</li> <li>4) Transportation requirements (airline tickets, land transportation, etc.).</li> <li>5) Lodging requirements.</li> <li>6) Anticipated Work Location.</li> <li>7) Estimated time of arrival.</li> </ol> </li> <li><input type="checkbox"/> Contact Admin Coordinator to ensure access requirements are obtained and required training is scheduled.</li> </ul>
<input type="checkbox"/> *10.	<p>Request additional equipment as needed:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Keep Recovery Manager informed of request being made for additional support services/equipment.</li> <li><input type="checkbox"/> Requesting organization should provide:             <ol style="list-style-type: none"> <li>1) Explicit equipment requirements in writing.</li> <li>2) Amount needed.</li> <li>3) Delivery location.</li> <li>4) Person on site to contact.</li> <li>5) Justifiable reason for request.</li> </ol> </li> <li><input type="checkbox"/> Contact vendor and obtain the following information:             <ol style="list-style-type: none"> <li>1) Availability.</li> <li>2) Shipping Mode.</li> <li>3) Special handling requirements.</li> <li>4) Estimated arrival time.</li> </ol> </li> <li><input type="checkbox"/> Contact the following to coordinate the delivery/arrival:             <ol style="list-style-type: none"> <li>1) Security Coordinator.</li> <li>2) OSL for traffic control.</li> <li>3) Requesting group.</li> </ol> </li> </ul>

## LOGISTICS SUPPORT COORDINATOR CHECKLIST

<u>TURNOVER</u>	
<input type="checkbox"/> 1.	Brief the oncoming LSC on the status of the facility and on-site and off-site emergency response activities.
<input type="checkbox"/> 2.	Review log.
<input type="checkbox"/> 3.	Inform the Recovery Manager, Logistics and Clerical Staff of the turnover.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA# 736.

<u>RECOVERY</u>	
<input type="checkbox"/> 1.	Continue providing requested information.
<input type="checkbox"/> 2.	Continue activities per procedures and checklist until Recovery Organization established or until directed otherwise by the Recovery Manager.

<u>TERMINATION and SHUTDOWN</u>	
<input type="checkbox"/> 1.	When directed, assist the OSL with the EOF deactivation.
<input type="checkbox"/> 2.	Ensure area is put into order and all EOF logs collected and forward to the Emergency Preparedness Department.

\_\_\_\_\_  
Logistics Support Coordinator



## DOSE ASSESSMENT COORDINATOR CHECKLIST

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

<u>INITIATION</u>	
<input type="checkbox"/> 1.	Sign in on Facility Sign-in board. Obtain the DAC package and clip on the Dose Assessment Coordinator badge.
<input type="checkbox"/> 2.	Inform Recovery Manager/Protective Measures Coordinator of your presence.
<input type="checkbox"/> 3.	Adjust Gai-tronics in Recovery Center to an acceptable level.
<input type="checkbox"/> 4.	Switch the DAC's computers (2) power supplies to the UPS position.
<input type="checkbox"/> 5.	Initiate Facility Log sheet.
<input type="checkbox"/> 6.	Check DAC phone lines for dial tone and Dose Assessment Equipment available and operable. Report any deficiencies to the Logistics Support Coordinator.
<input type="checkbox"/> 7.	Turn on overhead projector.
<input type="checkbox"/> 8.	Upon direction of the RM, Contact the Rad/Chem Technician in the Control Room who is performing dose assessment and request a turnover of dose assessment activities including elevated Radiation Monitor readings and trends (prepare to accept transfer of Dose Assessment to EOF). (If the EOF is uninhabitable, Dose Assessment is maintained in the TSC until the BEOF is staffed.)
<input type="checkbox"/> 9.	If vital busses NB01 and NB02 are degraded, refer to <b>KOA-ZZ-00125</b> to determine effect of degraded condition of Plant computer points.
<input type="checkbox"/> 10.	Notify the RM when you are ready to assume your duties.      TIME: _____
<input type="checkbox"/> 11.	Obtain RM approval to transfer Dose Assessment to the EOF, then relieve the Rad/Chem Technician in the Control Room of his Dose Assessment responsibility. (Communications and Dose Assessment should be transferred to the EOF at the same time.)
<input type="checkbox"/> 12.	Contact the HP Coordinator (HPC) and discuss the need to Assign R/C Support Personnel to the Rapid Assessment Tech. position, if not already dispatched.
<input type="checkbox"/> 13.	Contact the HP Coordinator (HPC) in the TSC and request two (2) Field Monitoring Teams be dispatched and two (2) Dose Assessment Staff personnel to report to the EOF. <i>NOTE: If release is in progress or imminent, brief the FMTs on the radio.</i>

<u>OPERATIONS</u>	
<i>(*) Steps are items that MUST be frequently reviewed.</i>	
<input type="checkbox"/> *1.	Make Facility Announcement that <b>"All personnel leaving the EOF should check out with the Security Officer prior to leaving the facility."</b> If a release is in progress or anticipated announce <b>"an HP brief from the DAC will also be required."</b>  <i>NOTE: If a release is in progress or anticipated, ensure all personnel dispatched from the EOF have dosimetry. The Security Officer will verify HP briefs prior to exit.</i>
<input type="checkbox"/> *2.	Upon determination that the emergency involves an actual or potential release of radioactive material, perform dose projections in accordance with <b>EIP-ZZ-01211</b> , Management Action Guides For Nuclear Emergencies (MAGNEM). ( <b>COMN 42538</b> ) PRINT and SAVE all dose calculations.  <i>NOTE: Request Rapid Assessment Tech. (if dispatched) to obtain closed window RO-2 reading at or near Exclusion Area Boundary (EAB). This is to initially quantify the release.</i>
<input type="checkbox"/> *3.	Notify the Health Physics Coordinator (HPC) when thyroid dose exceeds 25 REM. Recommend KI for Plant Personnel.

### DOSE ASSESSMENT COORDINATOR CHECKLIST

<input type="checkbox"/> *4.	Wind shifts and changes in meteorological conditions should be announced to the RM, FMTs, and/or PMC and noted on maps. Notification of Offsite Agencies <b>MUST</b> be initiated within approximately 15 minutes of changes to Protective Action Recommendations. When available, coordinate recommendations with the Missouri Department of Health (DOH).
<input type="checkbox"/> *5.	Obtain weather forecast initially and approximately every 4 hours. Brief the PMC and/or the RM of any anticipated changes in the weather conditions and their effects on PARs. (St. Louis Flight Briefing Service 1-800-992-7433)
<input type="checkbox"/> *6.	Monitor Radiation Monitor Trends for Group 1 and 2 EALs in accordance with <b>EIP-ZZ-00101</b> . Notify the RM and/or PMC of any setpoints that have been exceeded or are being approached. <i>NOTE: Refer to KOA-ZZ-00125 during degraded NB01/NB02 conditions to determine validity of plant computer points.</i>
<input type="checkbox"/> *7.	When the field monitoring teams are available, brief and dispatch as per <b>EIP-ZZ-00211</b> , Field Monitoring Direction and Assessment. <i>NOTE: If release is in progress or imminent, brief the FMTs on the radio.</i>
<input type="checkbox"/> *8.	Evaluate input from the FMT's and monitor Protective Action Recommendations based on radiological conditions per <b>EIP-ZZ-00212</b> , Protective Action Recommendations. When available, coordinate recommendations with the Missouri Department of Health (DOH).
<input type="checkbox"/> *9.	Request update of release duration from the PMC/PAC or the TAC if the PMC/PAC is not available.
<input type="checkbox"/> *10.	Provide the Protective Measures Coordinator with the radiological based Protective Action Recommendations. <i>NOTE: If the Protective Measures Coordinator is not staffed, provide the Recovery Manager with the above information.</i>
<input type="checkbox"/> *11.	Initiate Free Format Logs as needed.
<input type="checkbox"/> *12.	Establish Radiological Habitability Controls in the EOF. <ul style="list-style-type: none"> <li><input type="checkbox"/> Close both vestibule doors</li> <li><input type="checkbox"/> Response check the Portal Monitor (page 5 of 7, this attachment or HTP-ZZ-04135).</li> <li><input type="checkbox"/> AMS 3 energized and source checked (page 6 of 7, this attachment or HTP-ZZ-04137)</li> <li><input type="checkbox"/> Control dosimetry set.</li> </ul>
<input type="checkbox"/> *13.	Set up a frisking station using a model 177 ratemeter, (per page 4 of 7, this attachment or HTP-ZZ-04101).
<input type="checkbox"/> *14.	Issue TLDs to personnel, as required, in the EOF (Use Page 7 of 7, this attachment for issue).
<input type="checkbox"/> *15.	Ensure that facility habitability is maintained using portable instrumentation and secondary monitoring devices. <u>Habitability Action Levels:</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> 600 mrem/hr direct dose rate, inform the RM, and commence monitoring cumulative dose.</li> <li><input type="checkbox"/> 4400 mrem cumulative dose, recommend facility evacuation.</li> <li><input type="checkbox"/> 5000 mrem/hr or greater direct dose rates recommend facility evacuation.</li> <li><input type="checkbox"/> Iodine concentrations of <math>2.4 \text{ E}^{-6}</math> uCi/ml or greater, inform the Recovery Manager and commence air sampling to ensure total intake does not exceed 25 rem CDE.</li> <li><input type="checkbox"/> Iodine concentrations of <math>1.9 \text{ E}^{-5}</math> uCi/ml or greater, recommend evacuation.</li> <li><input type="checkbox"/> Appropriate protective actions, as per Health Physics procedures, should be recommended when experiencing the above radiological conditions and considering how and when to evacuate.</li> </ul>
<input type="checkbox"/> *16.	Ensure decon sinks and shower are directed to the Radioactive Holding Tank when handling radioactive waste. The Waste Holding Tank is to be monitored for level and disposed of properly when full. See <b>OOA-HD-00001</b> .
<input type="checkbox"/> *17.	Set up frisker at entry to Decon Area for use by returning FMTs.

## DOSE ASSESSMENT COORDINATOR CHECKLIST

<u>TURNOVER</u>	
<input type="checkbox"/> 1.	Brief the oncoming DAC and FMTs on radiological release and dose information, field monitoring activities, and in-plant Radiation Monitor trends.
<input type="checkbox"/> *2.	Arrange for Field Monitoring Team (FMT) turnover by briefing and dispatching relief FMTs. Ensure returning FMTs access the EOF via the Decon Area in back of the Lab.
<input type="checkbox"/> 3.	Review log.
<input type="checkbox"/> 4.	Inform the Recovery Manager, Dose Assessment Staff and Field Monitoring Teams of the turnover.
<input type="checkbox"/> 5.	Notify DOH personnel of turnover.
<input type="checkbox"/> 6.	Turnover complete _____ Time.
<input type="checkbox"/> 7.	Turnover logged.
<input type="checkbox"/> 8.	Initiate a new checklist CA# 734.
<u>RECOVERY</u>	
<input type="checkbox"/> 1.	Continue providing requested information.
<input type="checkbox"/> 2.	Ensure that Field Monitoring Teams are informed of the Recovery declaration.
<input type="checkbox"/> 3.	Continue activities per procedures and checklist until Recovery Organization established or until directed otherwise by the Recovery Manager.
<u>TERMINATION and SHUTDOWN</u>	
<input type="checkbox"/> 1.	When directed, assist with the EOF deactivation.
<input type="checkbox"/> 2.	Ensure area is put into order and logs collected and given to the Logistics Support Coordinator.
<input type="checkbox"/> 3.	Ensure dose assessment equipment is turned off and/or stored and UPS units selected to LINE.
<input type="checkbox"/> 4.	If sinks and showers are no longer needed for decon purposed, survey sinks and showers. If free of contamination, return drains to the sanitary tank.
<input type="checkbox"/> 5.	Secure friskers and store in locker.
<input type="checkbox"/> 6.	Secure AMS-3.
<input type="checkbox"/> 7.	Collect and make preparations to read TLDs issued from the EOF.

\_\_\_\_\_  
Dose Assessment Coordinator

**DOSE ASSESSMENT COORDINATOR CHECKLIST****SET-UP AND OPERATION OF THE MODEL 177 RATEMETER**

This Startup Sequence augments HTP-ZZ-04101, Operation of the Ludlum Model 177 Series Alarm Ratemeter. It is designed to be used in an Emergency Response Facility when a HP Operations Technician is not immediately available.

1. Remove Model 177 ratemeter, frisker probe, detector cable, power cord, and check source from the E-Kit cabinet.
2. Connect detector and power cords, if not already connected, to the Model 177 ratemeter and verify the following switch settings:
  - Front Panel:
    1. On/Off switch in "ON" position.
    2. Volume adjusted to hear audible counts.
    3. Response switch in "slow" position.
    4. Range switch to "X1" scale.
  - Rear Panel:
    1. Alarm set at '5'.
    2. Subtract switch in "Off" position if meter has Subtract Switch.
3. Perform response check as follows:
  - Ensure instrument has a current calibration sticker.
  - Set the range switch to the appropriate position and place the detector on the check source bracket.
  - Verify the response is within the acceptable range as specified on the response value determination form/sticker for that check source.
  - Check the instrument alarm by adjusting the ALARM SET switch so that it is slightly less than the count rate of the source.
  - Remove the source from the detector.
  - Depress the RESET button. The alarm condition should clear.
  - If the pre-operational checks are satisfactory, complete the attached pre-operational check sticker. If either the alarm or the response check failed, notify the Health Physics Coordinator and obtain an operational ratemeter.
4. Return the check source to the E-Kit cabinet.

**DOSE ASSESSMENT COORDINATOR CHECKLIST****GAMMA-10 PORTAL MONITOR RESPONSE CHECK**

This Startup Sequence augments HTP-ZZ-04135, Operation of the NNC Gamma-10 Portal Monitor. It is designed to be used in an Emergency Response Facility when a HP Operations Technician is not immediately available.

NOTE: The key for the electronics cabinet is attached to the response source.

1. Verify 110 VAC power to the unit. If it is ON, proceed to Step 2. If the monitor is OFF, perform the following:
  - Supply 110 VAC to the unit through the UPS unit.
  - Set the NIMBIN power supply On-Off switch to ON and ensure the power light is illuminated.
  - Set the HV-2 NIM On-Off switch to on and ensure the Positive LED is illuminated.
2. Verify that a current calibration label is affixed to the Electronics Box and the pot settings, on the box, are the same as identified on the label.
3. Inspect the monitor for physical damage.
4. Verify no alarms are activated. (If an alarm is activated, clear the alarm and depress the RESET on the portal before continuing.)
5. Pass the Gamma-10 Response Source through the central region of the monitor. The Contamination alarm should activate on the box, a light and buzzer, and a red light on the portal should illuminate.
6. Depress the RESET button on the portal. The alarms should clear and the green operational light should remain lit.
7. If the monitor passes this check, initial and date the Pre-Operational Check Sticker affixed to the Electronics Box.

If the monitor fails the Pre-Operational Checks, tag the unit Out Of Service and notify the Health Physics Coordinator. Set up Frisking Station and have personnel entering the building and those already in the building frisk for contamination, if it is expected.

**DOSE ASSESSMENT COORDINATOR CHECKLIST*****AMS-3 STARTUP AND OPERATION***

This Startup Sequence augments HTP-ZZ-04137, Operation of the Eberline AMS-3. It is designed to be used in an Emergency Response Facility when a HP Operations Technician is not immediately available.

- 1) Connect AMS-3 (monitor) and air sampler to 110 VAC power.
- 2) Ensure monitor and air sampler have current calibration label.
- 3) Inspect the chart paper. Ensure an adequate supply of paper remains. If a RED line appears on the chart paper, notify Health Physics and continue the startup procedure.
- 4) Set monitor ON-OFF switch (located on back of monitor) to the ON position. Allow monitor to warm-up for 5 minutes.
- 5) Set BACKGROUND SUBTRACT switch to the ON position.
- 6) Push in "PUSH TO SET" on bottom left side of monitor and note the alarm setpoint value of 20,000 cpm (this is the first scale mark to the right of the 104 scale value).
- 7) Set alarm setpoint to 1000 cpm by adjusting the SET knob while holding in "PUSH TO SET" button.
- 8) Remove sample holder located on the right front side of monitor by loosening the clamp and pulling out on handle.
- 9) Obtain check source from HP E-Kit Locker. Center source over sample holder opening with the recessed side of the source bracket facing the opening.
- 10) The audible alarm and the alarm light should energize (activate). If not notify Health Physics. (The startup procedure should not continue until the problem is resolved).
- 11) Press ACKNOWLEDGE button to silence alarm.
- 12) Verify count rate on chart recorder is as indicated on the response value listed on back of source bracket or a sticker on the instrument.
- 13) Remove check source. Ensure alarm light resets and count rate decreases on chart recorder.
- 14) Remove the filter in the filter holder. (Remove the filter retaining ring on the filter holder, this snaps on the end of the filter holder assembly, and may fit somewhat tight.)
- 15) Obtain a new filter from the HP Emergency Kit Locker and place it on the sample holder with the "ROUGH SIDE" of filter facing upwards.
- 16) Replace retaining ring on the sample holder and insert the sample holder into the sample chamber. Lock the filter holder into place.
- 17) Set the alarm setpoint to 20,000 cpm by adjusting the SET knob while holding in the "PUSH TO SET" button.
- 18) Place the toggle switch on the power cord to the "ON" position. The air sampler pump should start.
- 19) Ensure airflow as indicated on flowmeter is within the tolerance listed on the calibration label (read the flow at the center of the rotometer float ball.) If it is not, notify Health Physics.
- 20) Initial and date the Preoperational Check sticker.



**BACK-UP EOF CHECKLIST**

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

<b>TRANSFER TO BACK-UP EOF</b>	
<input type="checkbox"/> 1.	<p><b>OSL</b>-Contact SEMA and County EOCs and notify them of the decision to activate the Backup EOF due to the EOF being uninhabitable. Inform SEMA of the estimated time of arrival to the Backup EOF. <i>NOTE: This step can be satisfied by adding this information to a SENTRY Notification Form or by using backup communication lines.</i></p>
<input type="checkbox"/> 2.	<p><b>OSL or RM</b>-Contact the NRC Operations Center and notify them of the decision to startup the Backup EOF.</p>
<input type="checkbox"/> 3.	<p><b>OSL</b>-Inform the appropriate EOF emergency personnel to relocate as indicated below. If personnel have not arrived at the facility, inform the Security Officer in the EOF to direct arrivals to the appropriate facility (Backup EOF or TSC). See attached map and layout for the Backup EOF: <i>NOTE: The BEOF has Emergency Packets for the staff. Personnel reporting to the TSC need to take their packet with them.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Recovery Manager to the Backup EOF.</li> <li><input type="checkbox"/> Protective Measures Coordinator to the Backup EOF.</li> <li><input type="checkbox"/> Off-Site Liaison Coordinator to the Backup EOF.</li> <li><input type="checkbox"/> Communicator, to the TSC to report to EC.</li> <li><input type="checkbox"/> DACs, one to the Backup EOF and one to the TSC to report to EC.</li> <li><input type="checkbox"/> Dose Assessment Staff, one to the Backup EOF and one to the TSC</li> <li><input type="checkbox"/> Plant Assessment Coordinator to the TSC to report to TAC.</li> <li><input type="checkbox"/> Logistics Support Coordinator to the TSC to work with the Admin. Coord.</li> <li><input type="checkbox"/> JPIC Tech Rep (EOF) to the TSC and communicate with JPIC.</li> <li><input type="checkbox"/> All Others – Contact the Admin Coordinator in the TSC to determine if EC needs additional personnel in the TSC. If not needed, personnel should be instructed to return home and standby their phones.</li> </ul>
<input type="checkbox"/> 4.	<p><b>RM</b>-Direct the <b>EC</b> and TSC to take charge of all ERO operations including the responsibility for the following until the BEOF is activated. Maintain contact, to the extent possible, using Cellular phones while in route to Backup EOF</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Protective Action Recommendations in accordance with <b>EIP-ZZ-00212</b>.</li> <li><input type="checkbox"/> Dose Assessment/ FMT Coordination in accordance with <b>EIP-ZZ-01211</b> and <b>EIP-ZZ-00211</b></li> <li><input type="checkbox"/> Notifications in accordance with <b>EIP-ZZ-00201</b>.</li> </ul> <p><i>NOTE: Notifications may be sent from the Control Room using SENTRY or be initiated from the TSC using backup communication lines.</i></p>

<b>INTERIM OPERATION WHILE AWAITING BACKUP EOF ACTIVATION</b>	
<input type="checkbox"/> 1.	<p><b>Communicator</b> - (Reporting to TSC) Announce your presence to the EC and coordinate notification completion with the DAC and TAC.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Make Notifications using the backup notification system.</li> <li>or</li> <li><input type="checkbox"/> Relay information to the Control Room communicator to use SENTRY.</li> </ul> <p><i>NOTE: Ensure copies of all notifications are Faxed to the Backup EOF. (See attached drawing for phone #.)</i></p>



### BACK-UP EOF CHECKLIST

<input type="checkbox"/>	2.	<b>DAC</b> - (Reporting to TSC) Work with the HPC and perform all applicable portions of the DAC Checklist Attachment 6. <i>NOTE: Field Monitoring Teams (FMTs) should remain under the control of the TSC DAC until the DAC in the Backup EOF is ready to assume control. Primary communications with the FMTs to the Backup EOF will be via cellular phones. Secondary radio communications can be established if necessary.</i>
<input type="checkbox"/>	3.	<b>Dose Assessment Staff</b> - (Reporting to TSC) Assist the DAC with FMT direction.
<input type="checkbox"/>	4.	<b>PAC</b> - (Reporting to TSC) Report to the TAC and perform applicable portions of Attachment 4.
<input type="checkbox"/>	5.	<b>LSC</b> - (Reporting to TSC) Work with the Admin Coordinator performing the applicable portions of Attachment 5.

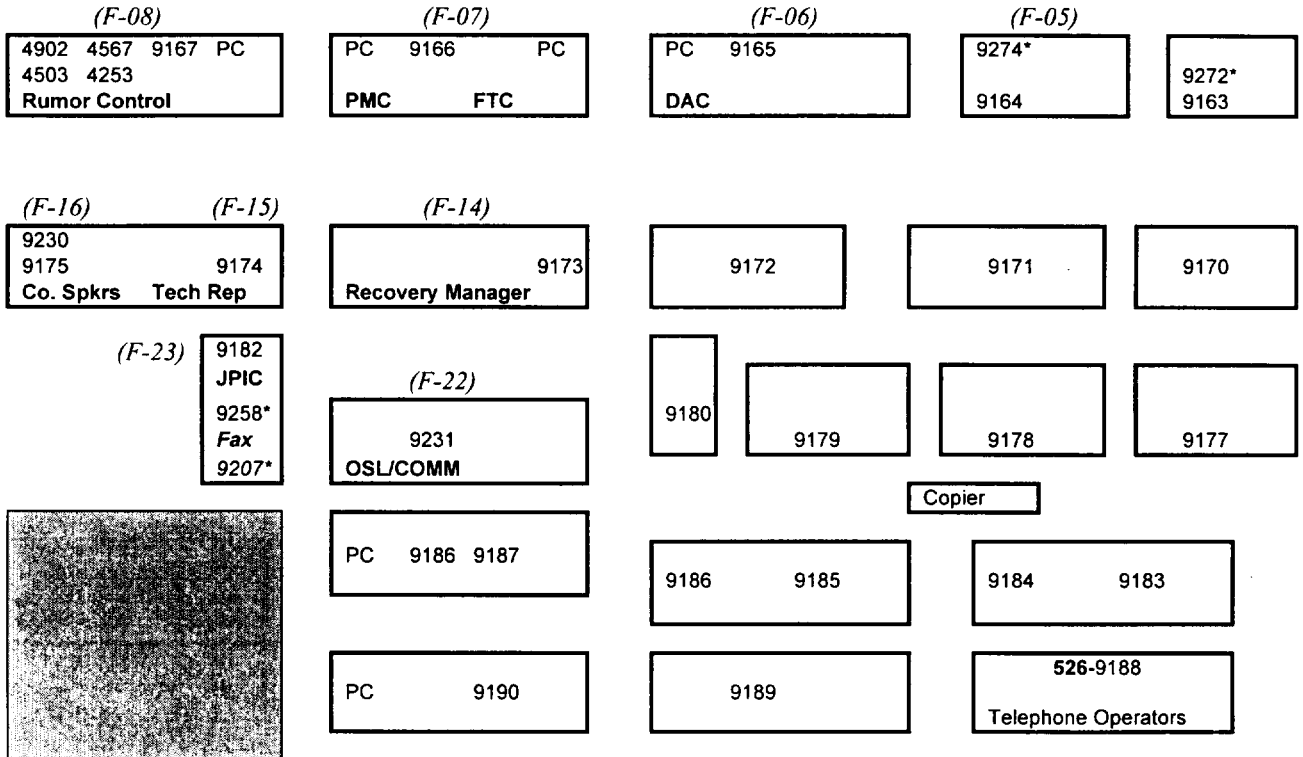
### BACKUP EOF ACTIVATION

<input type="checkbox"/>	1.	<b>OSL</b> - Upon arrival at the Backup EOF. <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure equipment/materials are setup (Refer to Page 3 of this Attachment).</li> <li><input type="checkbox"/> Ensure the MAGNEM PC is set up and operating including testing the printer.</li> <li><input type="checkbox"/> Phones are removed from the cabinet, plugged in, and operable.</li> <li><input type="checkbox"/> Introduce yourself and the RM to the appropriate State officials.</li> </ul>
<input type="checkbox"/>	2.	<b>RM</b> - Recovery Manager contact the Emergency Coordinator, receive update, and request transfer of the following to the Backup EOF: <ul style="list-style-type: none"> <li><input type="checkbox"/> Protective Action Recommendations in accordance with <b>EIP-ZZ-00212</b>.</li> <li><input type="checkbox"/> Dose Assessment/ FMT Coordination in accordance with <b>EIP-ZZ-01211</b> and <b>EIP-ZZ-00211</b>.</li> </ul> <i>Note: Field Monitoring Teams remain under the control of the TSC DAC.</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Notifications in accordance with <b>EIP-ZZ-00201</b>.</li> </ul>
<input type="checkbox"/>	3.	<b>PMC</b> - Perform applicable portions of PMC Checklist Attachment 3 using input from the TAC, PAC (in TSC) and DAC (Backup EOF).
<input type="checkbox"/>	4.	<b>DAC</b> - Coordinate with the Missouri Department of Health (DOH) and assume Field Monitoring Team coordination from the TSC, using cellular phones as the primary communication with the Teams. Perform applicable portions of Attachment 6.
<input type="checkbox"/>	5.	<b>OSL</b> - Perform applicable portions of the OSL Checklist Attachment 2 and ensure a comprehensive turnover of offsite notifications with the concurrence of the RM. <i>NOTE: DO NOT assume responsibility of notifications until PMC and DAC have assumed responsibility.</i>
<input type="checkbox"/>	6.	<b>OSL</b> - Report the assumption of responsibilities to the Recovery Manager.
<input type="checkbox"/>	7.	<b>OSL</b> - Log the Backup EOF activation time
<input type="checkbox"/>	8.	<b>OSL</b> - Inform the Emergency Coordinator, SEMA, County EOCs and the NRC of the assumption of responsibilities in the Backup EOF.

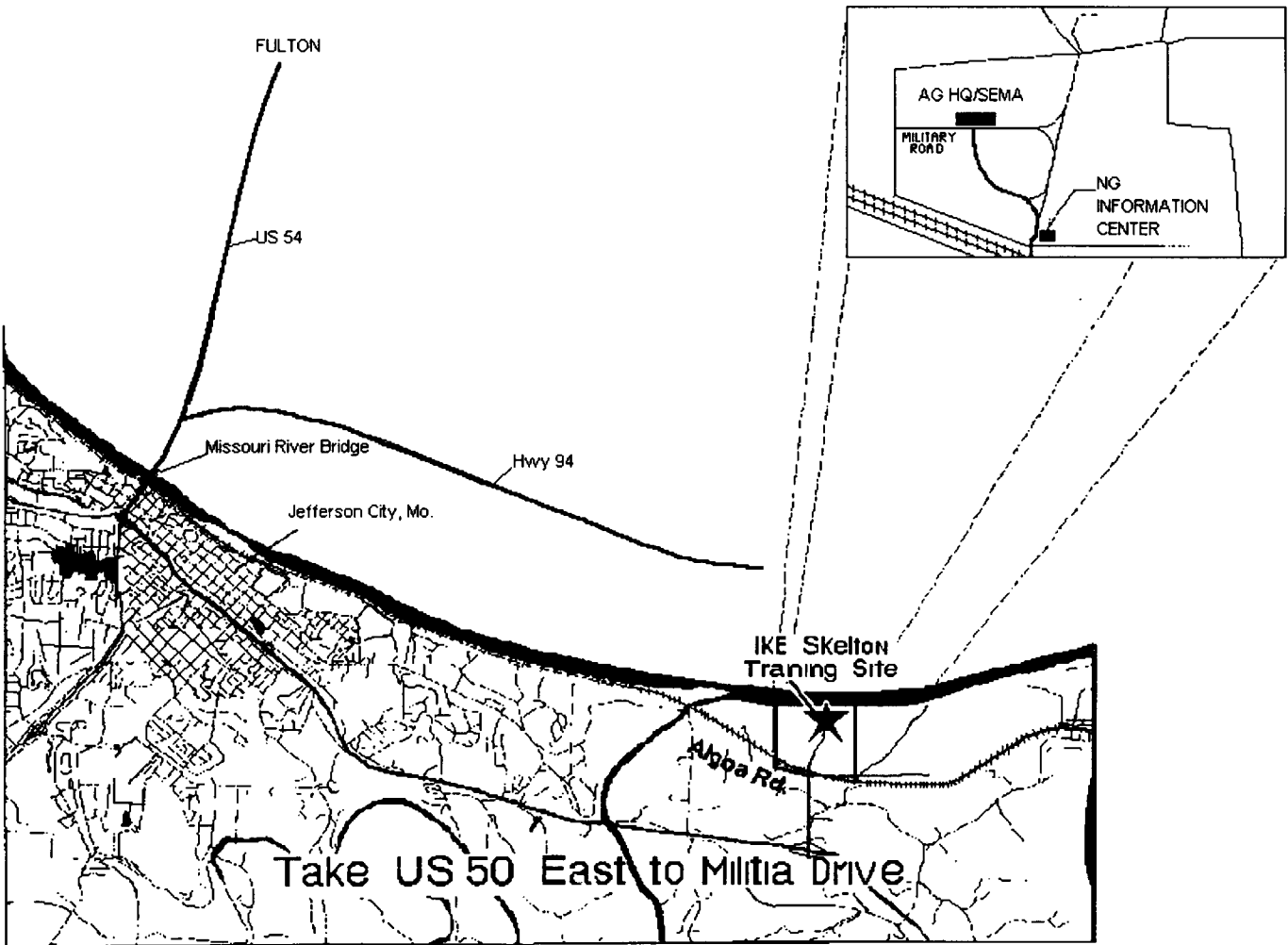
\_\_\_\_\_  
Off-Site Liaison Coordinator Signature

**BACK-UP EOF CHECKLIST**

**BEOF LAYOUT**



All 9XXX phone numbers are 526-9XXX  
 All 4XXX phone numbers are 634-4XXX  
 \* Indicates analog phone line  
 Field Monitoring Team Cellular Phones  
     Chem Vehicle (573) 220-0173  
     HPTS Vehicle (573) 220-0628  
     I&C Vehicle (573) 220-2507  
 Radio for FMT communications is located in the SEMA Radio Room  
 When dialing out, use 8 (area code) XXX-XXXX.



CALLAWAY PLANT  
EMERGENCY PLAN IMPLEMENTING PROCEDURE  
EIP-ZZ-00211  
FIELD MONITORING

RESPONSIBLE DEPARTMENT Emergency Preparedness

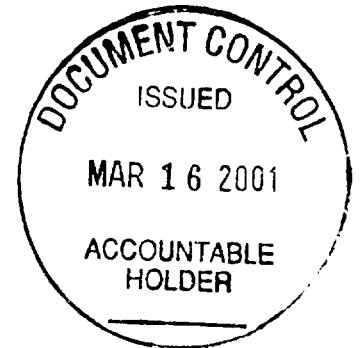
PROCEDURE OWNER T.W. Parker

WRITTEN BY T.W. Parker

PREPARED BY T.W. Parker

APPROVED BY Warren A. Witt

DATE ISSUED 3-16-01



This procedure contains the following:

Pages	<u>1</u>	through	<u>11</u>
Attachments	<u>1</u>	through	<u>3</u>
Tables	<u>          </u>	through	<u>          </u>
Figures	<u>          </u>	through	<u>          </u>
Appendices	<u>          </u>	through	<u>          </u>
Checkoff Lists	<u>          </u>	through	<u>          </u>

This procedure has            checkoff list(s) maintained in the mainframe computer.

Conversion of commitments to TRS reference/hidden text completed by Revision Number:

Non-T/S Commitments 017

TABLE OF CONTENTS

<u>Section</u>		<u>Page Number</u>
1	PURPOSE AND SCOPE	1
1.1	PURPOSE	1
1.2	SCOPE	1
2	RESPONSIBILITIES	1
3	PRECAUTIONS	2
3.1	FIELD MONITORING TEAM	2
4	PROCEDURE	2
4.1	TEAM FORMATION	2
4.2	EQUIPMENT CHECKOUT	3
4.3	TEAM BRIEFING	4
4.4	PLUME PHASE DOSE ASSESSMENT SAMPLING	5
4.5	INGESTION PATHWAY ENVIRONMENTAL SAMPLING	7
4.6	FIELD MONITORING TEAM DEBRIEF/RELIEF	8
4.7	FIELD TEAM COMMUNICATOR (FMT TRACKING)	9
5	FINAL CONDITIONS	9
6	REFERENCES	10
7	RECORDS	10
7.1	QA RECORDS	10
7.2	COMMERCIAL RECORDS	11
	Attachment 1 - FMT Briefing/Debriefing Checklist	5 Pages
	Attachment 2 - FMT Radiation Survey Worksheet	1 Pages
	Attachment 3 – Environmental Collection Worksheet	1 Page

## FIELD MONITORING

### 1 PURPOSE AND SCOPE

#### 1.1 PURPOSE

Implement processes, in the event of a radioactive release from Callaway Plant, to support dose projection calculations by:

- Sampling a radioactive plume.
- Tracking the path of a radioactive plume.
- Assessing consequences to the surrounding areas resulting from a radioactive plume released from Callaway Plant.

#### 1.2 SCOPE

Establishes responsibilities of Field Monitoring Teams (FMT) members, communicators, and coordinators.

Quickly form, brief, and dispatch FMTs necessary to support dose projections while ensuring:

- Teams have the necessary sampling and safety equipment.
- Equipment is in good condition and operationally checked.

### 2 RESPONSIBILITIES

2.1 Health Physics Coordinator (HPC) forms FMTs.

2.2 Dose Assessment Coordinator (DAC) directs and assesses FMT activities.  
**COMN 3375**

2.3 Dose Assessment Staff (DAS) reports to the DAC. DAS records the FMT locations and sample data. DAS maintains the radiological status boards in the EOF. **COMN 3355**

- 2.4 FMTs track and quantify plume dose rates. In cooperation with the State Department of Health, FMTs also assist in the collection of environmental sample media. **COMN 3396**

### 3 PRECAUTIONS

#### 3.1 FIELD MONITORING TEAM

- 3.1.1 Primary method of communication between FMTs and the EOF is the radio on Repeater Plant 2.
- 3.1.1.1 If radio communications are lost or intermittent, the cellular phone should be used.
- 3.1.2 Primary method of communication between FMTs and the Backup EOF should be the cellular phone.
- 3.1.2.1 If phone communications are lost or intermittent, use the radio on Repeater Plant 2.
- 3.1.3 If communications cannot be established via alternate radio channels or cellular phone, return to the appropriate facility (EOF, Backup EOF, or Callaway Plant) and contact the DAC.
- 3.1.4 Minimize the time in the plume. Perform all sample counting and calculations outside the plume location.
- 3.1.5 Ventilation from outside sources should be minimized upon entry into the plume. Place vehicle ventilation in recirculation (depress MAX button, REC will light on your display) or off (for vehicles without A/C). Ensure windows are closed.
- 3.1.6 Silver Zeolite cartridges used for Iodine sampling are a hazardous waste. Return all cartridges to Chemistry for processing in accordance with APA-ZZ-00832 .
- 3.1.7 Designation of radioactive materials is not necessary while the items are under the control of a Field Monitoring Team member.

### 4 PROCEDURE

#### 4.1 TEAM FORMATION

- 4.1.1 The HPC designates a FMT Leader from the available Support Area Personnel.

- 4.1.2 The HPC requests a FMT Driver from the Ops Support Coordinator.
- 4.1.2.1 FMT obtains the vehicle keys from the Ops Support Coordinator or Health Physics Coordinator.
- 4.1.3 HPC briefs the FMT on current conditions. Record information on Attachment 1, Section I, Team Formation.
- 4.2 EQUIPMENT CHECKOUT
- 4.2.1 FMT Leader and Driver proceed to the Central Processing Facility (CPF) to checkout FMT equipment. Record equipment checks on Attachment 1, Section II, Equipment Checkout. FMT equipment lockers are located in the whole body count room #1102.
- |  |
|--|
| <p><u>NOTE:</u> The following steps of Equipment Checkout may be performed in any order.</p> |
|--|
- 4.2.2 The FMT Driver should assist the Team Leader as directed.
- 4.2.3 Response check all survey instruments, applicable operating procedures are located in a binder stored on the outside of the FMT equipment locker.
- 4.2.4 Load instruments, Immediate Field Monitoring Kit, check source, and any additional equipment into the RERP vehicle.
- 4.2.5 Check the Global Positioning System (GPS) for proper operation. The operator aid is in the FMT procedure binder.
- 4.2.6 Check the DC to AC inverter for proper operation. Operational check of the air sampler using the inverter as the power source satisfies this check.
- 4.2.7 Check the RERP vehicle fuel supply greater than ½ full. If necessary refuel vehicle from fuel tank located at Stores 1. Key to fuel pump is on the RERP vehicle key ring.



- 4.2.8 Electronic dosimetry devices (ED) are susceptible to interference from radios and cellular phones. To minimize the possibility of erroneous ED readings perform the following when operating phones or radios:

<p><u>NOTE:</u> These checks may be performed during communication check for the radio and the phone.</p>
---

- Maintain ED at least 4 inches from any antenna or co-axial cable used to connect to remote antenna.
- Check ED readings for possible interference while performing radio and phone checks.

- 4.2.9 Check the operation of the 2-way radio in the RERP vehicle. Switch the radio to "Repeater Plant 2." Contact FMT Communicator to perform a radio check.

- 4.2.10 Check the operation of the cellular phone by contacting Field Team Communicator (FTC) and having the FTC return the call. The phone numbers can be found on Attachment 1, FMT Briefing/Debriefing Checklist.

#### 4.3 TEAM BRIEFING

- 4.3.1 Upon completion of section 4.1 Team Formation and section 4.2 Equipment Checkout, contact the FTC and report FMT status. FMT status should be as follows:

- FMT equipment checks completed and satisfactory.
- All FMT equipment loaded in the RERP vehicle.
- FMT ready to be dispatched.

- 4.3.2 The FMT requests a brief from the DAC. Record information in Attachment 1, Section III Briefing and Dispatch. The brief should include but not limited to following items:

**NOTE:** The DAC may have the Field Team Communicator provide the brief.

- Team designator.
- Meteorological updates.
- Status of any releases in progress or possible release.
- Survey and sample locations.
- FMT review Attachment 1, Section IV Precautions.
- Potassium Iodide recommendations.

4.4 PLUME PHASE DOSE ASSESSMENT SAMPLING

**CAUTION:** Any time the Model 14C reading exceeds 1 R/hr, leave the area and notify the DAC. **SOS 98-2502**

- 4.4.1 Determine the leading edge and/or the perimeter sides of the plume by traversing the plume as near perpendicular to the wind direction/plume direction as possible.
- 4.4.1.1 Place probe of Model 14C on the seat, with the audible indicator on and probe window open facing up.
- 4.4.1.2 Determine the GPS location when the Model 14C detects the presence of the plume; record the information on Attachment 2, FMT Radiation Survey Sheet.
- 4.4.1.3 Determine the GPS location the Model 14C detects the highest reading while traversing the plume, record information on Attachment 2, FMT Radiation Survey Sheet. Indicate this as a centerline (C) reading.

**NOTE:** It is permissible to obtain readings in step 4.4.2 during the initial pass through the plume if the plume centerline is easily identified. **SOS 99-1680**

- 4.4.1.4 Determine the GPS location when the Model 14C detects the plumes other perimeter, record the information on Attachment 2, FMT Radiation Survey Sheet.
- 4.4.2 Return to the plume centerline location and perform the following samples:
- 4.4.2.1 Record dose rate using the Ion Chamber instrument on the FMT Radiation Survey Sheet.
- Hold meter waist level.
  - Instrument window closed.

<p><b><u>CAUTION:</u></b> Using the DC to AC inverter with vehicle engine off may cause excessive battery drain that could strand the vehicle in an undesirable location. <b>SOS 98-3384</b></p>
--

- 4.4.2.2 Obtain a Particulate and Iodine air sample, and if requested by the DAC, include a sample for noble gas. Air sample volumes are typically 10 ft<sup>3</sup> for Particulate and Iodine and 2 minutes for Noble Gas. With DAC permission, sample volumes may be reduced to a minimum of 15 seconds to maintain FMT exposures ALARA. **SOS 98-2505**
- 4.4.3 Exit the plume and purge the Particulate and Iodine sample by running the sampler for approximately 1-min. to remove noble gas interference.
- 4.4.4 Using a G-M count rate meter, count the Particulate and Iodine samples. Record gross counts and background counts on the FMT Radiation Survey Sheet. **COMN 42903**
- 4.4.5 Report survey results and sample locations to the FMT Communicator.

4.5 INGESTION PATHWAY ENVIRONMENTAL SAMPLING

- 4.5.1 Obtain FMT Recovery Kit, located in the equipment room of the EOF.
- 4.5.2 Proceed to sample locations as directed by the DAC.
- 4.5.3 Obtain a closed window radiation readings at waist level (window facing down) for the area to be sampled.
- 4.5.4 Record radiation readings on Attachment 3, FMT Environmental Collection Worksheet.
- 4.5.5 Vegetation samples are collected as follows:

***CAUTION:*** Do not contaminate the sample with soil. Do not collect vegetation from areas that are sheltered from fallout.  
**SOS 99-1680**

- Collect approximately one cubic foot of vegetation.
  - Clip vegetation to approximately one inch above the surface of soil.
  - Double bag sample and label appropriately.
  - Record sample information on Attachment 3, FMT Environmental Collection Worksheet.
- 4.5.6 Collect soil sample as follows:

***CAUTION:*** Do not collect soil from areas that are sheltered from fallout.

- If excessive vegetation is present, this should be clipped off approximately 1 inch above the soil surface and discarded. The litter at the surface and the root mat are considered part of the sample.
- Using a shovel, remove two plugs, approximately six by six inches by two inches deep and approximately 1-2 feet apart. Minimize disturbance of the grass cover or surface soil.
- Double bag sample and label appropriately.
- Record sample information on Attachment 3, FMT Environmental Collection Worksheet.

4.5.7 Collect water samples as follows:

- Collect approximately two gallons.
- Double bag sample and label appropriately.
- Record sample information on Attachment 3, FMT Environmental Collection Worksheet.

4.5.8 Collect snow samples as follows.

***CAUTION:*** Do not collect snow from areas that are sheltered from fallout.

- Collect approximately 12 liters.
- Collect snow to a depth that is representative at the time of release. Ensure sample area has been undisturbed since release.
- Double bag sample and label appropriately.
- Record sample information on Attachment 3, FMT Environmental Collection Worksheet.

4.5.9 Return all samples to the EOF for processing.

#### 4.6 FIELD MONITORING TEAM DEBRIEF/RELIEF

4.6.1 Normally, relief and turnover should be performed in the field, if possible.

4.6.2 Upon direction from the DAC, FMTs should report to the EOF or alternative location for debriefing.

4.6.3 Upon return to the EOF and prior to entry to the EOF, FMT personnel should be monitored for contamination.

4.6.3.1 If the FMT personnel are returning for relief or debriefing, access to the EOF should be through the Decontamination Area.

4.6.4 The FMT Leader ensures the DAC has updated the dose records for FMT members and completes dose information in Attachment 1 Section I, Team Formation.

4.6.5 The FMT Leader should complete Attachment 1, Section V, Debriefing, and return to DAC. **SOS 98-2498**

- 4.7 FIELD TEAM COMMUNICATOR (FMT TRACKING)
- 4.7.1 Using the wind direction, draw the plume centerline. The line should be drawn out to a distance based on wind speed and start time of the release.
- 4.7.2 If the plume centerline is within 3° (round to whole number) of a sector boundary, both sectors bordering that boundary are considered centerline sectors.
- 4.7.3 Using a different color than was used to draw the plume centerline, outline the outer boundaries of the affected sectors. The affected sectors include the centerline sector(s) and the adjacent sectors. Both sectors on either side of the centerline sector(s) are considered adjacent sectors.
- 4.7.4 When contacted by the FMT, the DAC may direct the FMT Communicator to brief the FMTs on the status of the emergency. Refer to section 4.3, Team Briefing.
- 4.7.5 Establish the position of the FMT with corresponding indicators (e.g., RED, BLUE, and GREEN).
- 4.7.6 FMT Communicator should use Attachment 2, FMT Radiation Survey Worksheet, to record survey results as they are reported by the FMTs.
- 4.7.7 Update the Field Monitoring Status Boards with current information from Attachment 2.
- 4.7.8 When sufficient data is available (a minimum of 1 point defining each side edge and a point defining the leading edge), determine and draw the plume perimeter on the map from the FMT information.
- 4.7.9 The Field Team Communicator should inform the DAC immediately of any significant changes to FMT radiological data.
- 4.7.10 The Field Team Communicator should periodically update FMTs on plant status and protective actions. **COMN 5405**

## 5 FINAL CONDITIONS

- 5.1 The Release has been terminated or is reduced to levels below the Emergency Action Levels (EAL) for the ALERT Emergency Classification.
- 5.2 All surveys and samples have been obtained as requested, properly identified, and returned to the designated location.

- 5.3 All the Field Monitoring Teams have returned for debriefing.
- 5.4 Emergency Kits have been inventoried, restocked, and sealed in accordance with **HTP-ZZ-07003**, Maintenance and Inventory of Health Physics Technical Support Emergency Equipment Kits.
- 5.5 All records have been collected and sent to the Emergency Preparedness Department.

## 6 REFERENCES

- 6.1 Callaway Plant Radiological Emergency Response Plan (RERP)
- 6.2 **APA-ZZ-00832**, Hazardous and Special Waste Management Program
- 6.3 **HDP-ZZ-01300**, Internal Dosimetry Program
- 6.4 **HTP-ZZ-04102**, Operation and Calibration of the Eberline RO-2(X) Series Ion Chamber
- 6.5 **HTP-ZZ-04106**, Operation of the Ludlum Model 14C
- 6.6 **HTP-ZZ-04108**, Operation of the Ludlum Model 3 Portable Count Rate Meter
- 6.7 **HTP-ZZ-04121**, Operation and Calibration of the Radeco Model AVS-28A Air Sampler
- 6.8 **HTP-ZZ-07003**, Maintenance and Inventory of Health Physics Technical Support Emergency Equipment Kits
- 6.9 FEMA REP-2, REV.2/June 1990, Guidance on Offsite Emergency Radiation Measurements Systems, Appendix D
- 6.10 HPCI No. 93-005, FMT Personnel Dose Evaluation

## 7 RECORDS

### 7.1 QA RECORDS

- Attachment 1, FMT Briefing/Debriefing (File K171.0010)
- Attachment 2, FMT Radiation Survey Worksheet (File K171.0010)
- Attachment 3, Environmental Collection Worksheet (File K171.0010)

7.2 COMMERCIAL RECORDS

None



**FMT BRIEFING / DEBRIEFING CHECKLIST**

TEAM DESIGNATOR (circle one): **BLUE** - Chemistry Vehicle (#102206)  
**GREEN** - HPTS Vehicle (#102207)  
**RED** - I&C Vehicle (#102004)

**I. TEAM FORMATION**

	Name	EID	TLD ED Y/N	Exposure Margin (mRem)	Debriefed Yes/No	Final Exposure	Dose Records Updated by DAC
Leader							<input type="checkbox"/>
Driver							<input type="checkbox"/>
							<input type="checkbox"/>

**Radioactive Release:**

In progress YES / NO START TIME \_\_\_\_:\_\_\_\_

Likely to occur YES / NO PROJECTED TIME \_\_\_\_:\_\_\_\_

Release location (circle one) UNIT VENT / PORV / OTHER \_\_\_\_\_

---

**Meteorological Data:**

Wind Direction (degrees) From: \_\_\_\_\_ To: \_\_\_\_\_

Wind Speed (mph) \_\_\_\_\_

Keys: ( may be obtained from OSC or the HPC )

---

**Dosimetry:**

Retain dosimetry (ED, if issued, and TLD) when exiting MAF

---

**Remarks:**

**II. EQUIPMENT CHECKOUT COMN 42536**

	<b>Remarks:</b>
<p><b>Field Monitoring Kits:</b> Kits located in CPF, whole body count room #1102 <i>Inventory Kit (not necessary if seal is intact)</i></p> <p><input type="checkbox"/> Kit Inventory (<i>Sat</i>)</p>	
<p><b>Pre-operational Check Survey Instruments:</b> (Procedure binder in rack mounted on outside of FMT locker)</p> <p><input type="checkbox"/> <i>Air sampler (Sat) HTP-ZZ-04121</i></p> <p><input type="checkbox"/> <i>Count rate meter (Sat) HTP-ZZ-04108</i></p> <p><input type="checkbox"/> <i>Ion chamber survey meter (Sat) HTP-ZZ-04102</i></p> <p><input type="checkbox"/> <i>GM survey meter (Sat) HTP-ZZ-04106 SOS 99-1680</i></p>	
<p><b>Load equipment in vehicle:</b></p> <p><input type="checkbox"/> <i>Immediate FMT Kit</i></p> <p><input type="checkbox"/> <i>Recovery FMT Kit (located at EOF equip room if needed)</i></p> <p><input type="checkbox"/> <i>Air sampler</i></p> <p><input type="checkbox"/> <i>Count rate meter (14c in front seat of vehicle)</i></p> <p><input type="checkbox"/> <i>Ion chamber survey meter</i></p> <p><input type="checkbox"/> <i>Procedures (located on side of locker)</i></p> <p><input type="checkbox"/> <i>Maps</i></p> <p><input type="checkbox"/> <i>Emergency light</i></p> <p><input type="checkbox"/> <i>Check source</i></p>	
<p><b>Other Equipment:</b> <i>GPS System (Operator aid in FMT Kit).</i></p> <p><input type="checkbox"/> Check GPS operational with vehicle parked at the CPF. (GPS is SAT if it reads N38°45.6' to 45.8' W91°47.0' to 47.2')</p> <p><i>Air sampler</i></p> <p><input type="checkbox"/> Prepare sample head. (Install filter and cartridge.)</p> <p><input type="checkbox"/> Check samplers air flow within calibrated range.</p> <p><i>RERP Vehicle</i></p> <p><input type="checkbox"/> DC to AC inverter operational (air sampler checked <i>Sat</i>)</p> <p><input type="checkbox"/> Fuel greater than ½ full <b>SOS 98-2506</b> (<i>refuel at tank located at Stores 1. Pump key on vehicle key-ring</i>)</p>	

**II. EQUIPMENT CHECKOUT COMN 42536 (continued)**

<p><b>Communication Equipment:</b></p> <p><i>Radio</i></p> <p><input type="checkbox"/> Switch radio to Repeater Plant 2.</p> <p><input type="checkbox"/> Contact FMT communicator for operational check of the radio. (Maintain ED away from antenna or coaxial cable. Notify DAC if ED interference is observed during Radio Test.) <i>(Sat)</i></p> <p><i>Cellular Phone</i></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">TELEPHONE NUMBER</th> </tr> </thead> <tbody> <tr> <td>FMT Communicator EOF</td> <td>(573) 676-4924</td> </tr> <tr> <td>Backup EOF</td> <td>(573) 526-9165</td> </tr> <tr> <td>HP Coordinator TSC</td> <td>(573) 676-8711</td> </tr> <tr> <td>DAC EOF</td> <td>(573) 676-4999 / 4907</td> </tr> <tr> <td>BLUE FMT (Chemistry Veh #102206)</td> <td>(573) 220-0173</td> </tr> <tr> <td>GREEN FMT (HPTS Veh #102207)</td> <td>(573) 220-0628</td> </tr> <tr> <td>RED FMT (I&amp;C Veh #102004)</td> <td>(573) 220-2507</td> </tr> </tbody> </table> <p><input type="checkbox"/> Contact FMT communicator for operational check of the phone. FMT communicator should also contact FMT to verify phone is operational and phone number is correct. <i>(Sat)</i></p>	LOCATION	TELEPHONE NUMBER	FMT Communicator EOF	(573) 676-4924	Backup EOF	(573) 526-9165	HP Coordinator TSC	(573) 676-8711	DAC EOF	(573) 676-4999 / 4907	BLUE FMT (Chemistry Veh #102206)	(573) 220-0173	GREEN FMT (HPTS Veh #102207)	(573) 220-0628	RED FMT (I&C Veh #102004)	(573) 220-2507	
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**III. BRIEFING AND DISPATCH**

<p><b>Contact FMT Communicator:</b></p> <p><input type="checkbox"/> Inform FMT communicator, FMT equipment loaded and the team is ready to be briefed and dispatched.</p> <p>Brief (minimum requirements):</p> <p><input type="checkbox"/> Team designator (Identified at top of page 1)</p> <p><input type="checkbox"/> Meteorological updates (Section I data)</p> <p><input type="checkbox"/> Status of any releases in progress or possible release</p> <p><input type="checkbox"/> Survey and sample locations</p> <p><input type="checkbox"/> Review of Section IV Precautions by the FMT</p> <p><input type="checkbox"/> Potassium Iodide recommendations (<b>HDP-ZZ-01300</b>, Attachment 1)</p> <p style="padding-left: 40px;">Recommended (circle one)                      YES / NO</p> <p><input type="checkbox"/> You should <u>not</u> take KI if you are allergic to iodine.</p>	<p style="text-align: center;"><b>Remarks</b></p>
---	---

**IV. PRECAUTIONS**

	Remarks
<input type="checkbox"/> Maintain communications with the EOF using Repeater Plant 2. If radio communications are lost or intermittent, use the cellular phone. If communications cannot be established through alternate radio channels or cellular phone, return to the appropriate facility (EOF, BEOF, or Callaway Plant) and contact the DAC.	
<input type="checkbox"/> If the Backup EOF is being used for Field Monitoring Team direction, the cellular phones should be used for primary communications. Backup communications should be performed using Repeater Plant 2.	
<input type="checkbox"/> Minimize the time in the plume. Perform all sample analysis, calculations, etc., outside the plume location.	
<div data-bbox="360 877 1042 1079" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b><u>CAUTION:</u></b> If Model 14C Reading exceeds 1 R/hr, Leave the area and contact the DAC for further instructions.</p> </div> <input type="checkbox"/> Ventilation from outside sources should be minimized upon entry in the plume. Place vehicle ventilation in recirculation (depress MAX button, REC will light on your display) or off (for vehicles without A/C). Ensure windows are closed.	
<div data-bbox="360 1356 1042 1558" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b><u>CAUTION:</u></b> Vehicle air filters may become highly contaminated and a source of radiation exposure after traversing the plume.</p> </div> <input type="checkbox"/> No eating, drinking, or smoking is allowed.	

**V. DEBRIEFING**

<b>FMT Status:</b>	<b>Remarks</b>
<input type="checkbox"/> Team(circle one) Secured / relieved  <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"><p><i>NOTE:</i> Access to the EOF should be through the Decontamination Area.</p></div> <input type="checkbox"/> Date and Time _____ : _____ Problems or Hazards encountered _____ _____ _____	
<b>Surveys:</b> <input type="checkbox"/> Survey Worksheet complete and submitted to DAC	
<b>Dosimetry:</b> <input type="checkbox"/> Exposure records updated by DAC (complete section I) SOS 98-2498	
<b>Internal Exposure:</b> <input type="checkbox"/> Probable internal exposure YES / NO <input type="checkbox"/> Plume Immersion YES / NO If yes, schedule whole body count location: _____ time: _____ : _____	

Debriefing by \_\_\_\_\_  
(DAC or designee)

### FMT Radiation Survey Worksheet

<u>Team Designator:</u> Blue    Green    Red			<u>Weather Conditions:</u> Clear Rain Snow Sleet Mist			Date:
<u>Dose Data</u>			<u>Instrument ID's</u>		<u>Notes:</u> <ul style="list-style-type: none"> <li>RO-XX values are &lt; 0.5 mR/hr, report as &lt; 0.5 mR/hr.</li> <li>If a Noble Gas sample is requested, connect marinelli at the sampler exhaust</li> <li>Ion Chamber instrument readings are closed window, waist level, unless otherwise noted</li> <li>Air samples are approximately 10 ft<sup>3</sup> unless directed by DAC based on keeping exposures ALARA (15 seconds min.) <b>SOS 98-2505</b></li> <li>Purge iodine cartridge prior to counting.</li> </ul>	
Member EID	ED Dose (mrem)	Time	CRM-	-HP		
			GMI-	-HP		
			ION-	-HP		
			LAS-	-HP		

<u>Plume Location</u>					<u>Plume Centerline Survey Information</u>					
Time	Latitude (N) 38° xx . xxx	Longitude (W) 91° xx . xxx	14 C mrem/hr	* P / C / L	RO-xx Gamma mrem/hr closed window	Bkgd (cpm)	Iodine Gross (cpm)	Particulate Gross (cpm)	Sample duration (min)	Flowrate (cfm)

\* P=Perimeter, C=Centerline, L=Leading Edge. Otherwise, leave blank



CALLAWAY PLANT  
EMERGENCY PLAN IMPLEMENTING PROCEDURE  
EIP-ZZ-00240  
TECHNICAL SUPPORT CENTER OPERATIONS

RESPONSIBLE DEPARTMENT EMERGENCY PERPAREDNESS

PROCEDURE OWNER T. W. PARKER

WRITTEN BY T. W. PARKER

PREPARED BY T. W. PARKER

APPROVED BY Warren A. Witt

DATE ISSUED 3-16-01



This procedure contains the following:

Pages	<u>1</u>	through	<u>7</u>
Attachments	<u>1</u>	through	<u>9</u>
Tables	<u>          </u>	through	<u>          </u>
Figures	<u>          </u>	through	<u>          </u>
Appendices	<u>          </u>	through	<u>          </u>
Checkoff Lists	<u>          </u>	through	<u>          </u>

This procedure has            checkoff list(s) maintained in the mainframe computer.

Conversion of commitments to TRS reference/hidden text completed by Revision Number:

Non-T/S Commitments 022



TABLE OF CONTENTS

<u>Section</u>		<u>Page Number</u>
1	PURPOSE AND SCOPE	1
2	RESPONSIBILITIES	1
3	PROCEDURE	4
3.1	TSC STARTUP	4
3.2	TSC OPERATION	4
3.3	TSC EVACUATION	4
3.4	EVENT CLOSEOUT	5
3.5	TSC SHUTDOWN	5
4	REFERENCES	6
5	RECORDS	7
Attachment 1	Emergency Coordinator Checklist.....	2 Pages
Attachment 2	Technical Assessment Coordinator (TAC) Checklist .....	5 Pages
Attachment 3	Operations Support Coordinator (OSC) Checklist .....	3 Pages
Attachment 4	Administrative (Admin.) Coordinator Checklist .....	3 Pages
Attachment 5	Health Physics (HP) Coordinator Checklist .....	7 Pages
Attachment 6	TSC (ENS) Communicator Checklist.....	1 Page
Attachment 7	Chemistry Coordinator Checklist .....	3 Pages
Attachment 8	Security Coordinator (SC) Checklist .....	2 Pages
Attachment 9	Emergency Team Coordinator (ETC) Checklist .....	3 Pages

## TECHNICAL SUPPORT CENTER OPERATIONS

### 1 PURPOSE AND SCOPE

- 1.1 Establishes responsibilities for the Emergency Response Organization, provides guidance and checklists for each coordinator in the Technical Support Center (TSC) during emergency operation of the TSC, including the Operations Support Area (SA).

### 2 RESPONSIBILITIES

- 2.1 EMERGENCY COORDINATOR (EC)
- 2.1.1 The Emergency Coordinator has overall responsibility for TSC operations.
- 2.2 TECHNICAL ASSESSMENT COORDINATOR (TAC)
- 2.2.1 The TAC reports to the EC. The TAC is responsible for directing technical analysis of plant conditions to formulate EAL'S and emergency mitigating recommendations to the EC. Responsible for coordinating Protective Action Recommendations (PAR'S) consistent with plant conditions with the Recovery Manager and Dose Assessment Coordinator in the EOF prior to the arrival of the Protective Measures Coordinator (PMC) and Plant Assessment Coordinator (PAC). The TAC also evaluates Severe Accident Management Guidelines (SAMG's). (COMN 3333)
- 2.3 ADMINISTRATIVE COORDINATOR (AC)
- 2.3.1 The AC reports to the Emergency Coordinator in the TSC. The AC is responsible for ensuring the completion of the Admin Coordinator checklists. The AC is also responsible for ensuring that technical documents are available, providing food and beverage needs, and ensuring continuity of resources for the On-Site Emergency Response Organization. (COMN 3341)
- 2.4 TSC (ENS) COMMUNICATOR (TC)
- 2.4.1 The TSC Communicator reports to the EC. He is responsible for manning the ENS Communication Line and relaying technical information to the NRC.

2.5 HEALTH PHYSICS COORDINATOR (HPC)

- | 2.5.1 The HPC reports to the Emergency Coordinator in the TSC. The HPC is responsible for assessing on-site radiological conditions, reviewing radiological EAL's, and directing in-plant radiation protection activities. (COMN 3331)

2.6 OPERATIONS SUPPORT COORDINATOR (OSC)

- 2.6.1 The OSC reports to the Emergency Coordinator in the TSC. The OSC assesses plant information from the control room and technical support staff to establish emergency team priorities and direct operation support activities. (COMN 3336)

2.7 SECURITY COORDINATOR (SC)

- 2.7.1 The SC reports to the Emergency Coordinator in the TSC. The SC establishes communications with the Shift Security Supervisor (SSS), assumes overall plant security responsibility, and directs the security force through the SSS. These responsibilities include access control, personnel evacuation and accountability, coordination of any off-site law enforcement agency involvement, and normal and emergency security activities in accordance with the security plan. (COMN 3347)

2.8 CHEMISTRY COORDINATOR (CC)

- 2.8.1 The CC reports to the Technical Assessment Coordinator, and assumes responsibility for plant chemistry operations from the shift supervisor. The Chemistry Coordinator directs primary and secondary chemistry operations, (including post-accident chemistry) and non-radiological environmental monitoring. The CC ensures that the TAC is aware of chemistry activities and provides input to the TSC engineering staff in assessing plant chemistry problems. The CC directs the Rad/Chem Technicians - Chemistry. (COMN 3349)

2.9 EMERGENCY TEAM COORDINATOR (ETC)

- 2.9.1 The ETCs report to the OSC and assist in formation, briefing, direction, and tracking of emergency teams. The Fire Brigade and MERT continue to report to the Shift Supervisor in the Control Room.

2.10 STORES PERSONNEL

2.10.1 A member of the Materials Department reports to the OSC and is responsible for obtaining parts, supplies, and materials when needed.

2.11 OTHER TSC STAFF MEMBERS

2.11.1 Each TSC coordinator that arrives at the TSC is responsible for starting their Checklist. If the TSC is without power, they should start the TSC diesel per **OOA-UB-EPG70** if it is within their capability.

2.11.2 All personnel are responsible for walking through the portal monitor and carding in on the accountability reader as they enter the TSC during a radiological emergency or drill.

<p><b><u>NOTE:</u></b> The portal monitor should be response checked as soon as possible by the Health Physics group</p>
--

2.11.3 Personnel that leave the Facility should check out with the Security Officer and card out on the accountability reader. If a release has occurred or is likely to occur a HP brief is required.  
**CARS 199701061**

2.11.4 The following TSC coordinators are responsible for their attachment to this procedure.

- a) Emergency Coordinator (EC)
- b) Technical Assessment Coordinator (TAC)
- c) Operations Support Coordinator (OSC)
- d) Administrative (Admin) Coordinator (AC)
- e) Health Physics (HP) Coordinator (HPC)
- f) TSC (ENS) Communicator (TC)
- g) Chemistry Coordinator (CC)
- h) Security Coordinator (SC)
- i) Emergency Team Coordinator (ETC)

### 3 PROCEDURE

#### 3.1 TSC STARTUP

3.1.1 Each TSC staff member that arrives at the TSC is responsible for carding in on the accountability card reader, assisting in the facility startup and initiating their checklist.

#### 3.2 TSC OPERATION

3.2.1 The Emergency Coordinator ensures that Attachment 1, Emergency Coordinators Checklist, is used as a guide.

3.2.1.1 The EC should periodically discuss priorities, habitability of the facility and Site radiological conditions with the HPC. If evacuation of the TSC becomes necessary refer to Section 3.3.

3.2.1.2 The EC should ensure TSC personnel receive a periodic plant status update, including priorities, any change to facility habitability or Site radiological conditions.

3.2.2 Each TSC coordinator is responsible for completing their Checklist.

#### 3.3 TSC EVACUATION

3.3.1 Evacuation of the facility should be considered:

- a) When direct dose rates reach or exceed 5,000 mrem/hour, or
- b) When cumulative dose reaches or exceeds 4,400 mrem, or
- c) When iodine concentration reaches or exceeds  $1.9 \text{ E-}5 \text{ } \mu\text{Ci/ml}$ .

3.3.2 Evacuation may be required if power is unavailable or the ventilation system fails.

- 3.3.3 Coordinators should go to the facilities as indicated depending on their availability.
- a) Emergency Coordinator (EC) – to Control Room.
  - b) Technical Assessment Coordinator (TAC) – to Field Office if habitable then Control Room.
  - c) Operations Support Coordinator (OSC) – to Field Office if habitable then Control Room.
  - d) Administrative (Admin) Coordinator (AC) – to EOF.
  - e) Health Physics (HP) Coordinator (HPC) – to Field Office if habitable then Control Room.
  - f) TSC (ENS) Communicator (TC) – to Control Room.
  - g) Chemistry Coordinator (CC) – to EOF.
  - h) Security Coordinator (SC) – to EOF.
- 3.3.4 Coordinators reporting to the Control Room should evaluate minimum staff required to go with them and assign others to the EOF.
- 3.3.4.1 The OSC should take the Emergency Team Coordinators and minimum number of team members.
- 3.4 EVENT CLOSEOUT
- 3.4.1 If the emergency conditions allow the initiation of recovery operations or the closeout of the event, the Emergency Coordinator should contact the Recovery Manager (RM) and discuss implementation of **EIP-ZZ-00260**, Event Closeout/Recovery.
- 3.4.2 TSC personnel continue activities in accordance with this procedure until turned over to the Recovery Organization or closeout is declared.
- 3.5 TSC SHUTDOWN
- 3.5.1 If the TSC is to be shut down, direct the Coordinators to initiate Termination and Shutdown section of their Checklist.
- 3.5.2 The Emergency Coordinator should make preparations with the Shift Supervisor to transfer remaining responsibilities to the Control Room.

- 3.5.3 The Administrative Coordinator assesses the status of the TSC and ensures the following actions have been completed:
  - 3.5.3.1 All functional equipment/supplies have been restored to startup conditions.
  - 3.5.3.2 The entire TSC staff has been relieved of all duties associated with the operation of the TSC.
  - 3.5.3.3 All records generated during the operation of the TSC have been collected.
- 3.5.4 After shifting responsibilities, inform the Shift Supervisor and Recovery Manager that the TSC is shut down.

#### 4 REFERENCES

- 4.1 Callaway Plant Radiological Emergency Response Plan (RERP)
- 4.2 **EIP-ZZ-00101**, Classification of Emergencies
- 4.3 **EIP-ZZ-00102**, Emergency Implementing Actions
- 4.4 **EIP-ZZ-00212**, Protective Action Recommendation
- 4.5 **EIP-ZZ-00213**, Technical Assessment
- 4.6 **EIP-ZZ-00217**, Emergency Response Data System Activation
- 4.7 **EIP-ZZ-00220**, Emergency Team Formation
- 4.8 **EIP-ZZ-00230**, Accountability
- 4.9 **EIP-ZZ-00260**, Event Closeout/Recovery
- 4.10 **OTN-ZZ-00001**, TSC Building HVAC System.
- 4.11 HPCI 96-007, Emergency Response Facility Habitability Guidelines
- 4.12 Severe Accident Management Guidelines

5      RECORDS

<p><i><u>NOTE:</u></i>      All Facility Logs, SENTRY or MAGNEM screen prints, office memos, notes, etc. should be attached to the Coordinator Checklist and turned in to the Admin Coordinator and/or Emergency Preparedness (EP).</p>
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5.1      QA RECORDS

- 5.1.1      Attachment 1, Emergency Coordinator Checklist (File K171.0010)
- 5.1.2      Attachment 2, Technical Assessment Coordinator (TAC) Checklist (File K171.0010)
- 5.1.3      Attachment 3, Operations Support Coordinator (OSC) Checklist (File K171.0010)
- 5.1.4      Attachment 4, Administrative (Admin) Coordinator Checklist (File K171.0010)
- 5.1.5      Attachment 5, Health Physics (HP) Coordinator Checklist (File K171.0010)
- 5.1.6      Attachment 6, TSC (ENS) Communicator Checklist (File K171.0010)
- 5.1.7      Attachment 7, Chemistry Coordinator Checklist (File K171.0010)
- 5.1.8      Attachment 8, Security Coordinator (SC) Checklist (File K171.0010)
- 5.1.9      Attachment 9, Emergency Team Coordinator (ETC) Checklist (File K171.0010)



**EMERGENCY COORDINATOR CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<u>INITIATION</u>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the EC package. <input type="checkbox"/> Clip on Emergency Coordinator badge.
<input type="checkbox"/> 2.	Initiate Log Sheet.
<input type="checkbox"/> 3.	Receive briefing by: <ul style="list-style-type: none"> <li><input type="checkbox"/> Technical Assessment Coordinator. (EAL Monitoring).</li> <li><input type="checkbox"/> Shift Supervisor and relieve him as Emergency Coordinator.</li> </ul>
<input type="checkbox"/> 4.	Announce assumption of duties to TSC staff.
<input type="checkbox"/> 5.	Review plant/group status with TSC Coordinators: <ul style="list-style-type: none"> <li><input type="checkbox"/> Administrative.</li> <li><input type="checkbox"/> TSC (ENS) Communicator.</li> <li><input type="checkbox"/> Health Physics.</li> <li><input type="checkbox"/> Operations Support/Support Area.</li> <li><input type="checkbox"/> Technical Assessment.</li> <li><input type="checkbox"/> Chemistry.</li> <li><input type="checkbox"/> Security.</li> </ul>
<input type="checkbox"/> 6.	Ensure the following responsibilities have been transferred from Control Room. <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>EAL MONITORING.</u></li> <li><input type="checkbox"/> <u>ENS COMMUNICATION.</u></li> <li><input type="checkbox"/> <u>PAR MONITORING</u> (if the RM position in the EOF is not manned).</li> <li><input type="checkbox"/> <u>SAMG Implementation</u> (if applicable).</li> </ul>
<input type="checkbox"/> 7.	Make a site-wide announcement that, "The TSC has accepted emergency responsibilities from the Control Room."
<input type="checkbox"/> 8.	Announce the following: "TSC Coordinators assess your manpower needs and request additional personnel from the Admin Coordinator as needed. All excess personnel should assemble in the Operations Support Area and await further instructions."
<input type="checkbox"/> 9.	After assessing manpower needs, instruct all excess personnel to return home or return to work (ALERT) and remain near their phones. Personnel sent home should remain fit for duty and will be contacted concerning shift relief and turnover.

<u>OPERATIONS</u>	
(*) Steps are items that MUST be frequently reviewed	
<input type="checkbox"/> *1.	Periodically update TSC personnel including priorities, habitability status and Site radiological conditions. <b>Note: Priorities should be listed on the Priority Status Board</b>
<input type="checkbox"/> *2.	Continue activities per EIP-ZZ-00102, Emergency Implementing Actions.
<input type="checkbox"/> *3.	Perform periodic briefs with the below individuals concerning on-site activities: <ul style="list-style-type: none"> <li><input type="checkbox"/> TSC Coordinators.</li> <li><input type="checkbox"/> RM.</li> <li><input type="checkbox"/> SS.</li> <li><input type="checkbox"/> On site NRC personnel.</li> </ul>

## ***EMERGENCY COORDINATOR CHECKLIST***

<b><u>TURNOVER</u></b>	
<input type="checkbox"/> 1.	Incoming Emergency Coordinator briefed on TSC status and log reviewed.
<input type="checkbox"/> 2.	Recovery Manager and Shift Supervisor informed.
<input type="checkbox"/> 3.	Turnover announced to TSC staff.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA# 259.

<b><u>RECOVERY</u></b>	
<input type="checkbox"/> 1.	Declare Recovery per <b>EIP-ZZ-00260</b> , Event Closeout/Recovery (if applicable). <ul style="list-style-type: none"> <li><input type="checkbox"/> Recovery Manager contacted.</li> <li><input type="checkbox"/> Shift Supervisor contacted.</li> <li><input type="checkbox"/> Recovery organization established.</li> <li><input type="checkbox"/> Make site wide announcement.</li> </ul>

<b><u>TERMINATION and SHUTDOWN</u></b>	
<input type="checkbox"/> 1.	Shutdown TSC (if required). <ul style="list-style-type: none"> <li><input type="checkbox"/> Coordinators directed to shutdown TSC _____ Time.</li> <li><input type="checkbox"/> Make site wide announcement.</li> </ul>

\_\_\_\_\_  
Emergency Coordinator Signature

**TECHNICAL ASSESSMENT COORDINATOR (TAC) CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the TAC package <input type="checkbox"/> Clip on the Tech. Assessment Coordinators badge.
<input type="checkbox"/> 2.	Ensure the TSC has power. <input type="checkbox"/> Normal power, (i.e. lights on, power available to computers, etc.). <input type="checkbox"/> No Power. Start the TSC diesel per <b>OOA-UB-EPG70</b> . (An EO may be used if available.)
<input type="checkbox"/> 3.	Shift the Computer link located in the closet near the water cooler then the PC power supplies to UPS power.
<input type="checkbox"/> 4.	If outside temperature is approximately 40°F or above, locate panel FIKUB7001 <u>TSC Air Handling Unit Control Panel</u> , just inside the TSC Equipment Room Door and to the left. Place the <u>TSC Air Handling Unit Control Switch CSUB7005</u> in the <b>COOL</b> position. <b>CARS 200002783</b>
<input type="checkbox"/> 5.	Initiate Log Sheet.
<input type="checkbox"/> 6.	Activate Plant Status Boards from the Plant Computer ( <b>Cancel</b> , type <b>PSB</b> , <b>Return</b> ) or use keyboard commands on the PC. <b>NOTE:</b> In the event of Plant Computer System failure, refer to <b>EIP-ZZ-00213</b> , Technical Assessment, for further guidance.
<input type="checkbox"/> 7.	Turn on the Projected Status Boards using the remote control. They are connected to the PCs. Keyboard controls <b>MUST</b> be used for the PCs.
<input type="checkbox"/> 8.	Obtain brief from the SS, STA or other CR personnel. Contact CR via phone as little as possible until the Control Room TSC Liaison is staffed then use the Tech Assessment Line (dial 211), always provide your name and title.
<input type="checkbox"/> 9.	The following should be logged: <input type="checkbox"/> Plant Status/Event Status <input type="checkbox"/> Current EAL(s) <input type="checkbox"/> Equipment Status (equipment out of service?) <input type="checkbox"/> Protective Action Recommendations (PAR) Issued per <b>EIP-ZZ-00212</b> . <input type="checkbox"/> Dose Assessment contact _____ (name) Inform Control Room when accepting _____ EAL(s) PAR(s) SAMG(s) responsibilities Additional instructions? _____
<input type="checkbox"/> 10.	Activate Emergency Response Data System <b>ERDS</b> per <b>EIP-ZZ-00217</b> (if not already activated) from the Plant Computer. ( <b>Cancel</b> , type <b>ERDS</b> , <b>return</b> type in password <b>NRCERDS</b> , <b>return</b> , select <b>F2</b> to activate) When <b>ERDS</b> is activated the system displays "Data Transmission in Progress". To return to <b>PSB's</b> , select <b>Cancel</b> , type <b>PSB</b> , <b>Return</b> ; <b>ERDS</b> continues to run unaffected in the background. Inform the ENS Communicator if <b>ERDS</b> cannot be activated (i.e., loss of Plant Computer). <b>CARS 199903613</b>
<input type="checkbox"/> 11.	Assign the Reactor Engineer to perform core damage assessment using <b>EDP-ZZ-00005</b> .
<input type="checkbox"/> 12.	Begin monitoring Emergency Action Levels (EAL) per <b>EIP-ZZ-00101</b> .
<input type="checkbox"/> 13.	Brief the Emergency Coordinator, upon his arrival, on the TSC activities.
<input type="checkbox"/> 14.	Place TSC Ventilation System in the Filter Mode per <b>OOA-UB-00005</b> . (An EO may be used if available.)



## **TECHNICAL ASSESSMENT COORDINATOR (TAC) CHECKLIST**

<u>RECOVERY</u>	
<input type="checkbox"/> 1.	Assess the following: <ul style="list-style-type: none"> <li><input type="checkbox"/> a. Plant equipment status</li> <li><input type="checkbox"/> b. Accident assessment</li> <li><input type="checkbox"/> c. Control of radiological releases</li> <li><input type="checkbox"/> d. Ability to resume normal operations</li> </ul>
<input type="checkbox"/> 2.	Continue Technical Assessment activities until directed otherwise by the Emergency Coordinator or RM.

<u>TERMINATION and SHUTDOWN</u>	
<input type="checkbox"/> 1.	When directed by the Emergency Coordinator, inform Tech Assessment staff of deactivation.
<input type="checkbox"/> 2.	Ensure equipment and supplies are deactivated and/or stored.
<input type="checkbox"/> 3.	Ensure documents are collected and given to the Admin Coordinator.
<input type="checkbox"/> 4.	Restore PC UPS power supply to LINE.
<input type="checkbox"/> 5.	Restore TSC Air Handling Unit Control Switch to <u>AUTO</u> position.

\_\_\_\_\_  
Technical Assessment Coordinator Signature

**TECHNICAL ASSESSMENT COORDINATOR (TAC) CHECKLIST****PLANT COMPUTER GUIDE****COLOR AND DESCRIPTION OF COMPUTER POINT QUALITY CODES**

The Plant Computer System (PCS) assigns a "Data Quality Code" to each field input and calculated variable at the time the point is processed. These quality codes are determined by a series of checks/tests performed during both input-data validation and point processing. A list of the quality codes follows, which is ordered by severity:

1. **UNK** (Blue) – Unknown; point not yet processed. If a point is deleted from processing when SAIPMS is first activated, "UNK" quality code is assigned. This quality code is also displayed for calculated or derived points which have not yet cycled through their first processing period.
2. **DEL** (Blue) – Point has been deleted from processing. If a point was active when the SAIPMS software was activated, and was subsequently disabled from processing, the quality code "DEL" is assigned and no further engineering unit conversion is attempted.
3. **NCAL** (Blue) – Derived point not calculable. This quality code is assigned when it has been determined that insufficient inputs exist to accurately perform the associated equation or calculation.
4. **INVL** (Blue) – Invalid code is generated when a point's defined hardware channel address has not been selected, does not exist, or cannot be accessed. This usually indicates either an invalid hardware channel address, or a failed hardware component. For example, if a defined card slot address does not contain a card, all points assigned to that card are tagged as INVL. Also, if a multiplexer has either failed or been taken offline, all points assigned to that multiplexer are tagged as INVL.
5. **RDER** (Blue) – Sensor Read Error code is generated when no test return/input is received for a point in response to a scan command/output to a valid hardware channel address. This usually indicates a faulty sensor or a multiplexer communication problem. Whenever a quality code of RDER is observed, a hardware error condition exists.
6. **OTC** (Blue) – Open thermocouple.
7. **BAD** (Blue) – The BAD (Bad Scanned Value) code is generated when the "corrected" scanned value (i.e. adjusted for A/D gain and zero-drift error) exceeds the sensor range as defined by a point's "SENSOR LIMIT LOW" and "SENSOR LIMIT HIGH" values in the database.
8. **HRL** (Blue) – Point exceeds high reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined High Reasonable limit, a quality code of "HRL" is assigned.
9. **LRL** (Blue) – Point exceeds low reasonable limits. This condition is tested after engineering unit conversion and if the value exceeds the defined Low Reasonable limit, a quality code of "LRL" is assigned.
10. **REDU** (Cyan) – Point fails redundant point check. If a point has a defined Redundant Point and its current value does not match the defined point within the specified tolerance, it is assigned a quality code of "REDU".

**TECHNICAL ASSESSMENT COORDINATOR (TAC) CHECKLIST****PLANT COMPUTER GUIDE**

11. **HIHI**(Red) – Point above high alarm limit. This condition is met when a point's current value has exceeded the defined High Alarm limit, and is assigned a quality code of "HIHI".
12. **LOLO** (Red) – Point below low alarm limit. This condition is met when a point's current value is less than the defined LOW Alarm limit, and is assigned a quality code of "LOLO".
13. **HALM** (Yellow) – Point above high warning limit. This condition is met when a point's current value has exceeded the defined High Operating limit, and is assigned a quality code of "HALM".
14. **LALM** (Yellow) – Point below low warning limit. This condition is met when a point's current value is below the defined Low Operating limit, and is assigned a quality code of "LALM".
15. **ALM** (Red) – State/Change-of-State alarm. Any logical-value point may be alarm monitored against either a defined logical state (i.e., "TRUE", or "FALSE"), or a defined change-of-state condition (i.e., "TRUE" to "FALSE", "FALSE" to "TRUE", or either state change). A quality code of "ALM" is assigned if the point meets any of the above conditions.
16. **SUB** (Cyan) – Substitute value inserted for point. If a substitute value has been entered for a point, the point is assigned a quality code of "SUB", and no further alarm checks or engineering unit conversions are made.
17. **DALM** (Cyan) – Point is deleted from alarm checks. If a point is currently disabled from alarm processing, it is assigned a quality code of "DALM", and no further alarm checks are made.
18. **INHB** (Green) – Point is inhibited from alarm by cut-out point. If a point has an assigned cut-out point, and the current state of the cut-out point matches the specified alarm inhibit state, the point is assigned a quality code of "INHB", and no alarm transaction is generated. While inhibited, the point value WILL continue to update, only the alarm condition is inhibited.
19. **GOOD** (Green) – Point passed all the above checks. The quality code "GOOD" indicates that all defined alarm conditions, states, or values have not been exceeded or met.





## OPERATIONS SUPPORT COORDINATOR (OSC) CHECKLIST

<input type="checkbox"/> *8.	Monitor TSC operating equipment periodically: <ul style="list-style-type: none"> <li><input type="checkbox"/> TSC Emergency Diesel.</li> <li><input type="checkbox"/> TSC Emergency Ventilation Filter System. (<b>NOTE:</b> Be aware of rapidly changing radiation levels during periods of releases.)</li> </ul>
<input type="checkbox"/> *9.	Periodically brief the Emergency Coordinator on the priorities that have been established for Emergency Teams. <b>CARS 199903669</b>

### TURNOVER

<input type="checkbox"/> 1.	Incoming OSC Coordinator briefed on OSC status and review log.
<input type="checkbox"/> 2.	Notify the Emergency Team Coordinators of the turnover.
<input type="checkbox"/> 3.	Notify the Control Room/TSC Liaison of the turnover.
<input type="checkbox"/> 4.	Emergency Coordinator informed.
<input type="checkbox"/> 5.	Turnover complete _____ Time.
<input type="checkbox"/> 6.	Turnover logged.
<input type="checkbox"/> 7.	Initiate a new checklist CA# 262.

### RECOVERY

<input type="checkbox"/> 1.	Assess the following: <ul style="list-style-type: none"> <li><input type="checkbox"/> Plant equipment status.</li> <li><input type="checkbox"/> Emergency team status. All Emergency Team work needs to be completed, turned over to Recovery or normal maintenance.</li> <li><input type="checkbox"/> Ability to resume normal operations</li> </ul>
<input type="checkbox"/> 2.	Continue Operations Support activities until directed otherwise by the Emergency Coordinator or RM.

### TERMINATION and SHUTDOWN

<input type="checkbox"/> 1.	Upon direction of the Emergency Coordinator/Administrative Coordinator, contact the Emergency Team Coordinator and inform of deactivation
<input type="checkbox"/> 2.	Ensure OSC/SA equipment and supplies are deactivated and/or stored.
<input type="checkbox"/> 3.	Ensure documents are collected and given to the Admin Coordinator.

\_\_\_\_\_  
Operations Support Coordinator Signature

***OPERATIONS SUPPORT COORDINATOR (OSC) CHECKLIST***

**OSA SUPPORT REQUEST**

Administrative (Admin.) Coordinator,

The Operations Support Area (OSA) requires the following support. This support is needed (circle one)

Immediately

At next Shift, at \_\_\_\_\_ (enter time)

**POSITION**

**NUMBER NEEDED**

Operations Support Coordinator

Electrical Emergency Team Coordinator

Mechanical Emergency Team Coordinator

Storekeeper

Mechanical Supervisor

Electrical Supervisor

I&C Supervisor

Mechanical Planner

Electrical Planner

I&C Planner

Electrician

Machinist

Welder

I & C Technician

Electrical Apprentice

Machinist Apprentice

Welder Apprentice

I&C Apprentice

Insulator

Plant Helper

Nuclear Utility Worker

Tool Room Mechanic

Operating Supervisor (Shift Supervisor concurrence obtained)

Equipment Operator (Shift Supervisor concurrence obtained)

**ADMINISTRATIVE (ADMIN) COORDINATOR CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the Admin Coordinators package. <input type="checkbox"/> Clip on the Admin Coordinators badge.
<input type="checkbox"/> 2.	Inform Emergency Coordinator and Technical Assessment Coordinator of your presence.
<input type="checkbox"/> 3.	Initiate Log Sheet.

<b>OPERATIONS CARS 199903558</b> (* Steps or items that must be frequently reviewed)	
<input type="checkbox"/> 1.	Equipment availability and operation. Check on: <ul style="list-style-type: none"> <li><input type="checkbox"/> Personal Computers (PC)</li> <li><input type="checkbox"/> Telephones</li> <li><input type="checkbox"/> Copier</li> <li><input type="checkbox"/> Fax</li> <li><input type="checkbox"/> Reader/Printer</li> <li><input type="checkbox"/> Print Plotter</li> </ul>
<input type="checkbox"/> 2.	Status TSC Coordinators and keep the EC informed periodically until all positions are filled. <ul style="list-style-type: none"> <li><input type="checkbox"/> Technical Assessment Coordinator</li> <li><input type="checkbox"/> Health Physics Coordinator</li> <li><input type="checkbox"/> Operations Support Coordinator</li> <li><input type="checkbox"/> TSC (ENS) Communicator</li> <li><input type="checkbox"/> Chemistry Coordinator</li> <li><input type="checkbox"/> Security Coordinator</li> </ul>
<input type="checkbox"/> *3.	Check status of TSC emergency responders per EIP-ZZ-00200 Attachment 2. DO NOT delete messages until all positions are filled. Distribute copies of Attachment 2 to the coordinators periodically until all positions are filled. Paging or calling using the Emergency phone directory may be required. <ul style="list-style-type: none"> <li><input type="checkbox"/> Call 64777 to obtain Audix.</li> <li><input type="checkbox"/> Enter 68400 and the # sign.</li> <li><input type="checkbox"/> Enter the password which is only the # sign.</li> <li><input type="checkbox"/> Follow the instructions to listen to the new messages and complete attachment 2.</li> </ul>
<input type="checkbox"/> 4.	Personnel Assessment Admin/Clerical Support Personnel (call in as necessary) <b>CARS 199903558</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ (name) <u>One NIS Support person should be considered.</u></li> <li><input type="checkbox"/> _____ (name) <u>One person to callout/canvass additional support.</u></li> <li><input type="checkbox"/> _____ (name) <u>One person for the RM in the EOF.</u></li> <li><input type="checkbox"/> _____ (name) <u>One person for the LSC in the EOF.</u></li> <li><input type="checkbox"/> _____ (name) <u>One person for the EC in the TSC.</u></li> <li><input type="checkbox"/> _____ (name)</li> <li><input type="checkbox"/> _____ (name)</li> <li><input type="checkbox"/> _____ (name)</li> </ul>
<input type="checkbox"/> *5.	<input type="checkbox"/> Monitor the Declaration Status Boards. <input type="checkbox"/> Ensure the Declaration Status Boards are current with the Emergency Classification announcements. <b>CARS 199903558</b>

**ADMINISTRATIVE (ADMIN) COORDINATOR CHECKLIST**

<input type="checkbox"/> *6.	Personnel that leave the Facility should check out with the Security Officer. If a release has occurred or is likely to occur a HP brief is required. <b>CARS 199701061</b>
<input type="checkbox"/> *7.	If personnel are dispatched to another facility a follow up call should be initiated in 15-20 minutes to ensure they arrive safely. <b>CARS 199901904</b>
<input type="checkbox"/> *8.	Ensure the availability of the following administrative services: <ul style="list-style-type: none"> <li><input type="checkbox"/> Typing, Word Processing</li> <li><input type="checkbox"/> Copying, Reproduction</li> <li><input type="checkbox"/> Fax</li> <li><input type="checkbox"/> Document control</li> <li><input type="checkbox"/> Drawings</li> <li><input type="checkbox"/> Message and mail Delivery</li> <li><input type="checkbox"/> Telephone Repair and Installation</li> <li><input type="checkbox"/> Radio Repair (Ameren Telecom.)</li> <li><input type="checkbox"/> _____</li> <li><input type="checkbox"/> _____</li> </ul>
<input type="checkbox"/> *9.	If operations become or have the potential to become long term, coordinate with the Logistics Support Coordinator (LSC) in the EOF to address the following items for site personnel. <ul style="list-style-type: none"> <li><input type="checkbox"/> Contact Security for number of personnel inside the protected area. <b>CARS 199903558</b></li> <li><input type="checkbox"/> Meals ordered and scheduled for the entire organization; personnel informed of meal times and locations.</li> <li><input type="checkbox"/> Sleeping space arranged for emergency personnel: personnel informed as to location.</li> <li><input type="checkbox"/> Shift schedule prepared for emergency personnel: appropriate personnel notified. (Use the sign in board and Emergency Telephone Directory to make up roster.)</li> <li><input type="checkbox"/> Janitorial/waste disposal services arrangements made.</li> </ul>
<input type="checkbox"/> *10.	Requests for additional vendor support personnel are to be coordinated with the Logistics Support Coordinator in the EOF. <p>Obtain the following information from the Logistics Support Coordinator:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Name(s) of personnel</li> <li><input type="checkbox"/> Social Security Number</li> <li><input type="checkbox"/> Work space requirements</li> <li><input type="checkbox"/> Estimated time of arrival</li> </ul> <p>Contact:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Supervisor Admin, Access Control and arrange for plant access as required.</li> <li><input type="checkbox"/> Plant helper group to set up desk etc., as required.</li> </ul>
<input type="checkbox"/> *11.	Coordinate requests for additional equipment with the Logistics Support Coordinator in the EOF. <ul style="list-style-type: none"> <li><input type="checkbox"/> Obtain the information from the requesting organization and supply it to the Logistics Support Coordinator:</li> <li><input type="checkbox"/> Explicit equipment requirements in writing</li> <li><input type="checkbox"/> Amount needed</li> <li><input type="checkbox"/> Delivery location</li> <li><input type="checkbox"/> Person on site to contact</li> </ul>
<input type="checkbox"/> *12.	Contact the Logistical Support Coordinator in the EOF and coordinate to provide Administrative Support to the entire organization.
<input type="checkbox"/> *13.	In the event of an accident or illness perform the following: <i>(Note: DO NOT release the individual's name.)</i> Call the control room (CR/TSC Liaison via OSC) and obtain the following. <b>CARS 199903558</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Nature of injury or illness.</li> <li><input type="checkbox"/> Contaminated?</li> <li><input type="checkbox"/> Transported offsite to doctor, hospital etc.</li> <li><input type="checkbox"/> If the incident may attract media attention call the JPIC Administrator or Coordinator and supply them with the information.</li> </ul>

## **ADMINISTRATIVE (ADMIN) COORDINATOR CHECKLIST**

<u><b>TURNOVER</b></u>	
<input type="checkbox"/> 1.	Brief the incoming Admin. Coordinator of the status of administrative activities and review log.
<input type="checkbox"/> 2.	Notify the Admin. and clerical staff of the turnover.
<input type="checkbox"/> 3.	Notify the Emergency Coordinator turnover complete.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new Checklist CA# 263.

<u><b>RECOVERY</b></u>	
<input type="checkbox"/> 1.	Continue Administrative activities until directed otherwise by the Emergency Coordinator or RM.

<u><b>TERMINATION and SHUTDOWN</b></u>	
<input type="checkbox"/> 1.	Upon direction of the Emergency Coordinator, begin terminating operation as follows <ul style="list-style-type: none"> <li><input type="checkbox"/> Responsibilities transferred to the Control Room.</li> <li><input type="checkbox"/> All functional equipment/supplies have been restored to startup conditions.</li> <li><input type="checkbox"/> Records collected, and forwarded to Emergency Preparedness Department.</li> <li><input type="checkbox"/> Staff relieved of TSC duties.</li> </ul>
<input type="checkbox"/> 2.	Control Room informed of TSC shutdown.
<input type="checkbox"/> 3.	TSC shut down Time _____.

\_\_\_\_\_  
Administrative Coordinator Signature

**HEALTH PHYSICS (HP) COORDINATOR CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Close front door to vestibule and back hallway door from support area. <input type="checkbox"/> Direct incoming traffic to enter through portal monitor <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the Health Physics Coordinators package. <input type="checkbox"/> Clip on the Health Physics Coordinators badge.
<input type="checkbox"/> 2.	Inform Emergency Coordinator and Admin. Coordinator of your presence.
<input type="checkbox"/> 3.	Initiate Log Sheet.
<input type="checkbox"/> 4.	Shift the HPC Plant Computer power supply to the UPS position.
<input type="checkbox"/> 5.	<b>Personnel Assessment On Shift:</b> <input type="checkbox"/> _____ (name) <b>HP Ops Shift Technician (HPOPS)</b> . Obtain Plant status and radiological concerns. Status setup of Control Room / Field Office in accordance with <b>EIP-ZZ-00102</b> , Attachment 2. HPOPS Tech to provide HP coverage for On Shift personnel as directed by Shift Supervisor. <input type="checkbox"/> _____ (name) <b>HP Tech Support Technician (HPTS)</b> . Obtain Plant, radiological release, meteorological, and Protective Action Recommendation status from the HPTS Tech performing dose assessment.
<input type="checkbox"/> 6.	<b>OSA Responders</b> NOTE: Minimum 14 R/C Support Personnel required, (one MUST be a Chemistry Tech.) <b>Assign personnel as they arrive to the TSC based on priorities, <u>not</u> as listed, using the below guidance.</b>
1. _____	<input type="checkbox"/> Contact the DAC and discuss the need to Assign R/C Support Personnel to the Rapid Assessment Tech. position if not already dispatched.
2. _____	<input type="checkbox"/> Assign 2 R/C Support Personnel to FMTs. Request Drivers from the OSC. Brief the teams and drivers in accordance with <b>EIP-ZZ-00211</b> .
3. _____	
4. _____	
5. _____	<input type="checkbox"/> Assign 2 R/C Support Personnel to the EOF for Dose Assessment Staff and FMT Communicator. Brief with FMTs if personnel are available, but do not delay dispatching.
6. _____	<input type="checkbox"/> Assign R/C Support Personnel to perform Onsite survey of plume if a release is suspected or in progress, monitor habitability of MAF, Field Office, HPAC, and Control Room as needed.
7. _____	<input type="checkbox"/> Assign R/C Support Personnel to monitor Plant Computer Screens, maintain Facility Log, and answer phones / radio. Initiate FF Logs and update HPC on any changes approx. every 15 minutes. Wind speed and wind direction should be closely monitored along with In Plant radiological conditions.
8. _____	<input type="checkbox"/> Assign R/C Support Personnel to the report directly to the OSC to support Radiological Briefing and Emergency Teams. Have R/C Techs response check portable instruments, prepare equipment and supplies, and activate the Automated Access Control Station. All prepared radiological briefings should be reviewed with HPC prior to conducting brief of Emergency Team.
9. _____	
10. _____	
11. _____	
12. _____	<input type="checkbox"/> Assign Chemistry Support Personnel to the Chemistry Coordinator (if needed).

## HEALTH PHYSICS (HP) COORDINATOR CHECKLIST

13.	_____	<input type="checkbox"/> Assign R/C Support Personnel to communicate with the NRC via the HPN line (if requested from NRC).
14.	_____	<input type="checkbox"/> Assign R/C Support Personnel to maintain Habitability of TSC per Initiation Step 8 and Operation Step 10 of HPC Checklist. Direct R/C Tech to conduct HP briefs and provide dosimetry for personnel leaving the facility that are not assigned to Emergency Teams (as needed).
<input type="checkbox"/> 7.	Contact Dose Assessment Coordinator (DAC) at EOF (ext. 64999): — Inform DAC of RAT, FMT, Dose Assessment Staff, and FMT Communicator deployment status.	
<input type="checkbox"/> 8.	Establish Radiological Habitability Controls in the TSC: <ul style="list-style-type: none"> <li><input type="checkbox"/> Portal Monitor energized and response checked.</li> <li><input type="checkbox"/> Set up a frisking station using a model 177 Rate Meter, as needed, to backup the portal monitor.</li> <li><input type="checkbox"/> AMS 3 energized and source checked.</li> <li><input type="checkbox"/> Control Dosimetry placed at HPC Desk.</li> </ul>	
<input type="checkbox"/> 9.	Notify Emergency Coordinator that HP is ready for operation and habitability in the TSC is established.	
<input type="checkbox"/> 10.	HP Group ready for responsibilities at _____ Time. (Also make log entry)..	

### OPERATIONS

*(\*) Steps are items that must be frequently reviewed.*

<input type="checkbox"/> *1.	Make Facility Announcement that <b>“All personnel leaving the TSC should check out with the Security Officer prior to leaving the facility.”</b> If a release is in progress or anticipated announce <b>“an HP brief will also be required.”</b>  <b>NOTE:</b> If a release is in progress or anticipated, ensure all personnel dispatched from the TSC are issued Electronic Dosimeters and dose is tracked. The Security Officer will verify HP briefs prior to exit.
<input type="checkbox"/> *2.	If personnel are dispatched to another facility a follow up call should be initiated in 15-20 minutes to ensure they arrive safely. <b>SOS 99-1904.</b>
<input type="checkbox"/> *3.	Review needed protective actions for On Site personnel: <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure dosimetry issued to Security personnel and Security Coordinator briefed on radiological conditions, wind speed and direction.</li> <li><input type="checkbox"/> Coordinate Assembly and Evacuation actions per <b>EIP-ZZ-00230</b> with the Security Coordinator. <b>(Assembly and Evacuation are required at a SITE and GENERAL EMERGENCY)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Determine which Care and Reception Center is preferred based on plume direction (if needed).</li> <li><input type="checkbox"/> Determine need for R/C Support Personnel to monitor Assembly and Evacuation.</li> </ul> </li> <li><input type="checkbox"/> Evaluate restricting access to areas due to release or potential release based on wind direction.</li> <li><input type="checkbox"/> Evaluate need for Respiratory Protection per <b>HTP-ZZ-01201.</b></li> <li><input type="checkbox"/> Evaluate Potassium Iodide (KI) distribution to Emergency Teams, Ops Department and Security personnel per <b>HDP-ZZ-01300.</b></li> </ul>
<input type="checkbox"/> 4.	Obtain Respirator Issue Log and Daily Dose Report from HPACA if LAN and Mainframe Computer are unavailable in the TSC.
<input type="checkbox"/> *5.	Monitor Area Radiation Monitors and appropriate Group 1 & 2 EAL's from <b>EIP-ZZ-00101</b> , Classification of Emergencies. Report any Area Radiation Monitor that is approaching or has exceeded EAL values to the Technical Assessment Coordinator and EC.
<input type="checkbox"/> *6.	Personnel requiring decontamination should be sent to HPACA. If needed, the back entrance of the TSC can be staged to receive contaminated personnel.
<input type="checkbox"/> *7.	Verify sufficient inventory of the following (additional quantities are available from HPAC or Cal Facility): <ul style="list-style-type: none"> <li><input type="checkbox"/> Electronic Dosimeters (ED)</li> </ul>

### HEALTH PHYSICS (HP) COORDINATOR CHECKLIST

	<input type="checkbox"/> Portable Instruments <input type="checkbox"/> Respirators <input type="checkbox"/> Protective Clothing (PC) <input type="checkbox"/> Consumables (rope, postings, bags, etc.)
<input type="checkbox"/> *8.	Consider preparation of Emergency Dose Extensions for selected Operations Support Area personnel in the event Plant radiological conditions change in accordance with <b>HDP-ZZ-01450</b> .
<input type="checkbox"/> *9.	Monitor Plant conditions and emergency activities to ensure personnel dose is maintained ALARA. <ul style="list-style-type: none"> <li><input type="checkbox"/> Monitor and trend Plant Area Radiation monitors, including Control Room and HPACA.</li> <li><input type="checkbox"/> Radiation levels are expected to increase when Safety Injection recirculation is lined up to Containment.</li> <li><input type="checkbox"/> Monitor the RWST radiation levels when in the recirculation mode.</li> <li><input type="checkbox"/> Notify the EC and make announcements to the TSC as Radiological Conditions change.</li> <li><input type="checkbox"/> Establish radiological postings in the Plant as time and resources allow (MUST be performed prior to Re-entry).</li> </ul>
<input type="checkbox"/> *10.	Monitor facility habitability radiological conditions and recommended appropriate protective actions: <ul style="list-style-type: none"> <li><input type="checkbox"/> Direct dose rate <math>\geq 600</math> mrem/hr, inform the EC, and commence monitoring cumulative dose.</li> <li><input type="checkbox"/> Cumulative dose of <math>\geq 4,400</math> mrem, recommend evacuation of the facility.</li> <li><input type="checkbox"/> Direct dose rate of <math>\geq 5,000</math> mrem/hr, recommend evacuation.</li> <li><input type="checkbox"/> Iodine concentrations of <math>\geq 2.4E^{-6}</math> <math>\mu\text{Ci/ml}</math>, inform the EC, and commence air sampling to ensure total intake does not exceed 25 rem CDE.</li> <li><input type="checkbox"/> Iodine concentrations of <math>\geq 1.9E^{-5}</math> <math>\mu\text{Ci/ml}</math>, recommend evacuation.</li> </ul>
<input type="checkbox"/> *11.	Periodically update the Emergency Coordinator on radiological conditions in the Plant and the status of TSC habitability.
<input type="checkbox"/> *12.	If additional HP support or supplies are needed, coordinate requests through the Admin. Coordinator or Stores person.

#### TURNOVER

<input type="checkbox"/> 1.	Brief the oncoming HP Coordinator on radiological information, and any protective actions, both recommended and implemented.
<input type="checkbox"/> 2.	Brief the oncoming HP Coordinator on the status of deployed Emergency Teams.
<input type="checkbox"/> 3.	Review HPC Checklist and Log.
<input type="checkbox"/> 4.	Contact Dose Assessment Coordinator in EOF <ul style="list-style-type: none"> <li>— Arrange for FMT turnover.</li> <li>— Obtain weather forecast.</li> <li>— Inform DAC of oncoming relief.</li> </ul>
<input type="checkbox"/> 5.	Notify the Emergency Coordinator of the Turnover
<input type="checkbox"/> 6.	Turnover complete _____ Time.
<input type="checkbox"/> 7.	Turnover logged.
<input type="checkbox"/> 8.	Initiate a new Checklist CA# 264.



## **HEALTH PHYSICS (HP) COORDINATOR CHECKLIST**

<b><u>RECOVERY</u></b>	
<input type="checkbox"/> 1.	Discuss: <ul style="list-style-type: none"> <li><input type="checkbox"/> Maintaining of personnel exposure ALARA and preventing spread of contamination.</li> <li><input type="checkbox"/> Survey and Posting Status.</li> <li><input type="checkbox"/> Need to implement <b>EIP-ZZ-00225</b>, Reentry</li> <li><input type="checkbox"/> Decontamination activities.</li> <li><input type="checkbox"/> Need for additional assistance, supplies, or equipment.</li> <li><input type="checkbox"/> Long term monitoring.</li> </ul>
<input type="checkbox"/> 2.	Continue HP operations until directed otherwise by the Emergency Coordinator or RM.

<b><u>TERMINATION and SHUTDOWN</u></b>	
<input type="checkbox"/> 1.	Upon direction of the Emergency Coordinator/Admin. Coordinator, notify R/C personnel of shutdown.
<input type="checkbox"/> 2.	Turn over any HP support to normal plant staff.
<input type="checkbox"/> 3.	Contact DAC in EOF.
<input type="checkbox"/> 4.	Ensure HP equipment is de-energized, supplies and materials are stored as required. (Note: Gamma 10 should remain on.)
<input type="checkbox"/> 5.	Ensure documents are collected and given to the Admin. Coordinator.
<input type="checkbox"/> 6.	Restore HPC Plant Computer UPS power supply to LINE position.

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HP Coordinator Signature

**HEALTH PHYSICS (HP) COORDINATOR CHECKLIST****GAMMA-10 PORTAL MONITOR RESPONSE CHECK**

NOTE: The key for the electronics cabinet is attached to the response source.

1. Verify 110 VAC power to the unit (green operational light is illuminated and no alarms are activated).
2. Set the NIMBIN power supply On-Off switch to ON and ensure the power light is illuminated.
3. Set the HV-2 NIM On-Off switch to on and ensure the Positive LED is illuminated.
4. Verify that a current calibration label is affixed to the Electronics Box and the pot settings, on the box, are the same as identified on the label.
5. Inspect the monitor for physical damage.
6. Verify no alarms are activated. If alarms are activated clear alarms before continuing.
7. Ensure green operational light is illuminated.
8. Pass the Gamma-10 Response Source through the central region of the monitor. The Contamination alarm should activate on the box, a light and buzzer, and a red light on the portal should illuminate.
9. Depress the reset button on the portal. The alarms should clear and the green operational light should remain lit.
10. If the monitor passes this check, initial and date the Pre-Operational Check Sticker affixed to the Electronics Box.

If the monitor fails the Pre-Operational Checks, tag the unit Out Of Service and notify the Health Physics Coordinator. Set up Frisking Station and have personnel entering the building and those already in the building frisk for contamination, if it is expected.

**HEALTH PHYSICS (HP) COORDINATOR CHECKLIST****AMS-3 STARTUP AND OPERATION**

This Startup Sequence augments HTP-ZZ-04137, Operation of the Eberline AMS-III. It is designed to be used in an Emergency Response Facility when an HP Operations Technician is not immediately available.

- 1) Connect AMS-3 (monitor) and air sampler to 110 VAC power.
- 2) Ensure monitor and air sampler have current calibration label.
- 3) Inspect the chart paper. Ensure an adequate supply of paper remains. If a RED line appears on the chart paper, notify Health Physics and continue the startup procedure.
- 4) Set monitor ON-OFF switch (located on back of monitor) to the ON position. Allow monitor to warm-up for 5 minutes.
- 5) Set BACKGROUND SUBTRACT switch (located on front of monitor) to the ON position.
- 6) Push in "PUSH TO SET" on bottom left side of monitor and note the alarm setpoint value of 20,000 cpm (this is the first scale mark to the right of the  $10^4$  scale value).
- 7) Set alarm setpoint to 1000 cpm by adjusting the SET knob while holding in "PUSH TO SET" button.
- 8) Remove sample holder located on the right front side of monitor by loosening the clamp and pulling out on handle.
- 9) Obtain check source from HP E-Kit Locker. Center source over sample holder opening with the recessed side of the source bracket facing the opening.
- 10) The audible alarm and the alarm light should energize (activate). If not notify Health Physics. (The startup procedure should not continue until the problem is resolved).
- 11) Press ACKNOWLEDGE button to silence alarm.
- 12) Verify count rate on chart recorder is as indicated on the response value listed on back of source bracket or a sticker on the instrument.
- 13) Remove check source. Ensure alarm light resets and count rate decreases on chart recorder.
- 14) Remove the filter in the filter holder. (Remove the filter retaining ring on the filter holder, this snaps on the end of the filter holder assembly, and may fit somewhat tight.)
- 15) Obtain a new filter from the HP Emergency Kit Locker and place it on the sample holder with the "ROUGH SIDE" of filter facing upwards.
- 16) Replace retaining ring on the sample holder and insert the sample holder into the sample chamber. Lock the filter holder into place.
- 17) Set the alarm setpoint to 20,000 cpm by adjusting the SET knob while holding in the "PUSH TO SET" button.
- 18) Place the toggle switch on the power cord to the "ON" position. The air sampler pump should start.
- 19) Ensure airflow as indicated on flowmeter is within the tolerance listed on the calibration label (read the flow at the center of the rotometer float ball.) If it is not, notify Health Physics.
- 20) Initial and date the Preoperational Check sticker.

**HEALTH PHYSICS (HP) COORDINATOR CHECKLIST****SET-UP AND OPERATION OF THE MODEL 177 RATEMETER**

1. Remove Model 177 ratemeter, frisker probe, detector cable, power cord, and check source from the E-Kit cabinet.
2. Connect detector and power cords, if not already connected, to the Model 177 ratemeter and verify the following switch settings:
  - Front Panel:
    1. On/Off switch in "ON" position.
    2. Volume adjusted to hear audible counts.
    3. Response switch in "slow" position.
    4. Range switch to "X1" scale.
  - Rear Panel:
    1. Alarm set at '5'.
    2. Subtract switch in "Off" position if meter has Subtract Switch.
3. Perform response check as follows:
  - Ensure instrument has a current calibration sticker.
  - Set the range switch to the appropriate position and place the detector on the check source bracket.
  - Verify the response is within the acceptable range as specified on the response value determination form/sticker for that check source.
  - Check the instrument alarm by adjusting the ALARM SET switch so that it is slightly less than the count rate of the source.
  - Remove the source from the detector.
  - Depress the RESET button. The alarm condition should clear.
  - If the pre-operational checks are satisfactory, complete the attached pre-operational check sticker. If either the alarm or the response check failed, notify the Health Physics Coordinator and obtain an operational ratemeter.
4. Return the check source to the E-Kit cabinet.

**TSC COMMUNICATOR (ENS) CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the ENS Communicators package. <input type="checkbox"/> Clip on the Communicators badge.
<input type="checkbox"/> 2.	Ensure the TSC has power. <input type="checkbox"/> Normal power, (i.e. lights on, power available to computers, etc.). <input type="checkbox"/> No Power. Start the TSC diesel per OOA-UB-EPG70 call for Equipment Operator if available.
<input type="checkbox"/> 3.	Shift the PC power supplies to the UPS position.
<input type="checkbox"/> 4.	Emergency Coordinator and Admin Coordinator informed of your presence.
<input type="checkbox"/> 5.	Initiate Log sheet.
<input type="checkbox"/> 6.	Activate Plant Status Boards on the Plant Computer (Cancel, type PSB, Return).
<input type="checkbox"/> 7.	Check dial tone on the ENS line.
<input type="checkbox"/> 8.	Contact Control Room Communicator.
<input type="checkbox"/> 9.	Get a brief as to the status of ENS Communications.
<input type="checkbox"/> 10.	Accept responsibility of ENS Communications per EIP-ZZ-00201, CA-#2517B, or as directed by the NRC.
<input type="checkbox"/> 11.	Discuss any additional support or supplies required with the Admin Coordinator.

<b>OPERATIONS</b>	
<i>(*) Steps are items that must be frequently reviewed.</i>	
<input type="checkbox"/> 1.	Call the NRC or accept transfer from the Control Room on the ENS line and inform them of your name and that you are communicating from the Callaway Plant Technical Support Center.
<input type="checkbox"/> *2.	Remain on the phone and gather facts as requested by the NRC from individual positions, plant computer or status boards and relay those facts back to the NRC, per EIP-ZZ-00201. (All notifications transmitted to the State and local agencies should also be given to the NRC Operations Center unless directed otherwise.)
<input type="checkbox"/> *3.	Log information requested and relayed to the NRC as deemed appropriate.
<input type="checkbox"/> *4.	Personnel that leave the Facility should check out with the Security Officer. If a release has occurred or is likely to occur a HP brief is required. CARS 199701061
<input type="checkbox"/> *5.	If personnel are dispatched to another facility a follow up call should be initiated in 15-20 minutes to ensure they arrive safely. CARS 199901904

<b>TURNOVER</b>	
<input type="checkbox"/> 1.	Brief the incoming ENS Communicator on the status of NRC requests, awaiting information and review log.
<input type="checkbox"/> 2.	Log turnover.
<input type="checkbox"/> 3.	Turnover complete _____ Time.
<input type="checkbox"/> 4.	Inform Emergency Coordinator or Technical Assessment Coordinator turnover complete.
<input type="checkbox"/> 5.	Initiate a new checklist CA# 265.

<b>RECOVERY</b>	
<input type="checkbox"/> 1.	Continue providing the NRC with requested information.

<b>TERMINATION and SHUTDOWN</b>	
<input type="checkbox"/> 1.	When directed, assist with the TSC deactivation.
<input type="checkbox"/> 2.	Ensure area is put into order and logs collected and give to the Admin Coordinator.
<input type="checkbox"/> 3.	Restore PC UPS power supply to LINE.

**CHEMISTRY COORDINATOR CHECKLIST**

Date \_\_\_\_\_ Time: \_\_\_\_\_

<b>INITIATION</b>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the Chemistry Coordinators package. <input type="checkbox"/> Clip on the Chemistry Coordinators badge.
<input type="checkbox"/> 2.	Inform Emergency Coordinator and Admin. Coordinator of arrival and ready to assume duties of Chemistry Coordinator. (Make log entry.)
<input type="checkbox"/> 3.	Initiate Log sheet.
<input type="checkbox"/> 4.	Contact on shift Chemistry Tech and ensure <ul style="list-style-type: none"> <li><input type="checkbox"/> Remind on-duty Chem tech to card in at the Field Office during accountability.</li> <li><input type="checkbox"/> RERP vehicle is operational and in the parking lot.</li> <li><input type="checkbox"/> Complete page 3, RERP Chemistry Data, with the most recent samples.</li> <li><input type="checkbox"/> Have PASS system placed in RCS recirc per <b>CTP-ZZ-08010</b>.</li> <li><input type="checkbox"/> Verify CCW is lined up to PASS and SJ panel.</li> </ul> <p><i>NOTE: Boron concentration in the RCS is used to determine Shut Down Margin. This may be one of the first samples requested by the TAC. CARS 199803260</i></p>
<input type="checkbox"/> 5.	Personnel Assessment  Rad./Chem. Chemistry technicians (2 required) <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ (name), PASS &amp; _____ (responsibilities)</li> <li><input type="checkbox"/> _____ (name), _____ (responsibilities)</li> <li><input type="checkbox"/> _____ (name), _____ (responsibilities)</li> </ul> Rad./Chem. Technicians available. (Chemistry) _____ (number).
<input type="checkbox"/> 6.	Assign an available Chemistry Supervisor to the Hot Lab as needed.
<input type="checkbox"/> 7.	Discuss plant chemistry status with Emergency Coordinator and Tech Assessment Coordinator.

<b>OPERATIONS</b>	
(*) Steps are items that must be frequently reviewed.	
<input type="checkbox"/> * 1.	Have RERP Chemistry Data Forms (page 3) ready to record RCS data as it becomes available: <ul style="list-style-type: none"> <li><input type="checkbox"/> Record RCS data on the RERP Chemistry Data form (CA#267).</li> <li><input type="checkbox"/> Have the Admin Clerk make 3 copies. Give a copy of the RERP Chemistry Data form to the:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Tech Assessment Coordinator.</li> <li><input type="checkbox"/> HP Coordinator.</li> <li><input type="checkbox"/> Reactor Engineer.</li> </ul> </li> <li><input type="checkbox"/> Make successive updates to the latest RERP Chemistry Data form and distribute.</li> </ul>
<input type="checkbox"/> *2.	Personnel that leave the Facility should check out with the Security Officer. If a release has occurred or is likely to occur a HP brief is required. <b>CARS 199701061</b>
<input type="checkbox"/> *3.	If personnel are dispatched to another facility a follow up call should be initiated in 15-20 minutes to ensure they arrive safely. <b>CARS 199901904</b>

## CHEMISTRY COORDINATOR CHECKLIST

<input type="checkbox"/> * 4.	Compare latest results of Dose Equivalent I-131 and 100/E bar total specific activity to Group 2 & 4 EAL's per <b>EIP-ZZ-00101</b> , Classification of Emergencies, and report any EAL that is being approached or exceeded to the Technical Assessment Coordinator and Emergency Coordinator.
<input type="checkbox"/> *5.	Evaluate Secondary Chemistry conditions.
<input type="checkbox"/> *6.	Monitor PASS data and provide recommendations as necessary. <ul style="list-style-type: none"> <li><input type="checkbox"/> If power is lost to PASS, see <b>CTP-ZZ-08010</b> .</li> <li><input type="checkbox"/> Initiation of SIS isolates cooling to PASS and the SJ Sink, Contact Operations to restore cooling, see <b>CTP-ZZ-08010</b>.</li> </ul>
<input type="checkbox"/> *7.	On a SI actuation, SJ sample cooling water will be lost. <ul style="list-style-type: none"> <li><input type="checkbox"/> Request the Tech to secure high temp samples.</li> <li><input type="checkbox"/> Request Ops to open EGHV69A &amp; B and EGHV70A &amp; B to restore cooling flow as soon as practical.</li> </ul> <p>CVCS letdown samples will remain representative as long as letdown flow is available.</p>
<input type="checkbox"/> * 8.	Identify additional support (e.g. personnel, off-site analysis) and coordinate requests through the Admin Coordinator.

### TURNOVER

<input type="checkbox"/> 1.	<input type="checkbox"/> Brief the incoming Chemistry Coordinator of Chemistry activities and review log.
<input type="checkbox"/> 2.	<input type="checkbox"/> Notify the Tech. Assessment Coordinator of the Turnover.
<input type="checkbox"/> 3.	Turnover complete _____ Time.
<input type="checkbox"/> 4.	Turnover logged.
<input type="checkbox"/> 5.	Initiate new checklist.

### RECOVERY

<input type="checkbox"/> 1.	Continue Chemistry activities until directed otherwise by the Emergency Coordinator or RM.
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### TERMINATION and SHUTDOWN

<input type="checkbox"/> 1.	Upon direction assist with TSC deactivation.
<input type="checkbox"/> 2.	Ensure Chemistry equipment is deactivated and/or stored.
<input type="checkbox"/> 3.	Ensure documents are collected and given to the Admin Coordinator.

\_\_\_\_\_  
Chemistry Coordinator Signature

**RERP CHEMISTRY DATA**

MOST RECENT 100/E Bar Limit: \_\_\_\_\_  $\mu\text{Ci/g}$  \_\_\_\_ / \_\_\_\_ / \_\_\_\_ date.

DATE \_\_\_\_\_

RCS SAMPLES													SECONDARY SAMPLES					
TIME	BORON (ppm)	DEI ( $\mu\text{Ci/g}$ )	I-131 ( $\mu\text{Ci/g}$ )	I-133 ( $\mu\text{Ci/g}$ )	I-135 ( $\mu\text{Ci/g}$ )	Cs-134 ( $\mu\text{Ci/g}$ )	Cs-137 ( $\mu\text{Ci/g}$ )	Te-132 ( $\mu\text{Ci/g}$ )	Ba-140 ( $\mu\text{Ci/g}$ )	Kr-87 ( $\mu\text{Ci/g}$ )	Xe-133 ( $\mu\text{Ci/g}$ )	Total Activity ( $\mu\text{Ci/g}$ )	Pri-Sec Leak Rate (gal/day)					
													A	B	C	D		

cc (each update): Technical Assessment Coordinator (Relay Information to Control Room)  
Reactor Engineer  
Health Physics Coordinator



## SECURITY COORDINATOR (SC) CHECKLIST

Date \_\_\_\_\_ Time: \_\_\_\_\_

<u>INITIATION</u>	
<input type="checkbox"/> 1.	<input type="checkbox"/> Card in on the accountability card reader. <input type="checkbox"/> Sign in on Facility Sign-in board. <input type="checkbox"/> Obtain the Security Coordinators package. <input type="checkbox"/> Clip on the Security Coordinators badge.
<input type="checkbox"/> 2.	Inform Emergency Coordinator and Admin. Coordinator of arrival.
<input type="checkbox"/> 3.	Initiated Log sheet.
<input type="checkbox"/> 4.	Personnel Assessment (Call in extra personnel as required). <input type="checkbox"/> Contact the Shift Security Supervisor and obtain number and names of security personnel available for assignment.
<input type="checkbox"/> 5.	Station security officers at the Emergency Response Facilities entrances to log personnel entrance and egress.
<input type="checkbox"/> 6.	Discuss any additional support or supplies required with the Admin Coordinator.

<u>OPERATIONS</u>	
<i>(*) Steps are items that must be frequently reviewed.</i>	
<input type="checkbox"/> *1.	Conduct normal and emergency security activities in accordance with the Security Plan. If the plan cannot be followed, obtain authorization from the EC to deviate (refer to <b>OTO-SK-00001</b> Attachment 1), in accordance with 10CFR50.54(x)(y) to deviate. Inform the ENS Communicator (1 hour NRC notification). <b>CARS 199901754</b>
<input type="checkbox"/> *2.	Assist the EC in Evacuation and Accountability per <b>EIP-ZZ-00230</b> .
<input type="checkbox"/> 3.	If accountability is declared, obtain badge numbers of personnel assigned to emergency teams that have left the TSC from the OSC, and report these badge numbers to the SSS.
<input type="checkbox"/> *4.	Personnel that leave the Facility should check out with the Security Officer. If a release has occurred or is likely to occur a HP brief is required. <b>CARS 199701061</b>
<input type="checkbox"/> *5.	If personnel are dispatched to another facility a follow up call should be initiated in 15-20 minutes to ensure they arrive safely. <b>CARS 199901904</b>
<input type="checkbox"/> *6.	Contact the HP Coordinator to determine the affected areas in the case of a release. If Security is to be pulled back from their posts, consider requirements in Step 1, Operations (above).
<input type="checkbox"/> *7.	Ensure that the Security Force has the appropriate dosimetry. Check with the HPC.
<input type="checkbox"/> *8.	Coordinate plant access control.
<input type="checkbox"/> *9.	Contact local law enforcement to coordinate traffic control (i.e. for evacuation routes).
<input type="checkbox"/> *10.	Coordinate personnel evacuation and accountability. <i>(NOTE: Accountability is required within 30 minutes of declaring accountability.)</i>
<input type="checkbox"/> *11.	Coordinate any off-site law enforcement agency involvement.

## ***SECURITY COORDINATOR (SC) CHECKLIST***

<b><u>TURNOVER</u></b>	
<input type="checkbox"/> 1.	Brief the incoming Security Coordinator of Security activities and review log.
<input type="checkbox"/> 2.	Notify the Emergency Coordinator of the turnover.
<input type="checkbox"/> 3.	Turnover complete _____ Time.
<input type="checkbox"/> 4.	Turnover logged.
<input type="checkbox"/> 5.	Initiate new checklist.

<b><u>RECOVERY</u></b>	
<input type="checkbox"/> 1.	Continue Security activities until directed otherwise by the Emergency Coordinator.

<b><u>TERMINATION and SHUTDOWN</u></b>	
<input type="checkbox"/> 1.	Upon direction assist with TSC deactivation.
<input type="checkbox"/> 2.	Ensure security equipment is deactivated and/or stored.
<input type="checkbox"/> 3.	Ensure documents are collected and given to the Admin Coordinator.

\_\_\_\_\_  
Security Coordinator Signature



**EMERGENCY TEAM COORDINATOR (ETC) CHECKLIST**

<input type="checkbox"/> *7	Periodically brief OSA Support personnel on Plant status and job priorities.
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<u><b>TURNOVER</b></u>	
<input type="checkbox"/> 1.	Incoming ETC Coordinator briefed on ETC status and review log.
<input type="checkbox"/> 2.	Notify the Operations Support Coordinator of the turnover.
<input type="checkbox"/> 3.	Notify the OSA Support personnel of the turnover.
<input type="checkbox"/> 4.	Turnover complete _____ Time.
<input type="checkbox"/> 5.	Turnover logged.
<input type="checkbox"/> 6.	Initiate a new checklist CA#0262a.

<u><b>RECOVERY</b></u>	
<input type="checkbox"/> 1.	Assess the following: <ul style="list-style-type: none"> <li><input type="checkbox"/> Emergency team status. All Emergency Team work is completed or turned over to the Recovery Organization or normal maintenance.</li> <li><input type="checkbox"/> Able to resume normal operations.</li> </ul>
<input type="checkbox"/> 2.	Continue Emergency Team activities until directed otherwise by the Operations Support Coordinator.

<u><b>TERMINATION and SHUTDOWN</b></u>	
<input type="checkbox"/> 1.	Ensure OSA equipment and supplies are deactivated and/or stored.
<input type="checkbox"/> 2.	Ensure documents are collected and given to the Admin Coordinator.

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Emergency Team Coordinator Signature

**EMERGENCY TEAM COORDINATOR (ETC) CHECKLIST**

**OSA SUPPORT REQUEST**

Administrative (Admin.) Coordinator,

The Operations Support Area (OSA) requires the following support. This support is needed (circle one)

Immediately

At next Shift, at \_\_\_\_\_ (enter time)

**POSITION**

**NUMBER NEEDED**

Operations Support Coordinator

Electrical Emergency Team Coordinator

Mechanical Emergency Team Coordinator

Storekeeper

Mechanical Supervisor

Electrical Supervisor

I&C Supervisor

Mechanical Planner

Electrical Planner

I&C Planner

Electrician

Machinist

Welder

I&C Technician

Electrical Apprentice

Machinist Apprentice

Welder Apprentice

I&C Apprentice

Insulator

Plant Helper

Nuclear Utility Worker

Tool Room Mechanic

Operating Supervisor (Shift Supervisor concurrence obtained)

Equipment Operator (Shift Supervisor concurrence obtained)