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DAEC EMERGENCY PLANNING DEPARTMENT PROCEDURE TRANSMITTAL ACKNOWLEDGEMENT MEMO (TAM-86)

To: NRC-NRR Document Control Desk
US NRC
Washington DC 20555

Re: Entire EPIP Document (Copy 28)

PSM Title: n/a

Distribution Date: 10 / 08 / 2003
Effective Date of Change: 10 / 13 / 2003
Return by: 10 / 22 / 2003

Please perform the following to your assigned manual. If you have any questions regarding this TAM please contact Don A. Johnson at 319-851-7872.

	REMOVE Rev. 142	INSERT Rev. 143
IP Table of Contents Revision		
EPIP 1.1 (PWR: 22790)	Rev. 20	Rev. 21
EPIP 1.2 (PWR: 21415)	Rev. 28	Rev. 29
EPIP 1.4 (PWR: 22875)	Rev. 4	Rev. 5
EPIP 1.5 (PWR: 22876)	Rev. 4	Rev. 5

PERFORMED BY:

Print Name	Sign Name	Date
_____	_____	_____

Please return to: K. Dunlap
PSC/Emergency Planning
3313 DAEC Rd.
Palo, IA 52324

AD45

<i>To be completed by DAEC EP personnel only:</i>	
Date TAM returned:	_____
EPTools updated:	_____



DAEC EMERGENCY PLANNING DEPARTMENT PROCEDURE TRANSMITTAL ACKNOWLEDGEMENT MEMO (TAM-86)

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EPIP 3.3 (PWR: 22885)	Rev. 19	Rev. 20
EPIP 5.2 (PWR: 22877)	Rev. 9	Rev. 10

PERFORMED BY:

Print Name

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Date

Please return to: K. Dunlap
PSC/Emergency Planning
3313 DAEC Rd.
Palo, IA 52324

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**Usage Level
REFERENCE**

Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared and Verified by: <u>Don A. Jones</u>	Date: <u>9/27/03</u>
Validated by: <u>Cassidy J. Titus</u> Emergency Planning Staff	Date: <u>10/8/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Carren Sullivan</u> Manager, Emergency Planning	Date: <u>10/6/03</u>

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1.0 PURPOSE

- (1) Provides guidance to the Operations Shift Manager (OSM), Emergency Coordinator (EC), or Emergency Response and Recovery Director (ER&RD), as applicable, when determining a need to declare or retract an emergency event at DAEC.

2.0 DEFINITIONS

- (1) Emergency Action Level (EAL)
 - (a) A pre-determined, site-specific, observable threshold for a plant Initiating Condition that places the plant in a given Emergency Classification Level. An EAL can be: an instrument reading, an equipment status indicator, a measurable parameter (on-site or off-site), a discrete observable event, results of analyses, entry into specific emergency operating procedures, or another phenomenon which, if it occurs, indicates entry into a particular Emergency Classification Level.
- (2) EAL Technical Basis Document
 - (a) This document was developed to :
 - (i) Provide clear documentation of how NEI generic guidance was applied in the development of DAEC upgraded EALs.
 - (ii) Provide justification of any exceptions or additions to NEI generic guidance as it is applied to DAEC.
 - (iii) Facilitate the regulatory approval of the upgraded EALs that is required under 10CFR50 Appendix E.
- (3) Emergency Classification Level
 - (a) These are taken from 10CFR50 Appendix E. They are, in escalating order :
 - (i) (Notification of) Unusual Event (UE): Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant/ISFSI. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.

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(ii) Alert: Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant/ISFSI. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

(iii) Site Area Emergency (SAE): Events are in progress or have occurred which involve an actual or likely major failure of plant functions needed for the protection of the public. Any release is not expected to exceed EPA Protective Action Guideline exposure levels except near the site boundary.

(iv) General Emergency (GE): Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting, with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Guideline exposure levels offsite for more than the immediate site area.

(4) ISFSI

(a) Independent Spent Fuel Storage Installation facility and associated cask loading and storage activities.

(5) Retraction

(a) The recanting of an Emergency Action Level that was declared due to an indeterminate condition.

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3.0 INSTRUCTIONS

3.1 OVERVIEW

- (1) The Control Room, TSC, and EOF staff shall evaluate plant/ISFSI conditions to determine whether any EAL Threshold Values have been met. The OSM/EC/ER&RD should declare the appropriate EAL within 15 minutes once indications are available that the Threshold Value for an EAL has been exceeded.

NOTE

For the purpose of making EAL determinations it is acceptable to use SPDS or ERDS information. It is always prudent to verify the SPDS or ERDS information with redundant instrumentation, when it is available.

- (2) The OSM/EC/ER&RD shall ensure requisite notifications are made within the 15-minute requirement, per EPIP 1.2 'Notification'.
- (3) Plant assembly and site evacuation decisions shall be made in accordance with EPIP 1.3, 'Plant Assembly and Site Evacuation'.
- (4) The EC/OSM/ER&RD shall review and approve the emergency classification to determine if events/conditions have changed that may warrant upgrade, declassification, termination or retraction.
- (5) The EC/OSM/ER&RD shall ensure activation of the Emergency Response Organization is underway/completed, as required.
- (6) If an EAL has been declared due to an indeterminate condition and subsequent investigation/evaluation discovers the condition did not exist, the event may be retracted. Notifications shall be made per EPIP 1.2 'Notification'.

3.2 EVENT CLASSIFICATION

- (1) Emergency conditions are classified in an ascending order of severity as follows:
- (a) NOTIFICATION OF UNUSUAL EVENT (Recognition Category AU, FU, HU, SU, EU)

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- (b) ALERT (Recognition Category AA, FA, HA, SA)
 - (c) SITE AREA EMERGENCY (Recognition Category AS, FS, HS, SS)
 - (d) GENERAL EMERGENCY (Recognition Category AG, FG, HG, SG)
- (2) When a suspected emergency condition occurs, the EC/OSM/ER&RD and their associated staff, shall make the initial analysis and determination of the classification, referring to the appropriate EAL tables in Appendix 1 and the EAL Basis Document. The appropriate EAL should be declared within 15 minutes once indications are available that the Threshold Value for an EAL has been exceeded. Appendix 1 of the EPIP's contains the five tables, EAL-01 through EAL-05, covering Emergency Action Levels.
 - (3) To determine an EAL: Categorize the general type of event, referring to the EAL tables, verify determinations by referring to the EAL Technical Basis Document.
 - (4) If the OSM has been fulfilling the responsibilities of the EC, upon declaring the emergency classification, the event, the time declared and the action(s) taken shall be logged in the Shift Manager's Log.
 - (5) Other events not specifically included in this procedure which may be based on plant/ISFSI prognosis, weather, or other external events, as well as events that have a high likelihood of occurrence may be classified as a NOTIFICATION OF UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY or GENERAL EMERGENCY at the discretion of the EC/OSM/ER&RD. The primary consideration for classification of these events shall be to protect the health and safety of site personnel and the public.
 - (6) The highest emergency classification for which an Emergency Action Level (EAL) is CURRENTLY met should be declared.
 - (a) If an action level for a higher classification was exceeded, but the situation has been resolved prior to offsite reporting, the higher classification level should be REPORTED to the offsite agencies and the NRC, but SHOULD NOT be declared.
 - (b) The notification must indicate the CURRENT classification, the period of time that the higher classification existed and the mitigating conditions that caused the reduction in the emergency classification.
 - (7) Reclassification shall be reviewed and approved by the EC/OSM/ER&RD.
 - (a) Reclassification should be based upon the guidance provided in the EAL Tables and Reference 1.

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- (b) The EC/OSM should consult with the following personnel, if available, during such evaluations:
 - (i) Site Radiation Protection Coordinator (SRPC)
 - (ii) TSC Operations Supervisor
 - (iii) Tech and Engineering Supervisor
 - (iv) Emergency Response and Recovery Director
- (c) The ER&RD should consult with the following personnel:
 - (i) Emergency Coordinator
 - (ii) EOF OPS Liaison
- (d) The EC/OSM shall ensure that offsite agencies are notified of the reclassification in accordance with EPIP 1.2, 'Notification'. If the Emergency Operations Facility (EOF) has been declared operational, the ER&RD shall assume this responsibility, unless otherwise advised.
- (e) If the OSM is fulfilling the responsibilities of the EC, reclassification of an event shall be documented in the Operations Shift Manager's Log or the TSC Supervisor's Log as appropriate.
- (8) As plant/ISFSI conditions change, the EC/OSM/ER&RD shall ensure that plant/ISFSI status is monitored and the EAL Tables and EAL Basis Document are constantly consulted in order to adjust the emergency classification, as appropriate. The appropriate EAL should be declared within 15 minutes once indications are available that the Threshold Value for an EAL has been exceeded.

3.3 CRITERIA FOR EMERGENCY CLASSIFICATION CHANGES

- (1) As plant/ISFSI conditions change, consider :
 - (a) The probability that plant/ISFSI conditions will continue to improve.
 - (b) The probability that plant/ISFSI conditions might worsen, thereby necessitating upgrading the emergency classification once the emergency has been downgraded.
 - (c) The need to staff all or some of the emergency response facilities.

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- (d) Evaluating existing conditions with respect to the criteria established for each emergency classification per the EAL Tables.
 - (e) The control or termination of non-routine releases of radioactive material to the environment.
 - (f) The control or cessation of any fire, flood, earthquake, or similar emergency conditions.
 - (g) The specified corrective action has been taken, or the plant has been placed in the appropriate operating mode.
 - (h) All required notifications are completed.
 - (i) The TSC technical staff has evaluated the plant/ISFSI status with respect to the Technical Specifications/applicable 10CFR 72 Certificate of Compliance requirements and recommends downgrading the emergency classification.
- (2) An emergency condition can be considered resolved, and a Recovery Organization established, if necessary, when the following guidelines have been met or addressed:
- (a) Existing conditions no longer meet the emergency classification criteria and it appears unlikely that conditions will deteriorate further.
 - (b) No surveillance relative to offsite protective actions is needed, except for the control of foodstuffs, water, and offsite contamination, or environmental assessment activities.
 - (c) Radiation levels in affected in-plant/ISFSI areas are stable or decreasing to acceptable levels.
 - (d) Releases of radioactive material to the environment are under control or have ceased.
 - (e) No Emergency Operating Procedure (EOP) entry condition exists.
 - (f) The reactor is in a stable and safe shutdown condition, and long-term core cooling is available as required.
 - (g) The control or cessation of any fire, flood, earthquake, or similar emergency conditions.
 - (h) All EAL notifications have been completed.

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- (i) Offsite conditions will not limit access of personnel and support resources.
- (j) Discussions have been held with the Nuclear Regulatory Commission (NRC), State and local organizations with FEMA input as necessary, and agreement has been reached to terminate the emergency.
- (k) The TSC technical staff has evaluated the plant/ISFSI status with respect to the Technical Specifications/applicable 10CFR 72 Certificate of Compliance requirements and concurs with the termination of the emergency.

4.0 RECORDS

All logs, forms, and records generated must be forwarded to the EP Department and retained in accordance with QA Record Retention requirements. Authorization for disposal shall be obtained from the NRC.

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) DAEC EAL Technical Basis Document
- (3) DAEC Technical Specifications
- (4) Emergency Operating Procedures (EOPs)
- (5) Updated Final Safety Analysis Report
- (6) EPIP 1.2, 'Notifications'
- (7) 10CFR50 Appendix E
- (8) 10CFR 72.32(c) and (d)
- (9) NEI Methodology for Development of Emergency Action Levels
NUMARC/NESP-007 NEI 99-01 Revision 4, May 1999/September 2002
- (10) NEI Methodology for Development of Emergency Action Levels
NUMARC/NESP-007 NEI 97-03 August 1997

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6.0 EPIP FORMS

<u>TABLE</u>	<u>FORM No.</u>
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Fission Barrier Table	EAL-02
Hazards and Other Conditions Affecting Plant Safety	EAL-03
System Malfunction	EAL-04
Independent Spent Fuel Storage Installation (ISFSI)	EAL-05

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. Johnson</u>	Date: <u>9/27/03</u>
Reviewed by: <u>Quail Hill</u> Independent Reviewer	Date: <u>10/3/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Kevin Collins</u> Manager, Emergency Planning	Date: <u>10/6/03</u>
Approved by: <u>N/R</u> Manager, Operations	Date:

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1.0 PURPOSE

- (1) This procedure provides instructions for initial and follow-up notifications of the Emergency Response Organization (ERO), Benton and Linn Counties, the Iowa Emergency Management Division, and the NRC in response to an emergency classification declared at the DAEC.

2.0 DEFINITIONS

(1) Emergency Classification

- (a) Four classes of Emergency Action Levels designed to provide early and prompt notification of events which could lead to more serious consequences given operator error or equipment failure or which might be indicative of more serious conditions which are not yet fully realized.

- (i) The four classes are; Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

3.0 INSTRUCTIONS

3.1 OVERVIEW

- (1) The Operations Shift Manager/Operations Shift Supervisor (OSM/OSS), Emergency Coordinator (EC), and Emergency Response & Recovery Director (ER&RD) shall ensure that initial and follow-up notifications are made to the ERO, counties, State, and NRC in accordance with this procedure.
- (2) The Emergency Telephone Book (ETB) contains telephone numbers to support required notifications.

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- (3) Benton and Linn Counties, and the Iowa Emergency Management Division, shall be notified within 15 minutes after the declaration of an emergency classification, as required by 10CFR50 Appendix E (Reference 1).
- (4) The NRC Emergency Operations Center (EOC) shall be notified as soon as possible after notifying Benton and Linn Counties and the Iowa Emergency Management Division, and not later than one hour after the declaration of an emergency classification as required by 10CFR50.72 (Reference 2).
- (5) Continuous communications with the NRC shall be established for all events classified as an ALERT or greater when requested by the NRC. This will be supported by the TSC ENS Communicator.
- (6) Completion of all notifications will be documented on the notification forms. Completed forms will be forwarded to the OSM/EC/ER&RD as appropriate for review. The Manager, Emergency Planning, shall receive a copy of the notification form. {IC001}

3.2 INITIALLY NOTIFYING THE ERO, BENTON/LINN/STATE EOC'S, AND NRC

NOTE
Reference EPIP Form NOTE-07 for notification flowpath.

- (1) **STA**
 - (a) Upon declaration of the event, complete Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM', and submit this form to the OSM/OSS for review and approval.
- (2) **OSM/OSS**
 - (a) Direct the Security Lt., (the STA performs this function during a security related emergency or if the Security Lt. is unable to get to the Control Room in time for this notification to be made within 15 minutes of the declaration), to make initial and follow-up notifications to Benton County, Linn County, and the Iowa Emergency Management Division per section 3.3.

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(3) STA

(a) Complete the following forms and submit them to the OSM/OSS for review and approval:

1. Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT.'
2. Form NOTE-03, 'EVENT NOTIFICATION WORKSHEET.'
3. Form NOTE-04, 'PLANT ASSEMBLY NOTIFICATION FORM.'

4. Form NOTE-01, 'ERO NOTIFICATION - PHONE SYSTEM CALLOUT', if applicable.

(4) OSM/OSS

(a) Direct a member of the Control Room crew to perform the plant page announcement per Form NOTE-04, 'PLANT ASSEMBLY NOTIFICATION FORM'. Ensure to turn on the outside speakers.

(b) Direct the SAS Operator, (the STA performs this function during a security related emergency), to conduct pager notifications per Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT', and as necessary Form NOTE-01 'ERO NOTIFICATION - PHONE SYSTEM CALLOUT.' Return the form(s) to the OSM/OSS when completed.

(c) As soon as possible, but within 1 hour after the declaration, direct the TSC ENS Communicator, (the backups for this function are the STA and Security Lt.), to make the initial and follow-up notifications to the NRC Emergency Operations Center per section 3.4.

(5) ER&RD

(a) Inform Corporate Management of the situation.

(b) If activation of the EOF is desired or required, initiate notification of the EOF staff and direct the JPIC Manager to initiate notification of the JPIC staff.

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(6) **Support Services Coordinator**

- (a) For an ALERT or greater, contact the Corporate Security Manager and instruct him/her to direct the Tower 1st Floor Security guard to make the appropriate (drill or emergency) announcement on the building page system.

(7) **ERO Members**

- (a) When notified of an ALERT or greater, report to assigned facility, as directed, and complete any assigned notifications in accordance with the ETB as applicable.

3.3 NOTIFYING BENTON AND LINN COUNTIES AND THE IOWA EMERGENCY MANAGEMENT DIVISION OF EMERGENCY CLASSIFICATIONS

- (1) Using the dedicated microwave line, select line 2 and dial "9999" (All-Call) to contact Benton and Linn Counties, and the Iowa Emergency Management Division. Upon verification that all three parties are on the line, dial "####" to cease further ringing on the line. Provide the information as read from Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM'.

NOTE

If the microwave line is unable to contact either Benton County, Linn County, or State EMD then use the commercial telephone to contact them. A list of the numbers is available in the ETB and a copy is near the phone. The 15-minute requirement begins when the event is declared and ends when the FIRST EOC Representative answers the phone. Priority shall be: (1) notify all respondents via microwave line; (2) place a commercial telephone call to those respondents who, because of equipment/line difficulties, cannot answer the microwave line; (3) fax page 1 of NOTE-05 to ensure notifications are properly completed and understood.

- (2) Fax page 1 of 2 of the completed Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM', to Benton County, Linn County, and the Iowa Emergency Management Division to confirm the notification. Push button "01" for working hour distribution and button "02" for off hour and weekend distribution.

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- (a) If the fax is not operable, confirmation will be made via microwave, commercial phone, or point-to-point radio.
- (b) Initiate any follow-up notifications to the counties and State for changes to PARs and EALs.

3.4 NOTIFYING THE NRC OF EMERGENCY CLASSIFICATIONS

- (1) Notify the NRC Emergency Operations Center on the FTS-2001 Network ENS line using Form NOTE-03, 'Event Notification Worksheet' as a guide if desired. The NRC EOC should be notified as soon as possible but no later than one hour after event classification.

3.5 FOLLOW UP NOTIFICATION FROM THE TSC

- (1) EC
 - (a) Upon activating the TSC, assume responsibility from the OSM/OSS for directing follow up notifications for changes to PARs and EALs to the ERO, Benton and Linn County Emergency Management, the Iowa Emergency Management Division and the NRC until the ER&RD assumes this responsibility in the EOF.
- (2) Periodic status updates shall be provided to the State and counties by the Admin Supervisor until the EOF has assumed follow-up notifications.
- (3) TSC Operations Liaison
 - (a) For changes to the declared emergency classification, PARs, and/or cancellation of the emergency, complete Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM', and submit it to the EC for approval.

- 1. Ensure to obtain SRPC concurrence on PARs.

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(4) **EC**

- (a) Review and approve Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM'.
- (b) Direct the Admin Supervisor to notify Benton County, Linn County, and the Iowa Emergency Management Division per section 3.3 step (1).
- (c) Direct the Admin Supervisor to send the backup fax to Benton County, Linn County, and the Iowa Emergency Management Division per section 3.3 step (2).

(5) **TSC Operations Liaison**

- (a) Complete the following forms and submit them to the EC for review and approval:
 1. Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT.'
 2. Form NOTE-03, 'EVENT NOTIFICATION WORKSHEET.'
 3. Form NOTE-06, 'PLANT PAGE FOR EMERGENCY CLASSIFICATION CHANGES'.

(6) **EC**

- (a) Direct the Security and Support Supervisor to conduct pager notifications per Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT'.
- (b) Direct the TSC Operations Liaison to perform the plant page announcement per Form NOTE-06, 'PLANT PAGE FOR EMERGENCY CLASSIFICATION CHANGES'.
- (c) As soon as possible, but within 1 hour after the change, direct the TSC ENS Communicator to notify the NRC Emergency Operations Center per section 3.4

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3.6 FOLLOW UP NOTIFICATION FROM THE EOF

(1) **ER&RD**

- (a) Upon activating the EOF, assume responsibility from the EC for directing follow up notifications for changes to PARs and EALs to the ERO, counties, State, and the NRC until no longer necessary.

(2) **EOF Ops Liaison**

- (a) For changes to the declared emergency classification, PARs and/or cancellation of the emergency, complete the Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM', and submit it to the ER&RD for review and approval.

(i) Ensure to obtain Rad & EOF Manager input for PARs.

- (b) Periodic updates shall be provided to the State and counties by the Rad & EOF Manager.

(3) **EOF Ops Liaison**

- (a) Complete Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT', and submit it to the ER&RD for approval.

(4) **Rad & EOF Manager**

- (a) Using the Admin Hotline to contact Benton and Linn Counties, and the Iowa Emergency Management Division, provide the information as read from Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM'

(5) **Support Services Coordinator & EOF Messenger**

- (a) Conduct the pager notifications per the completed Form NOTE-02, 'ERO NOTIFICATION - ALPHANUMERIC PAGING SYSTEM CALLOUT' and fax page 1 of the completed Form NOTE-05, 'EMERGENCY ACTION LEVEL NOTIFICATION FORM', to Benton and Linn Counties and the Iowa Emergency Management Division to confirm the notification.

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1. If the fax is not operable, confirmation will be made via microwave, commercial phone, or point-to-point radio.

(6) **EOF HPN Communicator**

- (a) Using Form NOTE-03, 'EVENT NOTIFICATION WORKSHEET' as a guide if desired, notify the NRC Operations Center on the FTS-2001 Network ENS and HPN line in the EOF. The TSC-ENS Communicator will maintain continuous communication on the ENS line with the NRC providing the needed plant technical information as requested by the NRC Emergency Operations Center.

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4.0 RECORDS

- (1) All logs, forms, and records generated must be maintained in accordance with EPDM 1007.

5.0 REFERENCES

- (1) 10CFR50 Appendix E IV. D
- (2) 10CFR50.72, "Immediate Notification Requirements"
- (3) {IC001}, Inspection Report 88-04
- (4) DAEC Emergency Plan
- (5) Emergency Telephone Book (ETB)
- (6) EPDM 1007

6.0 ATTACHMENTS

- (1) Attachment 1, Notification Forms

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ATTACHMENT 1

NOTIFICATION FORMS

Notification Form	Form No.
ERO Notification - Phone System Callout	NOTE-01
ERO Notification - Alphanumeric Paging System Callout	NOTE-02
Event Notification Worksheet	NOTE-03
Plant Assembly Notification	NOTE-04
Emergency Action Level Notification	NOTE-05
Plant Page for Emergency Classification Changes	NOTE-06
Basic Notification Flowpath	NOTE-07

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. Johnson</u>	Date: <u>10/3/03</u>
Reviewed by: <u>Russell H. Hines</u> Independent Reviewer	Date: <u>10/3/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Russell S. Sullivan</u> Manager, Emergency Planning	Date: <u>10/6/03</u>

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1.0 PURPOSE

- (1) This procedure delineates the responsibilities, actions, and interfaces required by Nuclear Management Company (NMC) and Asset Owner personnel who staff the Joint Public Information Center (JPIC) during an emergency at the Duane Arnold Energy Center (DAEC). The basis for this procedure is documented in NUREG 0654, Planning Standard "G", (Reference 1), 10 CFR 50 (Reference 2), and the DAEC Plan, Sections G and H (Reference 3).
- (2) The Joint Public Information Center is created to:
 - (a) Coordinate the development and dissemination of clear, accurate, and timely information to the news media; and,
 - (b) Establish and operate rumor control in a coordinated and timely manner.

2.0 DEFINITIONS

- (1) None.

3.0 INSTRUCTIONS

3.1 ACTIVATION AND OPERATION OF THE JPIC

- (1) The JPIC Manager shall determine the extent to which the JPIC will be staffed. JPIC positions are indicated on Attachment 1.
- (2) Notification of persons needed to staff the JPIC will be accomplished in accordance with EPIP 1.2, "Notification" (Reference 4).
- (3) All persons reporting to the JPIC, Public Information Officers, and News Media representatives, will be processed into the facility in accordance with Section 3.2. Attachment 3 will be distributed to the media and visitors as they are processed into the JPIC.
- (4) The Logistics Coordinator shall supervise activities needed to prepare the JPIC for operation. Attachment 2 may be used for the physical set-up of the facility.

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- (5) Persons staffing JPIC positions shall participate in the activation and operation of the JPIC utilizing guidance provided in checklists from Appendix 1 of the EPIP manual.
- (6) The JPIC Manager shall advise the ER&RD when the JPIC is operational and the facility is prepared to receive news media representatives.
- (7) In the event that the JPIC is activated and the EOF is not activated, the Technical Liaison should contact the TSC Communicator in the TSC to ensure timely and accurate information is being received and released from the JPIC.
- (8) If additional resources/personnel are needed contact the Support Services Coordinator in the EOF.

3.2 SECURITY

NOTE

Whenever the title Asset Owner "Corporate Security Manager" is used in this procedure, it shall also imply his/her designee.

- (1) The Support Services Coordinator will contact the Asset Owner Corporate Security Manager for security guards.
- (2) The Asset Owner Corporate Security Manager will conduct the following:
 - (a) When guards arrive ensure they are assigned to security posts;
 - (b) Instruct them on their responsibilities, as needed;
 - (c) Ensure a walkdown of the 6th and 15th floor is conducted following the emergency announcement to verify all visitors have vacated;
 - (d) Use security post checklist from Appendix 1 of the EPIP Manual.

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NOTE

Building wide page announcements are made during normal working hours (8 AM - 5 PM, Monday through Friday). The "Drill Announcement Message" is used for drill purposes only, and the "Emergency Announcement Message" is used for emergency purposes.

- (3) The guard stationed on the 1st floor should be informed of the following:
- (a) During normal business hours access control will be regulated at the elevator lobbies of the 1st, 6th and 15th floors.
 - (b) During non-working hours NMC and Asset Owner personnel who present identification shall be permitted to access Asset Owner portions of the building. Identification, such as a Driver's License, may be compared to the Emergency Telephone Book or a list of NMC and Asset Owner personnel permitted access to the EOF or JPIC.
 - (c) Contract personnel with appropriate identification and whose names are listed in the Emergency Telephone Book or on any approved access list, shall be permitted access to the EOF or JPIC.
 - (d) Personnel who present appropriate identification as a Linn or Benton County Emergency Management member, representative from the State of Iowa, Emergency Management Division or Department of Health; employees of the Nuclear Regulatory Commission (NRC); or Federal Emergency Management Agency (FEMA) shall be permitted access to the 6th or 15th floors, as requested.
 - (e) Security personnel will hold news media representatives on the 1st floor if the JPIC has not been activated. The JPIC Manager will notify Security when the media may be directed to the sixth floor.
 - (f) Following activation of the JPIC news media are to be permitted access to the 6th floor, only.
- (4) Security access personnel on the 6th floor will process all media desiring access to the JPIC.

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- (5) Security access will notify the JPIC Manager when FEMA and/or NRC PIOs arrive at the JPIC.
- (6) If access is desired by any other individuals to the JPIC or EOF, the JPIC Manager should be contacted for JPIC access and the ER&RD for EOF access.
- (7) Upon reporting to their assigned security posts, Security Guards should:
 - (a) Conduct a radio check with the other security posts;
 - (b) Initiate (or update) the Security Log by recording the following information:
 - (i) Date and time of staffing (or relieving) the assigned post;
 - (ii) Name of the Security Guard and Access Control staff assigned;
 - (iii) Results of radio checks;
 - (iv) Actions taken to correct any deficiencies.
 - (c) Provide assistance, as required, to the Security Access Control staff to prevent unauthorized access.
- (8) Upon reporting to their assigned locations, Security Access Control personnel should:
 - (a) Provide security badges to personnel assigned duties at the EOF, JPIC and Corporate Management who desire access to the JPIC or EOF;
 - (b) Establish Access Control and initiate recording of any personnel who exit and enter those areas;
 - (c) Make entries or ensure that they are made for Support Services staff who may be providing services or delivering equipment for emergency use;
 - (i) Prior to entering the facility, the individual's name and time should be recorded in the log.
 - (ii) When exiting, the time and location where the individual can be reached should be recorded if appropriate.
 - (iii) Subsequent re-entries and exits should be recorded as above.

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- (9) The Asset Owner Corporate Security Manager representative and Support Services Coordinator shall be advised of access control problems;
- (10) When individuals without access to the JPIC, the EOF or to Corporate Management offices insist on gaining access, the Asset Owner Corporate Security Manager shall be advised.
- (11) Circumstances associated with access control problems experienced should be recorded in the Security Log.
- (12) Badges shall be issued to all personnel granted access to the JPIC and EOF.
- (13) Badges, depicted on Attachment 4, "Access Badge Example", should be color coded, as indicated.
- (14) State and County representatives with assigned functions in the EOF or JPIC will be requested to complete Attachment 5, "Registration Form" or an equivalent prior to being issued a badge.
- (15) Once issued, badges should be retained by the recipient even though he or she may exit the area (except those issued to news media [orange]).
- (16) Badges issued to the new media should be collected upon exit of the individual and, if he or she returns, reissued.

3.3 ACTIVATION OF JPIC BACKUP FACILITY

- (1) The ER&RD will notify the JPIC Manager if a decision is made to evacuate Subarea 23 of the Cedar Rapids Metropolitan area.
- (2) If the JPIC has already been established at the Alliant Energy Tower, it will be necessary to relocate key JPIC spokespersons, media representatives, and State, County and Federal spokesperson to the JPIC Backup Facility at the Alliant Energy Hangar at the Eastern Iowa Airport as shown on Attachment 6. The Public Rumor Control Group and the News Media Rumor Control Group will remain at the Alliant Energy Tower.
- (3) The JPIC Manager shall issue an information release informing the news media and the public that conditions require the relocation of the JPIC and that news reports will be temporarily interrupted until the JPIC Backup Facility becomes operational.

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- (4) The JPIC Manager will notify the Support Services Coordinator in the EOF that the JPIC Backup Facility is being activated and request a security guard and a Security Access Clerk be assigned to that location.
- (5) The Logistics Coordinator will arrange for necessary vehicles to transport staff, audiovisual equipment, and other necessary supplies to the Alliant Energy Hangar.
- (6) The Logistics Coordinator should ensure telephone and FAX communications from the Alliant Energy Tower to the JPIC Backup Facility are operational.
- (7) Once the JPIC Backup Facility is operational, the JPIC Manager should ensure an information release is made, informing the news media and public that the facility is operational.
- (8) The JPIC Manager will notify the EOF when the JPIC Backup Facility is operational.

3.4 RUMOR CONTROL ACTIVITIES

- (1) Rumor Control staff will perform their function as outlined in checklists contained in Appendix 1 of the EPIP manual.
- (2) Rumors or misinformation and trends in information identified by News Media or Public Rumor Control will be relayed to the Assistant JPIC Manager.
- (3) The Assistant JPIC Manager will ensure that rumors or misinformation are addressed in a timely manner in either a news conference, a news briefing, or a telephone call.
- (4) As appropriate, rumors or misinformation regarding State or County activities will be referred to State or County PIOs located in the JPIC in accordance with the Linn and Benton County Radiological Emergency Response Plans (References 5 & 6).

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3.5 PREPARATION AND APPROVAL OF WRITTEN INFORMATION RELEASES

NOTE

Prescribed news release templates are available on computer disk and hard drive in the JPIC storage area, 6th Floor and Emergency Planning at the DAEC, as well as the Site Communication Department at the DAEC.

- (1) The JPIC Manager shall direct the Technical Liaison and Assistant JPIC Manager to prepare written information releases for the news media and the public as needed.
- (2) As appropriate to the emergency situation, written information releases should include:
 - (a) The type, severity, and extent of the emergency situation at DAEC;
 - (b) The plant's current status (i.e., stable, improving, or deteriorating).
 - (c) Any changes in the emergency classification, including cancellation of the emergency situation;
 - (d) A description of the latest developments regarding the emergency situation
 - (e) The prognosis for, or magnitude of, any radiological releases from the plant, and the associated meteorological conditions;
 - (f) A description of those actions taken or currently being undertaken to mitigate the emergency situation and place the plant in a safe, stable condition.
- (3) The Assistant JPIC Manager shall also ensure the following items are included:
 - (a) Times of events and declarations;
 - (b) Points of contact and/or telephone numbers for the news media and the general public;

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- (c) Refer persons to the DAEC Emergency Action Plan in US WEST DEX and McLeod USA telephone books for additional emergency information.
- (4) The JPIC Manager shall direct written information releases to the DAEC Spokesperson for review and approval.
- (5) The DAEC Spokesperson shall review and approve the release with respect to its contents, the events that have and/or are taking place at DAEC, the actions initiated by the DAEC in response to the emergency situation, and any related decisions by management.
- (6) Any questions or concerns regarding the contents of the information release shall be resolved with the JPIC Manager and the Technical Liaison.
- (7) After review and approval, the DAEC Spokesperson shall return the information release to the JPIC Manager for final processing.
- (8) At a minimum, written information releases should be prepared following activation of the JPIC and cancellation of the emergency situation (i.e., resumption of normal plant operations); however, written information releases should be prepared as events related to the emergency situation dictate to ensure that the news media and the general public are kept fully informed, and to preclude the dissemination of misinformation. Such information releases should also be prepared when a change in emergency classification occurs.

3.6 DISTRIBUTION OF WRITTEN INFORMATION RELEASES

- (9) To the extent possible, information releases should be reviewed with Federal, State, and County PIOs or agencies to ensure consistency, accuracy, and timeliness in the release of information by all parties responding to the emergency situation.
- (10) The Logistics Support staff shall ensure that copies of the approved information release are made available to the JPIC staff, the EOF, and the News Media Work Area.
- (11) For each information release prepared, the Logistics Support staff shall ensure that originals of the draft and final approved information releases are retained and appropriately filed with other JPIC records.

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3.7 CONDUCT OF NEWS CONFERENCES

NOTE

News conferences should be conducted as events related to the emergency situation dictate; however, it is recommended that, at a minimum, news conferences be conducted at least once daily until such time that the plant has been placed in a safe, stable condition.

- (1) The JPIC Manager will schedule news conferences held in the JPIC and will coordinate the announcement of the time of scheduled news conferences to the media.
- (2) The Logistics Coordinator will ensure that a notice for scheduled news conferences is posted in the Auditorium.
- (3) Prior to any news conference, the DAEC Spokesperson, the JPIC Manager, the Medical Advisor, if present, the Technical Liaison, and appropriate State and County PIOs shall meet to discuss the content and organization of the news conference.
- (4) The JPIC Manager will serve as the moderator for all news conferences.
- (5) The Audiovisual Support should videotape all news conferences as a matter of record.

3.8 NEWS BRIEFINGS AND INTERVIEWS

- (1) News briefings by the JPIC Manager, the DAEC Spokesperson, or the Technical Liaison shall be given as needed for the emergency situation. The Audiovisual Support should videotape all news briefing and interviews as a matter of record.
- (2) The Technical Liaison may provide generic "background information" presentations and technical briefings to the news media.
- (3) If appropriate, the JPIC Manager may establish a schedule of videotape or film presentations for the news media at the JPIC on such topics as radiation and plant design.

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- (4) Requests by the news media for "one-on-one" interviews shall be arranged by the JPIC Manager.

3.9 PLANT TOURS

- (1) Once the plant has been placed in a safe, stable condition, the JPIC Manager, with the concurrence of the ER&RD, may arrange tours of the plant for the news media.
- (2) The Logistics Coordinator shall coordinate with the Support Services Coordinator in the EOF in arranging transportation for the news media from the JPIC or JPIC Backup Facility to DAEC and back, if needed.
- (3) The JPIC Manager shall coordinate with the DAEC Security Superintendent to facilitate access for those representatives from the news media touring the site.
- (4) The JPIC Manager shall designate those persons from DAEC who will accompany each tour group and answer any questions.

3.10 DEACTIVATION OF THE JPIC

- (1) After consulting with the ER&RD, the JPIC Manager may direct deactivation of the JPIC under the following conditions:
 - (a) The plant has been placed in a safe, stable condition, and
 - (b) The level of news media interest has diminished to the point where full-scale operation of the JPIC is no longer required.
- (2) The Logistics Coordinator shall supervise the deactivation of the JPIC.
- (3) All personnel shall restore their work station locations to their pre-emergency configurations.
- (4) All personnel shall surrender their logs and other records to the Logistics Coordinator for disposition as determined by the JPIC Manager.
- (5) The Logistics Coordinator shall advise the Support Services Coordinator that security provisions are no longer required at the JPIC.

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- (6) If requested by the ER&RD, the JPIC Manager shall prepare a written synopsis of the activities of the JPIC during the emergency situation with assistance from the JPIC staff as needed.

4.0 RECORDS

- (1) All original forms, logs, graphs and computer runs generated shall be forwarded to the Emergency Planning Department and retained in accordance with the QA Retention requirements. Records will be retained until the NRC gives approval for disposal.

5.0 REFERENCES

- (1) NUREG-0654/FEMA-REP-1, Revision 1, Planning Standard G. Criteria 3.a., 3.b., 4.a., 4.b., and 4.c.
- (2) Title 10, Code of Federal Regulations, 10CFR50.47
- (3) DAEC Emergency Plan, Sections G and H
- (4) EPIP 1.2, "Notification"
- (5) Linn County Radiological Emergency Response Plan, Section G
- (6) Benton County Radiological Emergency Response Plan, Section G
- (7) Duane Arnold Energy Center Emergency Telephone Book

6.0 ATTACHMENTS

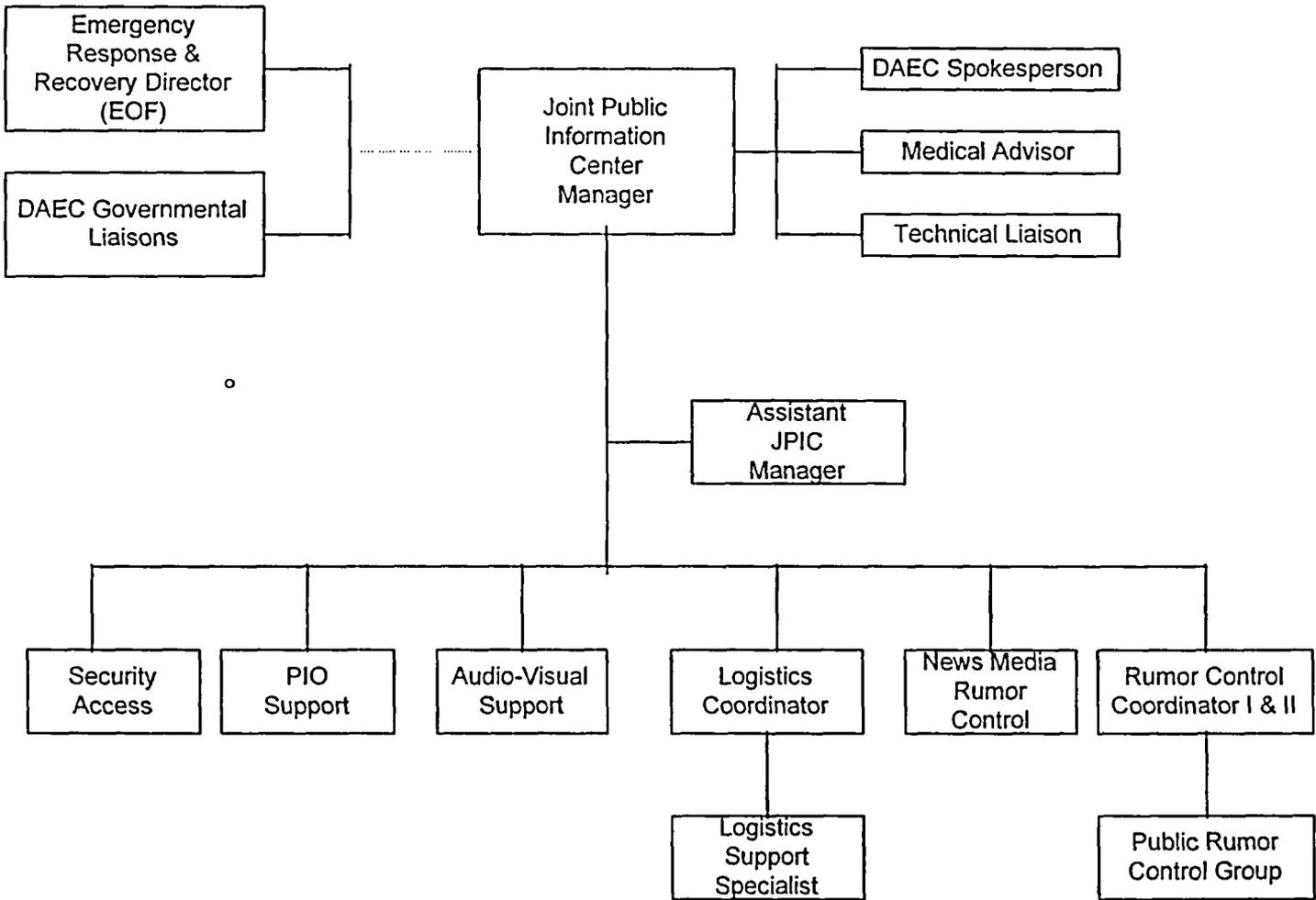
- (1) DAEC Joint Public Information Center Organization
- (2) Typical Layout of the Joint Public Information Center

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- (3) **Instructions to the News Media and Other Visitors to the Joint Public Information Center**
- (4) **Access Badge Examples**
- (5) **Registration Form**
- (6) **Location of JPIC Backup Facility**

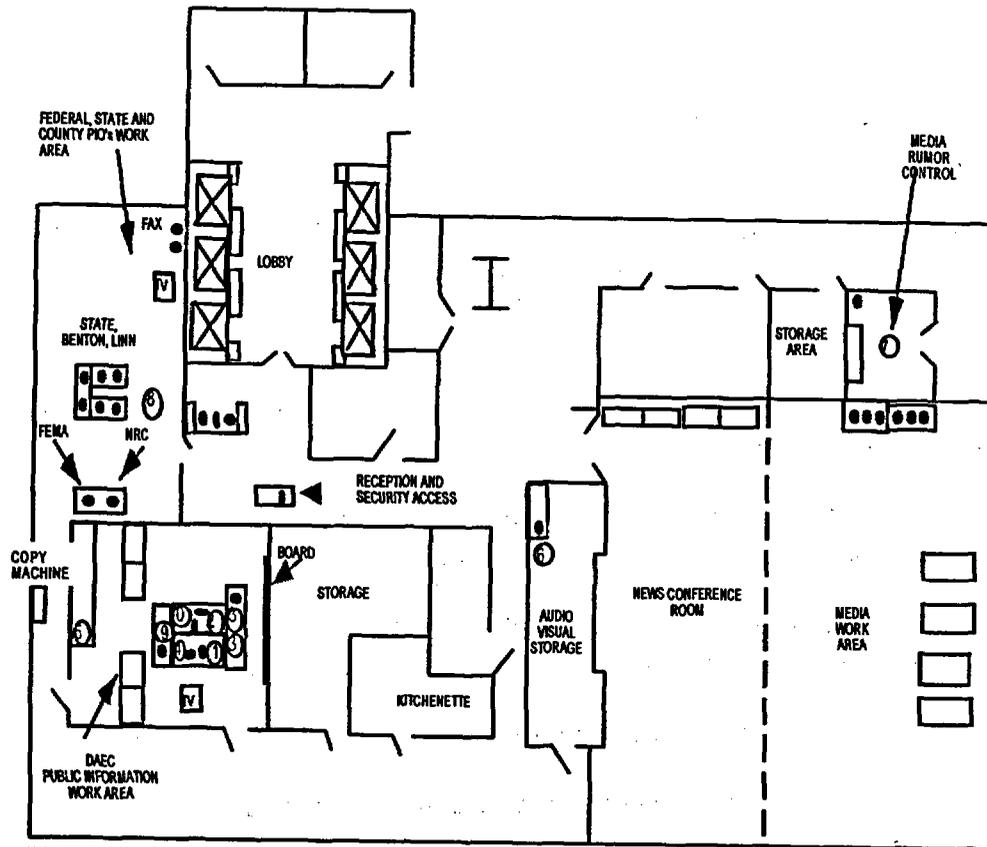
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**ATTACHMENT 1
DUANE ARNOLD ENERGY CENTER
JOINT PUBLIC INFORMATION CENTER ORGANIZATION**



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**ATTACHMENT 2
LAYOUT OF THE DAEC JOINT PUBLIC INFORMATION CENTER
'TYPICAL'**



WORK STATION LOCATIONS

- | | | | |
|--------------------------|---------------------------------|-----------------------------|----------------------|
| ① DAEC SPOKESPERSON | ② LOGISTICS COORDINATOR/SUPPORT | ③ PIO SUPPORT | ● TELEPHONE/FAX LINE |
| ④ JPIC MANAGER | ⑤ AUDIO-VISUAL SUPPORT | ⑥ RUMOR CONTROL COORDINATOR | |
| ⑦ TECHNICAL LIAISON | ⑧ NEWS MEDIA RUMOR CONTROL | ⑨ MEDICAL CONSULTANT | |
| ⑩ ASSISTANT JPIC MANAGER | | | |

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ATTACHMENT 3
INSTRUCTIONS TO THE NEWS MEDIA AND OTHER VISITORS
TO THE DUANE ARNOLD ENERGY CENTER (DAEC)
JOINT PUBLIC INFORMATION CENTER (JPIC)

- Please wear your registration badge at all times in the Joint Public Information center (JPIC).
- A schedule of news conferences and other events, copies of all written information releases, and other pertinent information will be available in the auditorium. Background information for the news media is also available in the Auditorium. Background information for the news media is also available in the Auditorium.
- Any special announcements will be made over the JPIC public address system in the Joint Public Information Center.
- The News Media Work Area has been established for your use, and copies of all information releases will be made available there.
- Plant tours are subject to the approval of the DAEC. If the situation permits plant tours, a schedule and sign-up sheets will be posted in the Auditorium.
- Please direct any requests for special interviews to the JPIC Manager.
- All official information will be provided by the DAEC Spokesperson.

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**ATTACHMENT 4
ACCESS BADGE EXAMPLES
'TYPICAL'**

DAEC
NAME

AGENCY REPRESENTATIVE
Name:
Agency:

Badge Color:

1. **Orange** **News Media**
2. **Green** **EOF and JPIC Staff with assigned functions including NMC and Asset Owner employees and State and County Representatives.**
3. **Yellow** **Agency Representatives of FEMA/NRC, etc. with assigned function in the EOF and JPIC.**
4. **Pink** **Observers or FEMA/NRC evaluators.**

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**ATTACHMENT 5
REGISTRATION FORM
'TYPICAL'**

Name: _____

Company or Organization: _____

Title or Position: _____

Business Address: _____

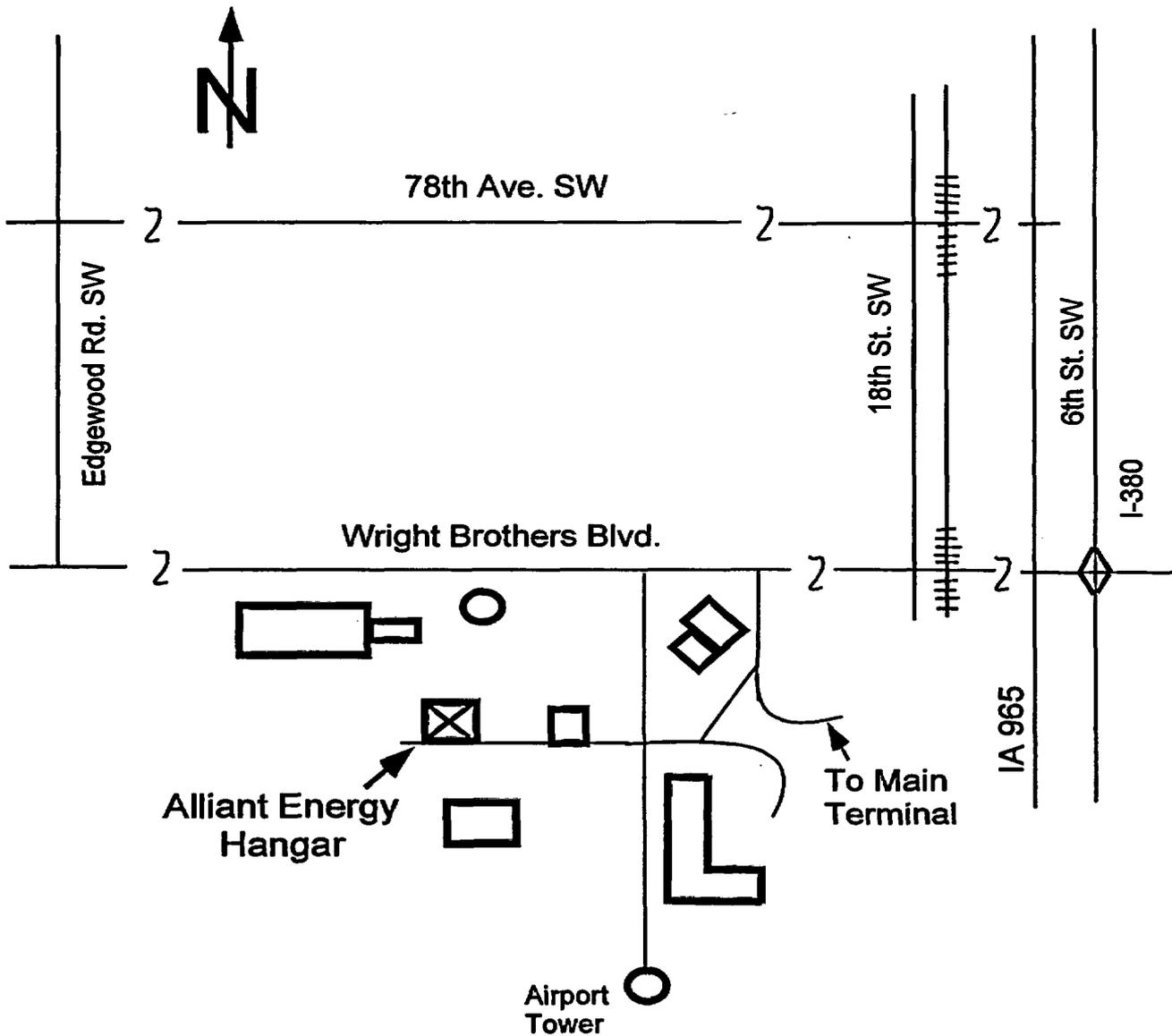
City: _____ State: _____ Zip: _____

Business Phone: _____

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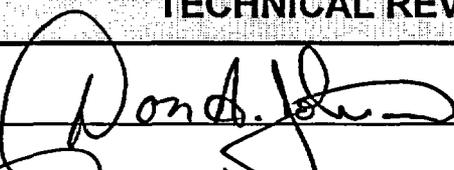
**ATTACHMENT 6
LOCATION OF JPIC BACKUP FACILITY**

Cedar Rapids



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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u></u>	Date: <u>10/3/03</u>
Reviewed by: <u></u> Independent Reviewer	Date: <u>10/6/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u></u> Manager, Emergency Planning	Date: <u>10/17/03</u>

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1.0 PURPOSE

- (1) This procedure provides instructions for activation and operation of the Emergency Operations Facility (EOF).

2.0 DEFINITIONS

- (1) None.

3.0 INSTRUCTIONS

3.1 OVERVIEW

- (1) The key response functions performed in the EOF are under the direction of the Emergency Response and Recovery Director (ER&RD) and are as follows:
 - (a) Coordinate emergency response activities with local, state and federal agencies and support organizations.
 - (b) Monitor and evaluate offsite radiological consequences of an emergency at the DAEC.
 - (c) Ensure the EOF is operational within 1 hour of a Site Area or General Emergency. Form EOF-32 from Appendix 1 of the EPIP Manual defines the minimum staff requirements.
- (2) This procedure shall be implemented upon declaration of a **SITE AREA EMERGENCY** or **GENERAL EMERGENCY** and is applicable to members of the Emergency Response Organization (ERO) who report to the EOF.
 - (a) This procedure shall also be implemented when the EOF is required to be activated due to a **SECURITY EVENT** at DAEC (reference EPIP 2.8).
 - (i) Note that an additional EOF position shall be staffed for **SECURITY EVENTS**. The TSC ENS Communicator shall also respond to the EOF during implementation of EPIP 2.8 to maintain an open ENS line with the NRC. When the **SECURITY EVENT** is cleared, then the TSC ENS Communicator shall report as determined by what activation criteria the ERO is in.

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- (3) During an event classified as a NOTIFICATION OF UNUSUAL EVENT or ALERT, the ER&RD may, at his/her discretion, initiate partial or full activation of the Emergency Operations Facility.
- (4) The ER&RD has the full authority and responsibility to make commitments for the company related to emergency response and the DAEC recovery activities including procurement of materials, equipment and other resources.
- (5) The Risk Administrator shall be informed of any injuries and briefed of the status of the event by the ER&RD or his designee to ensure all insurance related activities are being attended to.
- (6) The legal department is available to provide legal advice, development of policy statements, and coordinates activities with the DAEC partners as deemed necessary.
- (7) The ER&RD, or their designee, shall ensure personnel reporting to the EOF are fit for Duty in accordance with ACP 101.6.

3.2 ACTIVATION

- (1) The EOF shall be activated at a Site Area or General Emergency; Form EOF-32 delineates minimum staffing and required response times for ERO members reporting to the EOF.
 - (a) The Emergency Response and Recovery Director may designate other individuals to assume emergency positions if the primary and all alternates are unavailable. He/she may also change the emergency response organization to better apply resources as the event progresses or changes.
- (2) When notified to report to the EOF, ERO members shall respond to the EOF.
- (3) ERO members reporting to the EOF shall place their name tag/sign in on the EOF Staffing Board for the position they assume.
- (4) ERO members shall review instructions/checklists associated with their job functions as appropriate and advise their functional supervisor of their readiness.

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- (5) The ER&RD shall brief ERO members on plant status and response actions underway and identify/prioritize the response actions to be taken in support of the recovery activities at DAEC.
- (6) Functional Supervisors should contact their counterparts at DAEC and conduct a turnover. Upon receiving turnover, inform the respective manager of their ability to assume control of response activities.
- (7) The ER&RD shall declare the EOF operational and shall inform the Emergency Coordinator that the EOF will assume control of response activities.
- (8) The ER&RD will inform the EC that the EOF will assume responsibility for all offsite communications and that he/she has assumed responsibility for the decision to notify and recommend protective actions to offsite authorities.
- (9) The Radiological and EOF Manager shall inform the county, State and Federal Emergency Operations Centers (EOCs) that the EOF is operational and that the EOF has assumed responsibility for all offsite notifications, offsite dose assessment, radiological monitoring and protective action decision making activities.

3.3 SECURITY

- (1) The Support Services Coordinator will contact Corporate Security for Security guards.
- (2) Corporate Security will conduct the following:
 - (a) When guards arrive, ensure they are assigned to security posts;
 - (b) Instruct them on their responsibilities, as needed;
 - (c) Ensure a walkdown of the 6th and 15th floor is conducted following the emergency announcement to verify all visitors have vacated.
- (3) The guard stationed on the first floor should be informed of the following:
 - (a) During normal business hours access control will be regulated at the elevator lobby's of the 1st, 6th and 15th floors.
 - (b) During non-working hours NMC/Alliant-IES Utilities Inc. personnel who present identification shall be permitted to access IES portions of the

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building. Identification, such as a Driver's License, may be compared to the Emergency Telephone Book or a list of NMC/Alliant-IES Utilities, Inc. personnel permitted access to the EOF.

- (c) Contract persons, whose names are listed in the Emergency Telephone Book or on any approved access list, shall be permitted access to the EOF.
 - (d) Personnel who present some form of identification as a Linn or Benton County Emergency Management member; representative from the State of Iowa, Emergency Management Division or Department of Health; employees of the Nuclear Regulatory Commission (NRC); or Federal Emergency Management Agency (FEMA) shall be permitted access to the 6th or 15th floors, as requested.
 - (e) Security personnel will hold news media representatives on the 1st floor if the Joint Public Information Center (JPIC) has not been activated. The JPIC Manager will notify Security when the Media may be directed to the 6th floor.
 - (f) Following activation of the JPIC, news media are to be permitted access to the 6th floor, only.
- (4) Security personnel on the 6th floor will process all media desiring access to the JPIC.
 - (5) If access is desired by any other individuals to the JPIC or EOF, the JPIC Manager should be contacted for JPIC access and the ER&RD for the EOF access.
 - (6) Upon reporting to their assigned security posts, Security Guards should:
 - (a) Conduct a radio check with the other security posts.
 - (b) Initiate (or update) the " Security Post Log" form EOF-23 from Appendix 1 of the EPIP manual by recording the following information:
 - (i) Date and time of staffing (or relieving) the assigned post:
 - (ii) Name of the Security Guard and Access Clerk assigned;

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- (iii) Results of radio checks;
- (iv) Actions taken to correct any deficiencies.
- (c) Provide assistance, as required to the Security Access Clerk to prevent unauthorized access.
- (d) Corporate Security and the Support Services Coordinator shall be advised of access control problems.
- (e) When individuals without access to the JPIC, the EOF or to Corporate Management offices insist on gaining access, Corporate Security shall be advised.
- (f) Circumstances associated with access control problems experienced should be recorded in the Security Log.
- (7) Upon reporting to the EOF, Security Access personnel should:
 - (a) Assist, as required, in ensuring all personnel are informed that an emergency condition has been declared.
 - (b) Provide security badges to personnel assigned duties at the EOF and Corporate Management personnel who desire access to the EOF.
 - (c) Initiate access control to the EOF. Initiate recording of personnel who exit and enter those areas, using form EOF-21 from Appendix 1 of the EPIP manual.
 - (d) Security Access Clerks shall make entries or ensure that they are made for Support Services staff who may be providing services or delivering equipment for emergency use.
 - (e) Prior to entry to facility, the individual's name and time should be recorded in the log.
 - (f) When exiting, the time and location where the individual can be reached should be recorded if appropriate.
- (8) Badges shall be issued to all personnel granted access to the EOF.

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- (9) Badges, depicted on Form EOF-31, "Access Badge Example", should be color coded, as follows:

NOTE

Personnel displaying ORANGE color coded badges should not be permitted access to the EOF, unless accompanied by a green badged individual.

- (a) Orange - News Media
 - (b) Green - EOF and JPIC Staff with assigned functions, including NMC/Alliant-IES Utilities Inc. employees, and State and County representatives.
 - (c) Yellow - Agency Representatives of FEMA/NRC, etc., with assigned functions in the EOF and the JPIC.
 - (d) Pink - Observers or FEMA and NRC evaluators.
- (10) State and County representatives with assigned functions in the EOF will be requested to complete Form EOF-22, "Registration Form" or an equivalent prior to being issued a badge.
- (11) Once issued, badges should be retained by the recipient even though he or she may exit the area (except those issued to news media).

3.4 SUPPORT SERVICES

- (1) During normal and off-normal working hours, upon being advised of an emergency at the DAEC and plans for activation of the EOF, the Support Services Coordinator should follow the steps in Form EOF-11, "Support Services Coordinator Checklist".
 - (a) During off-hours, notifications will be made via an automated telephone call-out system and an alphanumeric paging system.

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- (2) Incoming calls from the News Media and/or the general public concerning the event should be directed to the JPIC.
- (3) The Support Services Coordinator should report to the EOF to be briefed by the ER&RD or designee concerning the need for any services which are currently or are anticipated to be required of the ERO.
- (4) As directed by the ER&RD, (or the JPIC Manager or the Security and Support Supervisor at the DAEC), the Support Services Coordinator should:
 - (a) Mobilize Corporate personnel and equipment, as necessary;
 - (b) Obtain additional supplies or equipment needed to support recovery work;
 - (c) Periodically, inform Support Services of any changes in the emergency condition which may affect their areas of responsibility.
- (5) During an emergency at the DAEC the following may be required by Corporate Department Heads:
 - (a) Director of Corporate Services - Obtain, on a regular basis, information regarding road and air travel conditions to determine travel routes and methods of transportation for personnel, equipment and supplies. Coordinate requests for transportation of personnel, equipment and supplies. Provide, as necessary, reservation assistance to NMC/Alliant-IES Utilities Inc. personnel and consultants for air and ground transportation and hotel accommodations. Provide regularly scheduled daily transportation between the DAEC and the Alliant Tower.
 - (b) Director of Purchasing, Transportation and Materials - Coordinate with other department heads to prevent undue delays in procuring essential materials. Expedite procurement of spare parts, equipment or materials. Maintain contact with key vendors to minimize procurement delays. Coordinate requests for transportation of materials.
 - (c) Manager, Staffing and Compensation - Supplement the clerical staffs to ensure that continuous, 24 hour shift coverage can be achieved. Provide other administrative support functions necessary to activate and continually staff the Emergency Response Organization.

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- (d) Manager, Industrial Relations - Provide the Support Services Coordinator with requested personnel by assisting in mobilizing Alliant-IES Utilities Inc. personnel from Field Operators and Production Department. Assist in resolving personnel disputes resulting from the emergency situation. Provide guidance regarding Federal and State laws and union contracts for employees working during an emergency situation.
- (e) Manager, Safety - Investigate serious personal injury accidents and develop standard reports. Brief Corporate Management, as requested, regarding the events associated with any personal injury. Review the details with the DAEC Spokesperson prior to presenting injury information to media personnel.

3.5 STAFFING OF THE EOF

- (1) The minimum staffing level is reflected in Form EOF-32 and upon staffing of these positions the EOF is considered operational.
- (2) The following is a listing of EOF staff members and an overview of their duties:
 - (a) RAD and EOF Manager - Informs local, State and Federal authorities of the event status and utility response actions taken. Develops Protective Action Recommendations (PARs) for approval by the ER&RD.
 - (b) Radiological Assessment Coordinator (RAC) - Directs the Radiological Monitoring Field Teams and coordinates with the Site Radiation Protection Coordinator performance of dose projection activities. Coordinates offsite radiological monitoring and dose assessment performed by NMC/Alliant-IES Utilities with the State and Federal organizations. Provide dose projection information and radiological survey results to the State Field Team Captain. Receives radiological survey information obtained by the State Field Teams to provide updated information to Linn and Benton Counties Emergency Management Agencies (EMA)
 - (c) EOF Communicator - Make entries into the electronic status board system in conjunction with the TSC. Upon loss of computer systems use Form EOF-04 "Summary of Computer Data Backup Collection Activity" as a means to obtain necessary data.

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- (d) **Field Team Director** - Relay directions and information to NMC/Alliant-IES Utilities Inc. Radiological Monitoring Field Teams and receive radiological survey information obtained by the State Field Teams.
- (e) **HPN Communicator** - Transmit information as necessary and monitor conversations and information being transmitted between HPN extensions at the DAEC in the TSC and NRC Emergency Operations Centers in Rockville, MD and Lisle, IL. Also informs the NRC, via the ENS Phone Line, of changes to EALs.
- (f) **Technical Recorder** - Relays information regarding plant status, protective actions, dose projections to Technical Liaisons in the Linn County, Benton County and State EOCs. Develop verbal and written closeout reports, per Section 3.7 (1), for all offsite Emergency Operation Centers. Reviews ACP 1402.3 for other 10 CFR reporting requirements.
- (g) **EOF Information Services Representative** - Shall assist in the operation of all computer related information systems in the EOF and shall be informed by ERO members upon suspicion of data loss from any computer generated information. Shall confer with the Information Services Representative in the Technical Support Center as needed to verify data or computer systems reliability. Shall inform the Emergency Response & Recovery Director of computer related problems for announcement to all EOF Responders. Will, upon determination that computer data is good/bad, turn on/off displayed data as necessary upon the announcement of such to the EOF Responders. Will verify that the ERDS data being sent to the NRC is accurate and ensure that the NRC Communicators in the EOF have notified the NRC of any change in the accuracy of the data.
- (h) **Support Services Coordinator** - Shall be responsible for ensuring that the necessary logistics, administrative, procurement and manpower services are provided to support emergency activities being conducted at the DAEC and by Alliant-IES Utilities Inc. personnel at offsite locations. The Support Services Coordinator shall maintain contact with the Security and Support Supervisor in the TSC and the ER&RD in the EOF to ensure that required needs are being addressed and promptly executed.
- (i) **Emergency Response and Recovery Director** - Coordinates emergency response activities with local, State, and Federal agencies and support

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organizations. Monitors and evaluates offsite radiological consequences of an emergency at the DAEC. Coordinates the Activation and operation of the EOF, maintains command and control of DAEC's emergency response efforts. Performs FFD assessment of personnel reporting to the EOF.

- (j) EOF OPS Liaison - Tracks plant status using EOP's and the EOP program manuals. Advises the ER&RD on EAL's and subsequent changes in plant status that warrant a change to the EAL classification. Provides operational insight on matters that pertain to the DAEC. Advises the ER&RD on operational concerns during the Recovery phase.
- (k) EOF MIDAS Operator - Performs dose projection activities in the EOF. Assists the RAC as necessary. Provides the State Dose Assessment Team dose projection information.
- (l) Radiological Data Plotter - Maintains and updates plume projections, PARs, and evacuation pathways. Plots DAEC and State Field Team readings, location and plume edges and centerline.
- (m) Messengers - Provide EOF personnel status reports, MIDAS printouts, press releases and other pertinent information as it relates to the event. In addition, conducts pager and FAX notifications, and posts the EAL updates.

3.6 COUNTY, STATE AND GOVERNMENTAL AGENCIES

- (1) County, state and federal agencies may dispatch representatives to the EOF upon declaration of a SITE AREA or GENERAL EMERGENCY or upon being advised that the EOF is being activated at a lower classification. NRC Site Team members initially dispatched who are expected to be assigned to the EOF are listed in the DAEC Emergency Plan in Section C.

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NOTE

Initial briefings expected from licensee staff are not intended to adversely impact licensee's response efforts.

- (2) Upon arrival of the representatives, security personnel shall verify the identity of each of the representatives, as prescribed in section 3.3 (4), and inform the ER&RD of their arrival. These representatives shall be briefed by or under the direction of the ER&RD and directed to their respective work spaces in the EOF.
- (3) The NRC's Incident Response plan defines the NRC's responsibilities and response mode during an emergency. A summation of these roles is presented in the DAEC Emergency Plan, Section C. The Response Coordination Manual Section Q, "Concept of Operations", renders additional organization charts for performing essential functions during a federal response to a severe reactor accident with an emphasis on state and federal coordination.
- (4) The Federal Radiological Emergency Response Plan (FRERP) also establishes the NRC as the Lead Federal Agency (LFA) for response to nuclear power plant accidents. As LFA the roles assigned to the NRC include the following:
 - (a) Coordinates federal technical evaluations and assessments.
 - (b) Acts as Lead Technical Spokesperson for the Federal Government.
 - (c) Assists the state in interpretation and analysis of technical information.
 - (d) Keeps the White House informed of technical assessments.

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NOTE

There is not necessarily a direct correlation between an Emergency Class and a NRC Response Mode. The NRC Response Mode depends on such factors as: the quality, completeness, and clarity of licensee's event description; NRC's perception on the appropriateness of the classification; if the event is over or ongoing; prognosis of event and professional judgement; etc.

- (5) Upon arrival of the NRC Site Team personnel at the EOF, a briefing shall be conducted by the ER&RD which covers:
- (a) Offsite radiological monitoring activities and results
 - (b) Dose projection results and Protective Action Recommendations that have been made.
 - (c) Protective actions that have been implemented by offsite authorities in the EPZ.
 - (d) Media briefings and press release status.
 - (e) Response actions in progress at the EOF to assist in mitigating/terminating the event at the site.
 - (f) Local and State interfaces that have been established.
 - (g) Prognosis of the event.
 - (h) Potential need for Technical Specifications/License exemptions.
- (6) The principal functions of the NRC Site Team related to NMC/Alliant-IES Utilities Inc. emergency response activities include:

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- (a) Monitor the licensee to assure appropriate protective action is being taken with respect to offsite recommendations.
 - (b) Support the licensee (technical analysis and logistic support).
 - (c) Support offsite authorities, including confirming the licensee's protective action recommendation to offsite authorities.
 - (d) Keep the media informed of the NRC's knowledge of the status of the incident, including coordination with other public affairs groups.
- (7) The Site Team Leader may be authorized by the NRC Emergency Director (Chairman of the NRC) to function as the Director of Site Operations (DSO). In that capacity, the DSO has:
- (a) Authority to represent the entire NRC by acting as the primary spokesperson for the NRC in responding to the media, supervising all NRC personnel at the site, and representing the NRC in interactions with other federal agencies.
 - (b) Responsibility for all on site technical aspects of the federal response.

NOTE

Authorization for the Director of Site Operations to implement items c, d, and e (below) must be specifically granted by the NRC Emergency Director.

- (c) Authority to recommend protective measures for the public health and safety in coordination with NMC/Alliant-IES Utilities Inc.
- (d) Authority to recommend actions to key state and local agencies in addition to those of NMC/Alliant-IES Utilities Inc.
- (e) Authority to direct the licensee to take specific actions but, only in rare and unusual circumstances (NRC decision maker is convinced that licensee is not taking an action to protect the public health and safety).

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3.7 OPERATION OF THE EOF

- (1) Upon activation of the EOF, the ER&RD shall make all final determinations with respect to event reclassifications.
 - (a) Time permitting, the ER&RD should advise the NRC Director of Site Operations of his intent to reclassify the emergency prior to doing so.
 - (b) A verbal summary should be given to all governmental and support agency officials notified when the emergency condition has been resolved. Within eight (8) hours of the verbal summary, a written summary shall be sent to the NRC and other agencies as appropriate for a GENERAL EMERGENCY, SITE AREA EMERGENCY or an ALERT. An UNUSUAL EVENT requires a written summary within twenty-four (24) hours of the verbal summary. Also, review ACP 1402.3 "Plant Regulatory Reporting Activities" for other 10 CFR reporting requirements. (Use forms EOF-28 & 29)
 - (c) The Emergency Coordinator should be advised of actions underway and decisions being made in the EOF and at offsite Emergency Operations Centers.
- (2) Upon activation, logs should be kept by the ERO which reflect activities in progress, problems and their resolutions and miscellaneous information which may be important from a historical perspective, using the Emergency Log or equivalent.
- (3) Emergency Response Organization personnel in the EOF should be apprised of plant status on a periodic basis.
- (4) Monitors for SPDS display of plant computer points will be used for display of various trends of Reactor or Containment or effluent parameters.
- (5) The EOF Public Address system will be utilized to highlight significant changes in the plant status and for periodic briefings.
- (6) Licensing and fuels related activities shall be conducted as directed by the ER&RD.
 - (a) Unless directed otherwise by the ER&RD, such activities conducted in support of the emergency shall be performed in accordance with

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standard practices defined by the QA Plan and further described in related administrative and project procedures. Any deviation from normal QA procedures will be documented in accordance with EPIP 2.2.

- (7) Dose projections, radiological monitoring and dose assessment activities, and development of Protective Action Recommendations shall be conducted, as described in EPIP 3.3
- (a) Offsite environmental radiological activities shall be conducted under the overall direction of the Radiological Assessment Coordinator as developed by the Radiological and EOF Manager.
 - (b) The Radiological Assessment Coordinator shall be responsible for coordinating offsite NMC/Alliant-IES Utilities Inc. activities with those being accomplished by state and federal support organizations.
 - (c) Status reports containing information related to release rates, dose projections and Protective Action Recommendations (PARs) will normally be developed on the VAX computer as part of the dose projection program or as described in EPIP 3.3. Significant changes from the preceding report shall be highlighted or otherwise uniquely identified. Parameter trending shall be accomplished, as specified in EPIP 3.3.
 - (d) The Radiological Assessment Coordinator shall review the status report printout with the Radiological and EOF Manager who is responsible for developing PARs.
 - (e) The PARs developed shall be approved by the ER&RD.
 - (f) PARs will be displayed in the EOF along with the time the recommendation was made.
- (8) Communications associated with offsite radiological monitoring and dose projection activities shall be recorded, as described in EPIP 3.3, "Dose Assessment and Protective Action Recommendations".
- (a) Information contained on the Radiological Data forms should be reviewed by the Radiological and EOF Manager and the Radiological Assessment Coordinator, as prescribed in EPIP 3.3.
 - (b) Records of such communications shall be retained for record keeping.

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- (9) Information regarding plant status, offsite radiological data, Protective Action Recommendations and response actions underway shall be provided on a periodic basis to Linn and Benton Counties, the State of Iowa, FEMA, the NRC and INPO.
- (a) Information to be officially transmitted shall be transmitted in accordance with EPIP 1.2.
 - (b) Sufficient copies of the forms shall be made for distribution to the Alliant-DAEC Spokesperson for use in briefing the media and other officials.
 - (c) Original copies of such communications shall be retained for record keeping.
- (10) Additional logs, graphs, computer runs, etc., shall be collected and forwarded to the Emergency Planning Department for record keeping.

3.8 FOLLOW UP OPERATIONS

- (1) The ER&RD in conjunction with the Emergency Coordinator should periodically assess the adequacy of response actions being taken by the Emergency Response Organizations.
- (a) Where functional support capabilities can be improved by additional manpower and/or equipment and/or where additional technical or craft support is required, the Support Services Coordinator should be directed to coordinate with the respective functional supervisor and obtain the resources which are required.
 - (b) Where response emphasis needs to be redirected due to the type of event, event phase, or other extenuating conditions, the ER&RD should take action to modify the structure of the Emergency Response Organization to enable adequate response.
- (2) Where response actions will be required over a protracted period of time, the ER&RD shall ensure that provisions are made for continuous coverage of required functions at all response center locations.
- (3) As plant conditions begin to stabilize and reclassification of the emergency to a lower classification is being conducted, the ER&RD shall initiate action to develop a recovery plan.

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- (a) Recovery planning shall be accomplished as specified in EPIP 5.2, "Recovery and Re-entry".
- (b) Deactivation of the Emergency Response Organization in part or in whole and transition to the normal operational organization or to a recovery organization shall be specified as part of the recovery plan.

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4.0 RECORDS

- (1) All original forms, logs, graphs and computer runs generated shall be forwarded to the Emergency Planning Department and retained in accordance with the QA Retention requirements. Records will be retained until the NRC gives approval for disposal.

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) NUREG 0654
- (3) NRC Region III, Emergency Response Plan and Implementing Procedures
- (4) EPIP's
- (5) NRC Incident Response Plan (NUREG 0845)
- (6) ACP 1402.3 Plant Regulatory Reporting Activities
- (7) FRERP, "Federal Radiological Emergency Response Plan"
- (8) NRC Administrative Letter 94-04, "Change of the NRC Operations Center Commercial Telephone and Facsimile Numbers"
- (9) Response Coordination Manual (RCM-96)
- (10) INPO 86-032, "Emergency Resources Manual"

6.0 ATTACHMENTS

- (1) EOF Forms

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**ATTACHMENT 1
EOF FORMS**

EOF FORMS	FORM NUMBER
NRC-HPN COMMUNICATOR	EOF-02
TECHNICAL RECORDER CHECKLIST	EOF-03
SUMMARY OF COMPUTER BACKUP CAPABILITIES	EOF-04
EOF INFORMATION SERVICES REP.	EOF-05
DAEC KEY PARAMETER LOG	EOF-06
ER&RD CHECKLIST	EOF-07
RAD & EOF MANAGER CHECKLIST	EOF-08
EOF OPS LIASON CHECKLIST	EOF-09
EOF COMMUNICATOR CHECKLLIST	EOF-10
SUPPORT SERVICES COORDINATOR CHECKLIST	EOF-11
FIELD TEAM DIRECTOR CHECKLIST	EOF-12
EOF MIDAS OPERATOR CHECKLIST	EOF-14
RADIOLOGICAL DATA PLOTTER CHECKLIST	EOF-15
RADIOLOGICAL ASSESSMENT COORDINATOR CHECKLIST	EOF-16
EOF PERSONNEL LOG	EOF-21
REGISTRATION FORM	EOF-22
SECURITY POST LOG	EOF-23
STATUS UPDATE MESSAGE-EOF COMMUNICATOR	EOF-27
VERBAL CLOSEOUT SUMMARY	EOF-28
WRITTENT CLOSEOUT SUMMARY	EOF-29
STATUS BOARD	EOF-30
ACCESS BADGES EXAMPLES	EOF-31
EOF STAFF RESPONSE	EOF-32
MESSENGERS CHECKLIST	EOF-38

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Effective Date: 10/17/03

TECHNICAL REVIEW	
Prepared by: <u>Rica A. Loney</u>	Date: <u>10/02/03</u>
Reviewed by: <u>Thomas P. Zimmerman</u> Independent Reviewer	Date: <u>10/07/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Paul Sullivan</u> Manager, Emergency Planning	Date: <u>10/7/03</u>

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1.0 PURPOSE

- (1) This procedure provides guidance for activation and operation of the Operational Support Center (OSC) as well as guidance to the Fire Brigade in the performance of their duties. The basis for this procedure is documented in NUREG-0654, Planning Standard H (Reference 1) and the DAEC Emergency Plan, Section H (Reference 2).

2.0 DEFINITIONS

- (1) None.

3.0 INSTRUCTIONS

3.1 ACTIVATION

- (1) The OSC shall be activated for any event classified as an ALERT or greater. The OSC may be activated at a NOTIFICATION OF UNUSUAL EVENT at the discretion of the Emergency Coordinator (EC).

3.2 STAFFING

- (1) OSC staffing levels
- (a) The minimum staffing level is reflected in EPIP Form No. OSC-03 in accordance with NUREG 0654 (Rev. 1) and the DAEC Emergency Plan.
 - Upon staffing the minimum 30-minute positions, the OSC is considered operational.
- (2) Upon initiation of the Evacuation Alarm (required for events classified as an ALERT or greater), the following action should be taken to activate and staff the OSC:
- (a) All onsite Emergency Response Organization (ERO) personnel other than those designated to report to the Control Room, Technical Support Center (TSC), and Emergency Operations Facility (EOF) shall report to the OSC. (EPIP Form No. OSC-01).
 - (b) Upon arrival in the OSC, personnel shall proceed to the Emergency Assignment Staffing Board and relocate the appropriate nameplate

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from the lower portion of the board, to the space provided on the upper portion of the board. Then follow the instructions posted inside the appropriate locker door.

- (c) If all 30 min/60 min positions have been filled, relocate the nameplate to the upper portion of staffing board. Go to the OSC Staging Area and wait for further directions.

3.3 INITIAL FUNCTIONAL ACTIVITIES

- (1) OSC Supervisor should report to the OSC to supervise the activities there, using "OSC Supervisor Checklist" (EPIP Form No. OSC-08) as a guide. The OSC Supervisor shall ensure that a record is maintained of pertinent occurrences in the OSC, using the "Emergency Event Log" (EPIP Form No. OSC-05) and "Recommended Log Entry Topics (EPIP Form No. OSC-04).
- (2) Staffing of support positions via the Emergency Assignment Staffing Board, will be supervised by the OSC Supervisor, as follows:
 - (a) Personnel should select their own nameplate and place it first in a 30-minute response position. Once all 30-minute response positions have been filled, proceed to fill all 60-minute response positions. (EPIP Form No. OSC-12). A single star denotes 30-minute response. Two stars denote 60-minute response.

★ = 30 minute responders
★★ = 60 minute responders

- (3) The Health Physics Supervisor should report to the OSC to coordinate the radiological response efforts of the Health Physics Technicians, using "Health Physics Supervisor Checklist" (EPIP Form No. OSC-09) as a guide.
- (4) The "Personal Statement Concerning Incident" form (EPIP Form No. OSC-06) shall be distributed and collected by the Personnel Monitoring/Habitability HP, and forwarded to the HP Supervisor for review.
 - (a) If unexpected or unusual responses are discovered, the individual who recorded those responses should be contacted in an effort to obtain additional information or details as appropriate. The OSC Supervisor shall be informed of any unexpected or unusual responses and, if appropriate, the Site Radiation Protection Coordinator (SRPC) and Emergency Coordinator (EC) shall be informed.

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- (5) The Electrical and I&C Maintenance, and the Mechanical Maintenance Supervisors should report to the OSC. These positions will coordinate repair efforts between the TSC and repair teams in the OSC, using "Electrical and I&C, Mechanical Maintenance Supervisor" (EPIP Form No. OSC-10) as a guide.
- (6) The Security and Support Supervisor shall establish accountability (as described in EPIP 1.3) for all personnel in the OSC. If personnel are determined to be missing, rescue activities should be conducted as prescribed in Reference 3.
- (7) Security shall relocate the emergency cabinets in the TSC HVAC Equipment Room to the OSC Hallway, per EPIP Form No. OSC-01.

3.4 FIRE BRIGADE

- (1) The Fire Brigade will assemble and initiate actions to extinguish fires when the fire alarm is sounded.
- (2) In the event that a fire develops and the Emergency Response Organization is activated, the Fire Brigade shall be briefed by the HP Supervisor on radiological conditions and also shall be briefed in accordance with the DAEC Fire Plan.
- (3) Communication between the Fire Brigade and the Emergency Response Organization shall be as follows:
 - (a) The Fire Brigade Leader should receive technical direction from the Control Room and should maintain communications with the Control Room throughout the fire incident.
 - (b) The Fire Brigade Leader shall ensure that the OSC Supervisor is kept informed of the status and location of the fire so that assistance to the Fire Brigade can be provided, as necessary.
 - (c) The Health Physics Technician should establish communications with the HP Supervisor informing him of the radiological conditions in the area of the fire.

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3.5 OPERATION OF THE OSC

- (1) The OSC Supervisor shall maintain responsibility over all personnel in the OSC. (EPIP Form No. OSC-02).
 - (a) If evacuation of assembly areas or the TSC is required, personnel shall be relocated as specified in Reference 5.
 - (b) If evacuation to the ORAA is required, evacuation shall be accomplished in accordance with Reference 5 and Reference 6.
- (2) Activities conducted by personnel assigned to the OSC shall be coordinated through the OSC Supervisor.
 - (a) Inplant Radiological Monitoring shall be accomplished in accordance with Reference 4.
 - (b) Field Radiological Monitoring shall be accomplished in accordance with Reference 7.
 - (c) Rescue and repair activities shall be accomplished in accordance with Reference 3.
- (3) The Site Radiation Protection Coordinator should consult with the Radiological Assessment Coordinator in the EOF and the HP Supervisor in the OSC with respect to activating the Offsite Radiological and Analytical Laboratory (ORAL).
 - (a) The ORAL should be activated if significant offsite releases are detected.
 - (b) If activation of the ORAL is desired, the Site Radiation Protection Coordinator should initiate activation in accordance with Reference 8.
 - (c) Keys to the facility may be obtained from the Security Control point.
- (4) Once an ALERT has been declared, and until there is a radiological release in progress, the HP Supervisor will assemble, brief and dispatch the following teams to perform the specified tasks with OSC Supervisor concurrence. The HP Supervisor shall inform the Site Radiation Protection Coordinator of teams dispatched. If a release is in progress, team dispatch concurrence must be obtained from the Emergency Coordinator or his designee.

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- (a) ORAL/ODEF - facility set-up in accordance with Reference 8 and Reference 9.
 - (b) ORAA - facility set-up in accordance with Reference 6.
 - (c) Onsite Field Monitoring Team - establish radio contact with the TSC and perform surveys as directed by the SRPC.
 - (d) Offsite Field Monitoring Team - establish contact with the radio operator located in the TSC.
- (5) Prior to allowing personnel to leave the OSC, the OSC Supervisor should ensure the following as appropriate:
- (a) Personnel have been thoroughly briefed by appropriate craft Supervisor and the HP Supervisor on plant status, expected radiological conditions and associated precautions, increased exposure limits, stay times, access routes, communications requirements, objectives of the assigned task and procedures for performing the assigned task, as appropriate.
 - (b) Personnel have been properly dressed in protective clothing and have adequate dosimetry and respiratory protection equipment.
 - (c) Emergency Coordinator or designee concurs on dispatching the team.
- (6) During the performance of their assignments, personnel shall be responsible for maintaining their own personal exposures as low as reasonably achievable (ALARA).
- (7) Upon their return to the OSC, personnel should contact the OSC Supervisor for instructions and debriefing.
- (8) The OSC Supervisor should ensure that personnel assembled in the OSC are periodically apprised of the event status, problems, and actions being taken to restore the plant to a safe condition.
- (9) Where response actions are expected to be required over a long period of time, the OSC Supervisor shall:

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- (a) Evaluate staffing needs and establish a rotating work schedule to assure adequate coverage.
- (b) Recommend to the Tech & Engineering Supervisor any additional staff support services which should be obtained.
- (c) Coordinate, as required, with the Security and Support Supervisor to assure that provisions have been made for continuous coverage of all OSC positions.

3.6 RECOVERY/RE-ENTRY

- (1) When directed by the Emergency Coordinator, the OSC Supervisor shall assist in developing a recovery plan.
- (2) Recovery planning and deactivation of the OSC shall be accomplished upon authorization of the Emergency Coordinator and shall comply with the applicable requirements prescribed in EPIP 5.2, "Recovery and Reentry" (Reference 10).

3.7 ALTERNATE OSC LOCATIONS

- (1) If the OSC staging area becomes uninhabitable, an alternate staging area should be selected by the OSC Supervisor.
- (2) The hallway between the TSC/OSC may be utilized first. The OSC Supervisor should select critical personnel required for the events in progress.
- (3) Non-critical personnel may be relocated to the Training Center Break room, ORAA or ODEF as determined by the OSC Supervisor.

4.0 RECORDS

All records generated as a result of this procedure should be submitted to the TSC Clerical Staff for filing.

5.0 REFERENCES

- (1) NUREG 0654, Rev. 1, Planning Standard H
- (2) DAEC Emergency Plan, Section H

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- (3) EPIP 4.3, "Rescue and Emergency Repair Work"
- (4) EPIP 3.1, "Inplant Radiological Monitoring"
- (5) EPIP 1.3, "Plant and Site Evacuation"
- (6) EPIP 2.4, "Activation and Operation of the ORAA"
- (7) EPIP 3.2, "Field Radiological Monitoring"
- (8) EPIP 2.6, "Activation and Operation of the Offsite Radiological and Analytical Laboratory"
- (9) EPIP 2.7, "Activation and Operation of the DAEC Offsite Decontamination Facility (ODEF)"
- (10) EPIP 5.2, "Recovery and Reentry"

6.0 ATTACHMENTS

ATTACHMENT 1 OSC Forms

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ATTACHMENT 1
OSC FORMS

OSC Forms	Form No.
OSC Layout	OSC-01
OSC Organization Chart	OSC-02
Minimum Staffing Level	OSC-03
Recommended Log Entry Topics	OSC-04
Emergency Event Log Sheet	OSC-05
Personal Statement Concerning Incident	OSC-06
Emergency Exposure Tracking Log	OSC-07
OSC Supervisor Checklist	OSC-08
Health Physics Supervisor Checklist	OSC-09
Electrical and I&C and Mechanical Maintenance Supervisor Checklist	OSC-10
Emergency Assignment Staffing Board Duties	OSC-11

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Lisa A. Libney</u>	Date: <u>10/6/03</u>
Reviewed by: <u>Monty P. [Signature]</u> Independent Reviewer	Date: <u>10/7/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Paul Sullivan</u> Manager, Emergency Planning	Date: <u>10/7/03</u>

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1.0 PURPOSE

- (1) This procedure provides instructions for activation and operation of the Technical Support Center (TSC). The basis for this procedure is documented in NUREG-0654, Planning Standard H and the DAEC Emergency Plan, Section B.

2.0 DEFINITIONS

The following definitions supplement those contained in the Quality Assurance Manual, Appendix B, "Glossary of Terms".

- (1) **Activation** – Facility is staffed, (i.e., all 30-minute TSC responders signed onto the TSC Staffing Board). The TSC is required to be activated within 30-minutes of event declaration.
- (2) **Accident Management Team (AMT)** – Personnel trained in accident mitigation strategies and response during Severe Accident Management events.
- (3) **Emergency Action Level (EAL)** – Four classifications for determining appropriate emergency actions: Notice of Unusual Event (UE), Alert, Site Area Emergency (SAE), and General Emergency (GE).
- (4) **Emergency Coordinator (EC)** – Plant Manager, or designee, assigned command and control of the ERO until relieved by the ER&RD.
- (5) **Emergency Operating Procedures (EOPs)** – Symptom based procedures which are entered when key plant parameters are threatened and provides accident mitigation strategies to be taken by the plant up to the point that Primary Containment Flooding is required.
- (6) **Emergency Response & Recovery Director (ER&RD)** – Site Vice President, or designee, assigned overall command and control of the ERO.
- (7) **Emergency Response Organization (ERO)** – The team of trained personnel who respond to emergency declarations in support of the Plant.

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- (8) **Emergency Telephone Book (ETB)** – A listing of all positions identified and personnel assigned to those ERO positions.
- (9) **Operational** – Facility assumes responsibility for EAL declarations, State & County notifications, Protective Action Recommendations (PARs), etc., from the Control Room.
- (10) **Severe Accident Guidelines (SAGs)** – Symptom based procedures which provide accident mitigation strategies to be taken by the plant following the point when it is determined that Primary Containment Flooding is required.
- (11) **Technical Support Guidelines (TSGs)** – Tools to provide a method for the development and optimization of the accident mitigation strategies. The TSGs are intended to enhance the ability of the ERO to assess control parameters, plant status, system status and EOP/SAG actions.

3.0 INSTRUCTIONS

3.1 TSC ACTIVATION

- (1) The TSC may be activated at a NOTIFICATION OF UNUSUAL EVENT at the discretion of the Emergency Coordinator (EC), however, the TSC shall be activated for any event classified as an ALERT or greater. At an ALERT classification and subsequent sounding of the Evacuation alarm and Plant Page announcement, the TSC must be activated within 30 minutes.
- (2) All personnel assigned to the TSC shall report to the TSC. Personnel must first swipe at any identified emergency accountability swipe card reader. The emergency accountability card readers are located at the TSC entrance, the Admin. Building hallway (OSC), and the Warehouse. Personnel then proceed to sign in on the TSC Emergency Assignment Staffing Board, acquire a position badge, position handbook and follow all instructions in the applicable position checklists. Position checklists are referenced in Appendix 1.
 - (a) After signing the TSC Staffing Board and obtaining the EC Position Handbook, the EC reports to the Control Room to obtain a detailed turnover from the Operations Shift Manager/Control Room Supervisor (OSM/CRS). He/she then relieves the OSM/CRS of ERO responsibilities and proceeds to the TSC to assume overall command and control of the ERO. The EC should comply with the items identified in their position checklist.

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1. Only the first EC to sign onto the TSC Staffing Board should go to the Control Room. All subsequent EC's who report should remain in the TSC to assist until dismissed. This is to minimize congestion in the Control Room.
- (b) The following positions may report to the Control Room after signing onto the TSC Staffing Board and obtaining their applicable Position Handbook:
1. TSC Ops Supervisor
 - a. The first TSC Ops Supervisor to sign onto the TSC Staffing Board may wish to receive a briefing from the OSM/CRS on the operational status of the plant. All subsequent responders shall remain in the TSC until dismissed.
 - b. The TSC Ops Supervisor shall relocate to the TSC after receiving the briefing.
 2. TSC ENS Communicator
 - a. The first TSC ENS Communicator should proceed to the Control Room after signing onto the TSC Staffing Board and obtaining their Position Handbook to assist with communicating with the NRC Operations Center. All subsequent responders shall remain in the TSC until dismissed.
 - b. The TSC ENS Communicator shall relocate to the TSC with the Emergency Coordinator after the NRC Operations Center has been notified of the event.
 3. CR Communicator
 - a. The first CR Communicator shall proceed to the Control Room after signing onto the TSC Staffing Board and obtaining their Position Specific Manual. All subsequent responders shall remain in the TSC until dismissed.
 - b. The CR Communicator shall remain in the Control Room.
- (3) In the absence of the EC, the Technical and Engineering Supervisor assumes the command and control function of the TSC.
- (4) The Technical and Engineering Supervisor is responsible for ensuring all minimum staffing requirements for the TSC are met. If necessary, the

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Technical and Engineering Supervisor may appoint qualified personnel to fill all vacant positions. Minimum staffing requirements are identified in TSC-29. The Technical and Engineering Supervisor should comply with the items identified in their position checklist.

- (5) During activation of the TSC, computer links should be established. These include startup and transmission of:
 - (a) ERDS to the NRC Operations Center (within 1-hour of event declaration).
 - (b) SPDS to various displays in the facility.
 - (c) The Electronic Status Board.
- (6) Establish telephone communications between the:
 - (a) TSC, Control Room and OSC.
 - (b) TSC, EOF and JPIC.
 - (c) ENS circuit to the NRC Operations Center.
 - (d) HPN circuit to the NRC Operations Center.

3.2 STAFFING

- (1) The minimum staffing level is reflected in EPIP Form No. TSC-29 in accordance with Reference 1 and Reference 3.
 - (a) Upon staffing the minimum 30-minute positions the TSC is considered activated.
- (2) The Technical and Engineering Supervisor is responsible for the activation of the TSC. Upon all minimum staffing requirements being satisfied, the Technical and Engineering Supervisor shall inform the EC, and initiate a PA announcement to ERO personnel. The announcement should state that all staffing requirements have been met and that the TSC has been declared activated.
- (3) Upon initiation of the Evacuation Alarm (at an ALERT or greater), the following action should be taken to activate the TSC:
 - (a) All onsite ERO personnel, other than those designated to report to the Control Room, OSC, JPIC and EOF, shall report to the TSC.

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- (b) Upon arrival in the TSC, personnel shall proceed to the TSC Emergency Assignment Staffing Board, sign in, locate the applicable position badge and then acquire their associated position specific manual. Utilize the position specific checklist to ensure that the minimum requirements for that position are accomplished.
- (4) ERO position checklists are as listed below:
- (a) Emergency Coordinator: EPIP Form TSC-01.
 - (b) Site Radiation Protection Coordinator: EPIP Form TSC-03.
 - (c) Technical & Engineering Supervisor: EPIP Form TSC-04.
 - (d) Quality Assurance: EPIP Form TSC-05.
 - (e) Security & Support Supervisor: EPIP Form TSC-06.
 - (f) Administrative Supervisor: EPIP Form TSC-07.
 - (g) TSC Communicator: EPIP Form TSC-09.
 - (h) CR Communicator: EPIP Form TSC-10.
 - (i) ENS Communicator: EPIP Form TSC-12.
 - (j) HPN Communicator: EPIP Form TSC-13.
 - (k) TSC/OSC Operations Liaison: EPIP Form TSC-14.
 - (l) Radiological Support Staff: EPIP Form TSC-15.
 - (m) Field Team Director: EPIP Form EOF 12
 - (n) MIDAS Operator: EPIP Form TSC-18.
 - (o) Technical & Analysis Engineer: EPIP Form TSC-19.
 - (p) TSC Operations Supervisor: EPIP Form TSC-20
 - (q) Electrical and I&C Engineer: EPIP Form TSC-21.
 - (r) Mechanical Engineer: EPIP Form TSC-23.
 - (s) Reactor Engineer: EPIP Form TSC-24.

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- (t) Information Services Representative: EPIP Form TSC-26.
 - (u) Fire Marshall: EPIP Form TSC-27.
 - (v) NRC Roles During A Nuclear Power Plant Emergency: EPIP Form TSC-28.
 - (w) TSC Minimum Staffing Level: EPIP Form TSC-29.
 - (x) Emergency Action Request Log: EPIP Form TSC-30.
 - (y) Field Team Log: EPIP Form TSC-31.
 - (z) TSC Organization (typical): EPIP Form TSC-34
 - (aa) TSC Clerical: EPIP Form TSC-39
- (5) If positions remain unstaffed, the Technical and Engineering Supervisor and/or Emergency Coordinator may assign qualified individuals to the unstaffed positions and supplement the assembled staff by further call-out using the ERO Position Equivalency Table, EPIP form ERO-01. Further call-out should be coordinated between the Security and Support Supervisor and the Administrative Supervisor.
- (6) Upon being advised by the Technical and Engineering Supervisor that the TSC is staffed and has been declared activated, the EC shall transit from the Control Room to the TSC. The EC should brief the TSC staff regarding current plant status and provide direction as to the response actions and tasks to be pursued.

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3.3 OPERATION OF THE TSC

- (1) The EC assumes the overall command and control function of the ERO. In the absence of the EC, the Technical and Engineering Supervisor will assume the responsibilities of the EC.
- (2) The TSC, under the supervision of the EC, shall perform the following key functions:
 - (a) Provide assistance to the on-shift operating personnel.
 - (b) Complete vital area accountability.
 - (c) Establish/verify TSC/OSC habitability.
 - (d) Coordinate engineering, emergency repair work, and temporary modifications.
 - (e) Communicate with local, State, Federal and corporate organizations.
 - (f) Initiate all EAL notifications, until relieved of this function by the EOF.
 - (g) Trend all vital plant parameters.
 - (h) Evaluate plant conditions and effluent monitoring systems to determine if a significant release has occurred, is in progress, or may potentially occur.
 - (i) Evaluate dose projections and develop protective action recommendations, as prescribed in reference 2.
 - (j) Communicate any protective action recommendations to the local and State emergency operations centers.
- (3) The OSM/CRS should advise the OSC Supervisor and the TSC Operations Supervisor as to the need to dispatch operators to local plant areas.
- (4) All operational activities should be conducted in accordance with approved procedures. Where procedural requirements cannot be complied with, TSC staff personnel should be assigned to assist the Control Room in preparing temporary changes or developing temporary procedures.
- (5) Adherence to Technical Specification requirements shall be maintained. In the event that deviation from Technical Specification requirements is immediately needed to protect the health and safety of the public, reasonable action that

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departs from a license condition or Technical Specification is permissible, as specified in 10 CFR 50.54(x).

- (a) Prior to taking such actions, approval shall be granted, at a minimum, by a licensed Senior Reactor Operator, as specified in 10 CFR 50.54(y).
- (b) The NRC shall be notified in accordance with 10 CFR 50.72.
- (6) When significant changes in plant status occur, or when new information relevant to onsite or offsite response actions become known, the EC should ensure that such information is disseminated to all TSC staff. This information should be disseminated via a PA announcement and placed onto the Electronic Status Board.
- (7) Plant status briefings should be conducted approximately every 30 minutes or sooner. The announcements should be preceded with, "Attention staff personnel, a status briefing will occur in 1 minute". While briefings are being conducted all communications should be halted, if possible, and personnel attention should be focused on the briefing.
- (8) Logistics and administrative support needs shall be provided under the supervision of the Security and Support Supervisor and shall include the following:
 - (a) Procurement expediting and warehouse support.
 - (b) Food, clothing, and transportation needs.
 - (c) Temporary office facilities and communications, typing/word processing and reproduction equipment.
- (9) Where response actions will be required over a protracted period of time, the EC shall take action to ensure that personnel staffing and shift assignments are made so that continuous coverage is available for all required functions.

3.4 TECHNICAL EVALUATION AND CORRECTIVE ACTION ACTIVITIES

- (1) Based upon the initiating event(s) and current plant status information, the Engineering Staff, under the direction of the Technical & Engineering Supervisor shall perform the following functions:
 - (a) Evaluate available options which will aid in terminating the transient and enable the plant to be returned to a safe and stable condition.

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- (b) Review drawings, specifications and other engineering data to ensure that technical evaluations are conducted with the latest information and that operational evolutions are properly planned.
 - (c) Recommend prioritization of response options which, if implemented, would assist in mitigating the event, restore the plant to a safe condition, minimize or stop any radiological release in progress.
 - (d) Soliciting recommendations and guidance regarding the event and plant conditions from appropriate vendor and contract engineering firms.
 - (e) Contact applicable vendors and industry organizations, (with expertise in specialized areas) who may be able to contribute to analyzing the cause of the event and proposing solutions and response actions.
- (2) In developing response options, the Technical & Engineering Supervisor should coordinate with the Site Radiation Protection Coordinator (SRPC) for those options where access to existing or potentially radiologically hazardous areas may be required.
 - (3) When corrective actions taken involve placing systems in abnormal configurations, the effects that such off-normal modes might have on future operational evolutions shall be evaluated.
 - (4) In restoring the plant to a safe, stable condition, consideration should be given to minimizing the spread of radioactive contamination to other areas of the plant. Contain the radiological hazard to as few systems and as small an area as possible.

3.5 EMERGENCY RADIOLOGICAL ACTIVITIES

- (1) The SRPC shall ensure that necessary protective measures are instituted for the radiological safety of all personnel on-site.
 - (a) Events which result in significant on-site radiological hazards should be given priority to determine assembly area habitability and assuring continued acceptability of those habitability areas.
 - (b) If habitability of the assembly areas is unsatisfactory or potentially unsatisfactory, the SRPC should recommend to the EC evacuation of those assembly areas.

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1. For all non-essential personnel, the Offsite Relocation and Assembly Area (ORAA) should be activated in accordance with reference 5.
 2. If the habitability of the ORAA is suspect (based on wind conditions), it is recommended that the alternate assembly area be the Offsite Decontamination Facility (ORAL/ODEF).
- (c) Essential personnel shall relocate to alternate locations onsite in accordance with reference 6.
- (2) The SRPC should ensure that the TSC/OSC staff personnel are apprised of significant radiological hazard areas within the plant and should provide recommendations to the EC regarding:
- (a) Radiological concerns associated with planned response options, repair activities, etc.
 - (b) Personnel exposure limit increase authorization.
 - (c) Levels of radioiodines and the advisability of administering Potassium Iodide (KI).
 - (d) Reclassification of the event due to on-site radiological problems and effluent release rates.
 - (e) Evacuation of the site.
- (3) Onsite and offsite radiological monitoring shall be conducted in the event of imminent release from the plant.
- (a) Advise the EC, OSC Supervisor and HP Supervisor of the need to conduct onsite and/or offsite monitoring.
 - (b) Provide information regarding the projected or ongoing release to the EC, OSC Supervisor, and HP Supervisor.

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3.6 NRC SITE TEAM

- (1) NRC Site Team members initially dispatched to the TSC, and their TSC counterparts, are as follows:
 - (a) Radiation Safety Coordinator - SRPC
 - (b) Reactor Safety Operations Coordinator - Technical & Engineering Supervisor
 - (c) Security/Safeguards Coordinator - Security & Support Supervisor
- (2) Upon arrival of NRC Site Team personnel, a briefing shall be conducted by, or under the direction of, the EC. Topics discussed should be:
 - (a) Response actions in progress at the TSC to mitigate/terminate the event.
 - (b) Prognosis of the event.
 - (c) Offsite radiological monitoring activities and results.
 - (d) Dose projection results and protective action recommendations that have been issued.
 - (e) Protective actions that have been implemented by offsite authorities in the EPZ.
 - (f) Any additional information requested by the NRC.
- (3) Additionally, the NRC Incident Response Plan defines the NRC's responsibilities during an emergency. A description of these roles is listed in TSC-28, "NRC Roles During a Nuclear Power Plant Emergency." Refer to Reference 7 for additional organization charts for performing essential functions during a federal response to a severe reactor accident with an emphasis on state and federal coordination.
- (4) The Federal Radiological Emergency Response Plan (FRERP) also establishes the NRC as Lead Federal Agency (LFA) for response to nuclear power plant accidents. As LFA, the roles assigned to the NRC include:
 - (a) Coordinate federal technical evaluations and assessments.
 - (b) Act as Lead Technical Spokesperson for the Federal Government.
 - (c) Assist the state in interpretation and analysis of technical information.

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- (d) Keep the White House informed of technical assessments.

3.7 TRANSFER OF CONTROL

- (1) Upon activation of the EOF, the TSC shall relinquish the following functions, but the TSC must remain available to resume these functions in the event the EOF becomes incapable of performing them:
- (a) Offsite communications, including follow-up notifications with local, State and Federal agencies.
 - (b) Dose projection and dose assessment activities.
 - (c) Offsite radiological monitoring and assessment activities, including coordination and interface with local, State and Federal organization.
 - (d) Development and transmittal of protective action recommendations for the public within the Emergency Planning Zone (EPZ).

3.8 UTILIZING ADDITIONAL OR ALTERNATIVE RESOURCES FOR THE ERO

- (1) Emergency conditions may necessitate utilizing personnel previously qualified in certain key areas to assist, or augment, the ERO. The ERO individual for Command and Control (ER&RD, EC, or OSM depending which facility is operable) has the ability to authorize the use of such resources at their discretion.
- (2) The ETB has a section dedicated to providing a list of personnel that can be called upon to assist or augment ERO functions in the following areas:
- (a) Operations
 - 1. SRO
 - 2. RO
 - 3. NSPEO
 - (b) Severe Accident Management (SAM)
 - (c) Fire Brigade
 - (d) First Aid
 - (e) SCBA

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4.0 RECORDS

- (1) Records generated by this procedure shall be retained as needed to support documentation for drills and exercises. If an emergency is declared and the TSC is activated, these records shall be retained in order to reconstruct the emergency event.

5.0 REFERENCES

- (1) NUREG-0654, Rev. 1
- (2) EPA 400-R-92-001, May 1992
- (3) DAEC Plan
- (4) Emergency Telephone Book (ETB)
- (5) EPIP 2.4
- (6) EPIP 1.3
- (7) NUREG 1471
- (8) EPIP 3.3
- (9) EPIP 1.1

6.0 ATTACHMENTS

- (1) TSC Forms (Position Checklists)

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ATTACHMENT 1
TSC FORMS (Position Checklists)

<u>TSC Forms</u>	<u>Form No.</u>
Emergency Coordinator	TSC-01
Site Radiation Protection Coordinator	TSC-03
Technical & Engineering Supervisor	TSC-04
Quality Assurance	TSC-05
Security & Support Supervisor	TSC-06
Administrative Supervisor	TSC-07
TSC Communicator	TSC-09
CR Communicator	TSC-10
ENS Communicator	TSC-12
HPN Communicator	TSC-13
TSC/OSC Operations Liaison	TSC-14
Radiological Support Staff	TSC-15
Field Team Director	EOF-12
MIDAS Operator	TSC-18
Technical & Analysis Engineer	TSC-19
TSC Operations Supervisor	TSC-20
Electrical and I&C Engineer	TSC-21
Mechanical Engineer	TSC-23
Reactor Engineer	TSC-24
Info Services Rep.	TSC-26
Fire Marshall	TSC-27
TSC Clerical Support	TSC-39

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OPERATION OF THE FTS-2001 PHONE NETWORK	Rev. 7 Page 1 of 10

Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. K</u>	Date: <u>10/3/03</u>
Reviewed by: <u>Lisa A. Gibney</u> Independent Reviewer	Date: <u>10/7/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Paula Suller</u> Manager, Emergency Planning	Date: <u>10/13/03</u>

EMERGENCY PLAN IMPLEMENTING PROCEDURES	EPIP 2.3
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1.0 PURPOSE

- (1) This procedure provides guidance associated with the operation of the FTS-2001 phone network. This network is necessary to maintain assured and reliable communications with the NRC during an emergency at DAEC as well as for licensee reporting events during operations.

2.0 DEFINITIONS

The following definitions supplement those contained in the "Glossary of Terms" Appendix B of the Quality Assurance Manual.

- (1) **Emergency Notification System (ENS)**
 - (a) Telephone link established as the primary means of communicating reactor safety-related information during an emergency to the NRC. The ENS portion of the emergency communications system is designed to facilitate the licensee's timely notifications to the NRC of off-normal incidents affecting the facility and provide information concerning the operation and status of the plant to the NRC Operations Center. Upon request by the NRC, the licensee must maintain an open, continuous communication channel with the NRC.
- (2) **Emergency Response Data System (ERDS)**
 - (a) This system provides direct electronic transmission of selected parameters between the DAEC Emergency Data System (EDS) on the DAEC Plant Process Computer (PPC) to the NRC Emergency Response Data System (ERDS). The ERDS would be activated by the licensee upon declaration of an Alert or higher emergency classification to begin transmission to the NRC Operations Center. The system is also intended for use by plant personnel at other times than plant emergencies to monitor plant status by requesting the system's plant parameter displays without transmitting data to the NRC.

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OPERATION OF THE FTS-2001 PHONE NETWORK	Rev. 7 Page 4 of 10

- (3) Federal Telecommunications System (FTS-2001)
 - (a) Network provided by the federal government for use as a communication alternative to the public switched network. The FTS-2001 network provides a separate government network for all of the essential communication functions to the NRC and it avoids the potential public switched network blockage anticipated during a major emergency.
- (4) Health Physics Network (HPN)
 - (a) Telephone link established with the NRC during its standby or initial activation mode of operations after the licensee's TSC/EOF has been activated and is operational. Preliminary information from the licensee (before establishment of the HPN) is provided via the ENS and includes both reactor safety and health physics data. After it has been established, the HPN is the primary means of communicating radiological data (onsite and offsite measurements, dose assessment information and protective measures) and meteorological conditions from the licensee to the NRC. Upon request by the NRC, the licensee must maintain an open, continuous communication channel with the NRC.
- (5) Local Area Network (LAN)
 - (a) Dedicated telephone jack used to access a line to allow the NRC Site Team access to any of the products or services provided on the NRC Operations Center's local area network. This includes technical projections, press releases, status reports, E-mail, and various computerized analytical tools.
- (6) Management Counterpart Link (MCL)
 - (a) Telephone link established for any internal discussions between the Executive Team Director or Executive Team Members and the NRC Director of Site Operations or top-level licensee management at the site.
- (7) Protective Measures Counterpart Link (PMCL)
 - (a) Telephone link established initially with the NRC base team, and then with the NRC site team representatives once they arrive on site. They will conduct internal NRC discussions on radiological releases and meteorological conditions, and the need for protective actions separate from the licensee and without interfering with the exchange of information between the licensee and the NRC. This is the channel by which the NRC Operations Center supports NRC protective measures personnel at the site. In addition, this link may also be used for discussion between

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the Reactor Safety Team Director and licensee plant management at the site.

(8) Reactor Safety Counterpart Link (RSCL)

- (a) Telephone link established initially with the NRC base team, and then with the NRC site team representatives once they arrive on site, to conduct internal NRC discussions on plant and equipment conditions separate from the licensee, and without interfering with the exchange of information between the licensee and the NRC. This is the channel by which the NRC Operations Center supports NRC reactor safety personnel at the site. In addition, this link may also be used for discussion between the Reactor Safety Team Director and licensee plant management at the site.

3.0 INSTRUCTIONS

3.1 FTS-2001 DIALING PROCEDURES

- (1) Lift the receiver on the telephone instrument and listen for the dial tone.
- (2) After receiving the dial tone:
- (a) Dial the first number listed on the sticker located on the telephone instrument. (make sure you dial one first).
- (b) If the first number is busy, proceed on with the second, etc.

3.2 FTS-2001 TROUBLE REPORTING

- (1) Should any emergency communications subsystem (ENS, HPN, RSCL, PMCL, MCL, LAN, or ERDS) fail, the Operations Center in Rockville, Maryland, should be so informed over normal commercial telephone systems by calling (301) 816-5100 or the following backup number: (301) 951-0550 or (301) 415-0550.
- (2) The following information should be provided when contacting the NRC about a failed communication system:
- (a) Name of contact at location of failure
- (b) Commercial phone number of contact

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- (c) Location of contact
- (d) Any other pertinent information
- (3) The NRC Network Control Center (NCC) analyzes the problem and attempts to isolate or determine where it is. If the problem is within the FTS-2001 system, the NCC will direct corrective action including dispatch of work crews.
- (4) If the NRC determines that there is no problem within the FTS-2001 portion of the service they will notify the contact person that the problem is on the DAEC side of the demark.
- (5) If the NRC determines or a local problem is suspected on FTS-2001 phone equipment:
 - (a) Call Technical Services at 851-7228 or the Palo Cooperative telephone Association at 851-3431 for DAEC problems.
 - (b) Call the Alliant Telecommunications department for phone problems in the EOF. The necessary arrangements will be made for repairs.
- (6) If total FTS-2001 is lost, communicate by any means necessary to the NRC Operations Center including commercial telephone, Alliant microwave system through System Load Dispatcher or use the Emergency Planning cell phone.
- (7) If significant losses of FTS-2001 equipment should occur, contact the OSM. The OSM will review ACP-1402.3 for possible regulatory reporting requirements as prescribed in 10CFR50.72.

4.0 RECORDS

- (1) None.

5.0 REFERENCES

- (1) 10 CFR 50.47 (b)(6)
- (2) 10 CFR 50.72
- (3) 10 CFR 50.109 (a)(4)(i)

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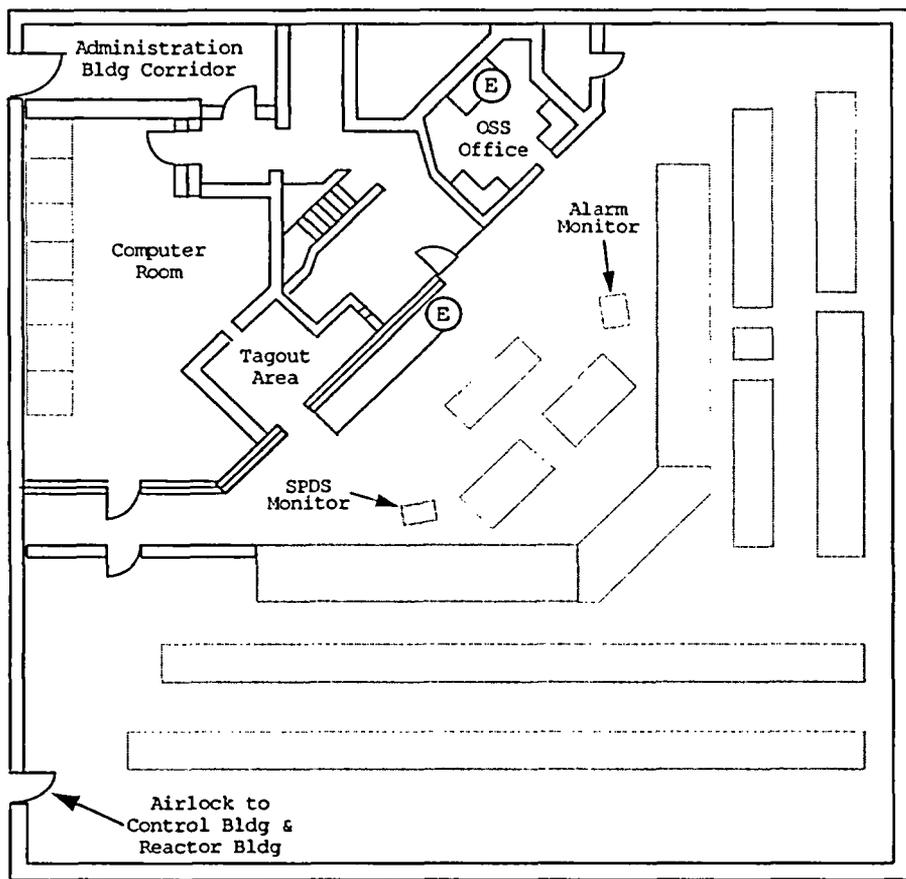
- (4) 10 CFR Part 50, Appendix E VI
- (5) ACP 1402.3 Plant Regulatory Reporting Activities
- (6) NRC Administrative Letter 94-04: Change of the NRC Operations Center Commercial Telephone and Facsimile Numbers

6.0 ATTACHMENTS

- (1) Control Room FTS-2001 Locations
- (2) TSC FTS-2001 Locations
- (3) EOF FTS-2001 Locations

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OPERATION OF THE FTS-2001 PHONE NETWORK	Rev. 7 Page 8 of 10

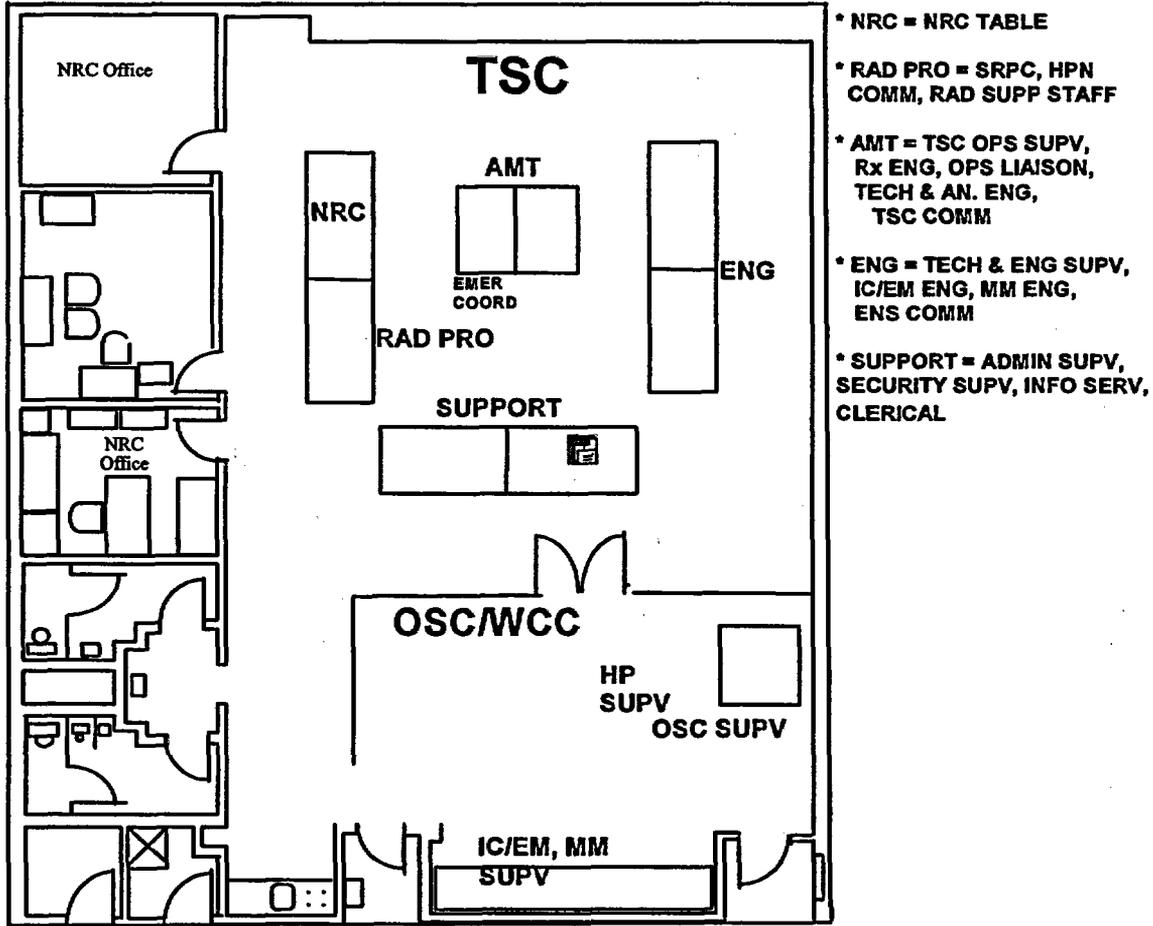
ATTACHMENT 1
CONTROL ROOM FTS-2001 LOCATIONS
 Typical



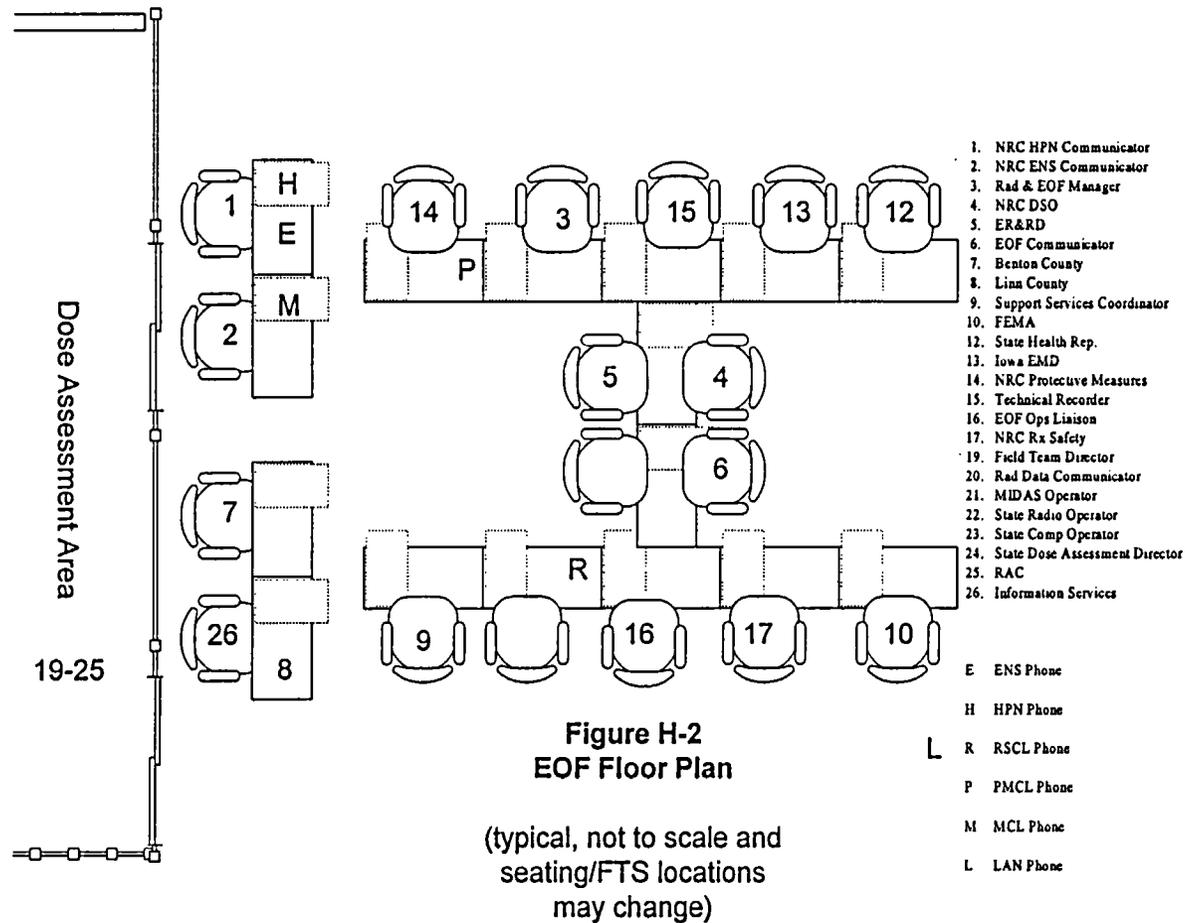
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OPERATION OF THE FTS-2001 PHONE NETWORK	Rev. 7 Page 9 of 10

ATTACHMENT 2
TECHNICAL SUPPORT CENTER FTS-2001 LOCATIONS
(Typical)



Attachment 3: EOF FTS-2001 Locations



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CONTROL ROOM EMERGENCY RESPONSE OPERATION	Rev. 15 Page 1 of 16

Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Ira A. Gibney</u>	Date: <u>10/04/03</u>
Reviewed by: <u>Russell Hiles</u> Independent Reviewer	Date: <u>10/6/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Paul Siller</u> Manager, Emergency Planning	Date: <u>10/17/03</u>

EMERGENCY PLAN IMPLEMENTING PROCEDURE	EPIP 2.5
CONTROL ROOM EMERGENCY RESPONSE OPERATION	Rev. 15 Page 2 of 16

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CONTROL ROOM EMERGENCY RESPONSE OPERATION	Rev. 15 Page 3 of 16

1.0 PURPOSE

- (1) This procedure provides guidance associated with implementing emergency preparedness requirements in the Control Room upon determining that the plant is in an unexpected operational condition.

2.0 DEFINITIONS

None

3.0 INSTRUCTIONS

3.1 EVENT CLASSIFICATION

- (1) Upon determining that the plant is in an unexpected operational condition, the Operations Shift Manager/Control Room Supervisor (OSM/CRS) shall evaluate plant conditions using guidance contained in EPIP 1.1, "Determination of the Emergency Action Level," and, as warranted, classify the event in one of the four emergency categories.
 - (a) Contact should be made with the Operations Manager for clarification, as may be warranted.
 - (b) Additionally, Technical Support staff personnel may be contacted for advice regarding event classification and/or reporting requirements.
- (2) If classified as an emergency, the OSM/CRS shall initiate notification.
 - (a) The OSM/CRS shall function additionally as the Emergency Coordinator and Site Radiation Protection Coordinator until relieved of such function by appropriately qualified personnel.
- (3) Form CR-01, 'OSM/CRS Checklist' should be used to ensure that all required actions are complete
- (4) Form CR-04, 'Control Room to TSC Command and Control Transfer Checklist' should be used to ensure that event status is effectively transferred to the TSC.

3.2 NOTIFICATION

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- (1) Notification of DAEC, Corporate and offsite agency personnel, including the NRC, shall be accomplished, as specified in EPIP 1.2, "Notification."
- (2) As part of the initial notification message to offsite authorities, the OSM/CRS is required to recommend protective actions for the health and safety of the public, if so warranted.
- (3) An evaluation of projected offsite doses and development of associated protective action recommendations should be accomplished using EPIP 3.3, "Dose Assessment & Protective Action Recommendations."
- (4) If no radiological release is occurring, Protective Action Recommendations (PAR'S), based upon plant conditions, should be made for events classified as SITE AREA or GENERAL EMERGENCY.
- (5) At Emergency Classification declarations of Alert or greater, the on-shift Chemist will run MIDAS. Projected offsite doses shall be communicated to the OSM/CRS until the TSC is activated.

3.3 PLANT EVACUATION AND RESPONSE CENTER STAFFING

- (1) For all events classified as an ALERT or greater, plant assembly and site evacuation (as appropriate) shall be conducted as prescribed in EPIP 1.3, "Plant Assembly and Site Evacuation."
- (2) Upon annunciation of the Evacuation Alarm, all Operations Department personnel on-site should report to the Control Room, whether or not assigned on-shift duties.
- (3) Should the Control Room require evacuation, personnel will report to the Remote Shutdown Panel.
- (4) The Shift Technical Advisor (STA) should report to the Control Room, if not already present, to assist in the evaluation of plant conditions and to provide assistance, as requested by the OSM/CRS.
- (5) Additional emergency personnel designated to report to the Control Room for communications and status reporting functions are guided by the following Checklists:

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- (5) Additional emergency personnel designated to report to the Control Room for communications and status reporting functions are guided by the following Checklists:
- (a) CR to TSC transfer of Command & Control; refer to Form CR-04, "Control Room to TSC Command and Control Transfer Checklist".
 - (b) CR Communicator; refer to Form TSC-10, "TSC Communicator Checklist."
 - (c) TSC NRC ENS Communicator; refer to Form TSC-12, "NRC ENS Communicator Checklist."
 - (d) Instructions to Start Electronic Status Board, Form TSC-43
- (6) The OSM/CRS may direct that additional Operations Department personnel be contacted for operating, monitoring, and communications functions.
- (7) The NRC Resident Inspector is expected to report to the Control Room to independently evaluate plant status and response actions underway and to ensure that NRC Emergency centers in Rockville, MD, and at Region III in Lisle, IL, are kept fully informed of the situation.
- (8) The OSM/CRS shall ensure that an accountability check is made for all emergency response personnel assigned to the Control Room and all operations personnel on-shift, this information shall be forwarded to Security.

3.4 COMMUNICATIONS AND STATUS MONITORING

- (1) ERO Personnel assigned to the Control Room should inform the OSM/CRS of their assigned position upon arrival in the Control Room.
- (2) Following initial activation, the OSM/CRS should ensure that the required communications and data recording/transmission functions are being executed satisfactorily, reassigning personnel, and/or appointing others, if necessary.
- (3) Status information being reported, its frequency and report format may be modified at the discretion of the OSM/CRS, TSC Operations Supervisor and/or the Technical and Engineering Supervisor.

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- (a) Information to be reported should be based on the type of event, plant conditions deemed to be pertinent and the event phase.
- (b) The report form on the VAX can be modified, adding or deleting information entries as is appropriate.
- (c) The CR Communicator should use the Electronic Status Board to document information such as:
 - 1. Summary of crew briefings
 - 2. Summary of plant status
 - 3. Main Steam Radiation Monitor readings
 - 4. Summary of events taking place in the Control Room
- (4) The dedicated telephone circuit between the Control Room and the TSC should be used by the CR Communicator under the direction of the OSM/CRS and the TSC Operations Supervisor for the following purposes:
 - (a) Provide amplifying information regarding plant status and clarify information indicated on the Plant Status Report.
 - (b) Provide immediate updates to the TSC regarding changing conditions and new information.
 - (c) Identify problems that are encountered and discuss actions which can be taken for their resolution.
 - (d) Discuss operational evolutions and repair activities which are planned and report status during execution.
 - (e) Serve as a means for the OSM/CRS to talk directly to the TSC Operations Supervisor and Emergency Coordinator.
- (5) The ENS circuit shall be used to initially notify the NRC of emergency conditions.
 - (a) The NRC shall be notified as soon as possible after notification of the appropriate State and local agencies and no later than one hour after

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- (b) If an event is classified as an ALERT or greater, at the request of the NRC, the ENS circuit shall remain open and shall be staffed. Upon activation of the TSC, an ENS Communicator will be assigned to enable continuous communications with the NRC.
- (c) Normally, the NRC Operations Center in Rockville, MD, will establish a communications link via the ENS to NRC Region III Offices in Lisle, IL, so that the DAEC, Region III and Headquarters are able to communicate simultaneously.
- (d) The DAEC EDS link to the NRC ERDS should be initiated as soon as possible following the declaration of an ALERT or higher emergency classification, not to exceed one hour from the time of the declaration.

3.5 RADIOLOGICAL AND METEROLOGICAL INFORMATION

- (1) Status information to be provided as input into dose projection calculations (if necessary) includes meteorological information, effluent monitor readings and process system flows.
- (2) Effluent monitor information and process flows should be obtained from the Kaman System console located in the Control Room.
- (3) Instructions for operation of the KAMAN System console are included in OI-879.
- (4) Information may also be obtained from the console located in the Radiochemistry Laboratory.
- (5) Meteorological information to be provided includes wind speed (in miles per hour), wind direction (the direction from which the wind is blowing, in degrees) and ΔT (the difference in temperature between sensors located at 156 and 33 feet) and degrees F.
- (6) Delta T (ΔT) can be either negative or positive and should be determined by reading point 2 on the outside air temperature recorder on Panel 1C22 or by subtracting the indicated temperature at the 33 ft. level from the indicated temperature at the 156 ft. level, pts. 3 and 1 on the outside air temperature recorder on Panel 1C22.

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- (7) As an alternate, wind speed and wind direction can be obtained by selecting SPMET1. ΔT can be obtained by selecting SPMET2 on the SPDS terminal.
- (8) Meteorological information and weather forecasts may also be obtained from the NWS Forecasting Station using the telephone number provided in the Emergency Telephone Book.
- (9) The radiological and meteorological parameters should be monitored and reported at a frequency specified by the TSC.
- (10) Additionally, when changes are detected and/or trends become apparent, the Site Radiation Protection Coordinator and TSC Operations Supervisor should be advised.

3.6 TRENDING

- (1) Trending of important plant parameters will be accomplished as directed by the OSM/CRS in conjunction with the TSC Operations Supervisor.
- (2) Parameters to be considered for trending include, but should not be limited to:
 - (a) Nuclear instrumentation; e.g., if shutdown has not been achieved.
 - (b) Reactor vessel water level and pressure.
 - (c) Containment pressure and temperature.
 - (d) Torus water level and temperature.
 - (e) ARM and Containment High Range Radiation Monitor levels.
 - (f) Radiological effluent concentrations.
- (3) Recorders installed in the Control Room should be used to the maximum extent possible. To enable more accurate trending, the recorder may be placed on high speed.
- (4) Additional plant parameters will be trended, as appropriate, based upon the event and plant condition as identified by the OSM/CRS or TSC Operations Supervisor.

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3.7 EMERGENCY RESPONSE ACTIVITIES

- (1) The OSM/CRS shall ensure that the TSC is kept informed of plant status and problems which are discovered.
- (2) The OSM/CRS should review problems and corrective action options with the TSC and provide input regarding options to be pursued, actions to be taken, and so forth.
- (3) The OSM/CRS shall also ensure that NRC personnel in the Control Room are kept apprised of plant status, problems, corrective action options being pursued and response actions underway.
- (4) Control Room response actions and strategies to terminate the transient and mitigate the consequences of the event, should be reviewed with the TSC Operations Supervisor.
- (5) In responding to off-normal conditions and restoring the plant to an acceptable operating mode, procedural requirements should be followed to the extent that plant conditions are consistent with the procedural basis.
- (6) In those cases where adherence to procedural requirements cannot be maintained, the TSC Operations Supervisor should be informed.
- (7) The normal administration practice governing temporary changes to procedures should be implemented unless such practices have been waived by the Emergency Response and Recovery Director.
- (8) If time does not permit, response actions should be initiated to terminate the transient and mitigate the consequences of an accident, irrespective of procedural requirements.
- (9) In such cases, actions taken should be logged in the Control Room Log.
- (10) Adherence to Technical Specification requirements should be maintained. As specified in 10 CFR 50.54(x), deviations from Technical Specification requirements are permissible, during an emergency, to protect the health and safety of the public.

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- (11) As noted in EPIP 1.2, "Notification," the NRC shall be notified, in accordance with 10 CFR 50.72, of emergency circumstances requiring such protective action before such action is taken, time permitting.
- (12) The TSC Operations Supervisor, with the assistance of the OSM/CRS, should recommend reclassification of the event to the Emergency Coordinator based upon plant status and projected conditions indicated by parameter trends, system operating configurations and system/equipment limitations which are being approached.

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3.8 TSC/OSC NOT OPERATIONAL

- (1) If the TSC and OSC are not operational and no abnormal radiological conditions are present:
 - (a) Operators are briefed utilizing Attachment 2, "In-Plant Operator Briefing Form" on associated precautions and pertinent operational information prior to being dispatched to plant locations where local response actions are required.
 - (b) Health Physics Technicians are informed of the operator actions and are requested to provide additional assistance at that time as is necessary.
 - (c) Personnel closely monitor in-plant and effluent radiation levels for trends and changes.
 - (d) All operators dispatched should exit through Access Control.

- (2) If suspected abnormal radiological conditions exist, dispatch of Operations personnel will be at the discretion of the OSM/CRS provided:
 - (a) Operators should be briefed on associated precautions and pertinent operational information utilizing Attachment 2, "In-Plant Operator Briefing Form", to include:
 - (b) Expected radiological conditions
 - (c) Associated precautions
 - (d) Stay times
 - (e) Access routes
 - (f) Increased exposure limits
 - (g) Estimates of total exposure
 - (h) Personnel dispatched should don protective clothing, dosimetry, respiratory equipment as necessary, and obtain a high range survey instrument.

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- (i) Health Physics is informed of the operator actions and provide assistance as necessary.
- (j) Personnel closely monitor in-plant and effluent radiation levels (trends/changes).
- (k) All personnel dispatched should exit through Access Control.

3.9 TSC/OSC OPERATIONAL

- (1) If no abnormal radiological conditions are present, operators may be dispatched directly into the plant providing:
 - (a) The OSC Supervisor and TSC Operations Supervisor are advised in advance, or the plant operators check in with the OSC Supervisor prior to plant entry.
- (2) Operators that are dispatched into the plant should enter the plant via Access Control unless otherwise authorized by the Emergency Coordinator.
- (3) If suspected abnormal radiological conditions exist the Emergency Coordinator must approve the dispatch of all personnel into the plant.
- (4) Plant Operators must check in with the OSC Supervisor prior to engaging In-plant Operators to perform tasks. The OSC Supervisor shall ensure that Operators are briefed on expected radiological conditions, associated precautions, increased exposure limits, stay times and access routes, and adequate protective clothing, dosimetry, and respiratory protection equipment is donned before each entry.
- (5) Personnel dispatched into the plant shall establish communications with the Control Room and the OSC by methods described by the OSC Supervisor.
- (6) The OSM/CRS should consult with the TSC to ensure that Control Room personnel are aware of the dispatch of any personnel on site, such as rescue and repair activities, on-site monitoring, etc.
- (7) As plant status changes, and/or problems are discovered, the OSM/CRS shall ensure that the TSC is advised.

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- (8) If conditions may potentially affect personnel already dispatched, the OSM/CRS should advise the TSC of the potential problems and that they are recalling any Operators currently in the plant.
- (9) Where response actions may extend over a protracted period of time or when additional Operations personnel are required to adequately conduct response and recovery activities, the TSC Operations Supervisor shall make provisions for continuous coverage by realigning personnel shift assignments and shift schedules.
- (10) In restoring the plant to a safe, stable configuration during an event where core degradation has occurred or where significant quantities of radioactive material have been released or are available for release (transport) from the Reactor Coolant System, consideration should be given to minimizing the spread of radioactive contamination to other areas of the plant and containing the radiological hazard to as few systems and as small an area as possible.
 - (a) The OSM/CRS should consult with the TSC and verify that TSC staff personnel, under the direction of the Technical and Engineering Supervisor, evaluate options available to aid in this effort.
- (11) No action should be taken to operate a system in a manner which could jeopardize the health and safety of the public.
- (12) The OSM/CRS shall evaluate plant status, key parameters and the ability to maintain the plant in a stable, safe condition and advise the TSC of their readiness to deactivate emergency response personnel in the Control Room. Deactivation and restoration of the plant to an operating condition following a significant event shall be accomplished in accordance with a recovery plan, developed as specified in EPIP 5.2, "Recovery and Reentry."

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4.0 RECORDS

- (1) All logs forms and records generated must be forwarded to the EP Department and retained in accordance with QA Record Retention requirements. Authorization for disposal shall be obtained from the NRC.

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) NUREG 0654, Rev. 1
- (3) 10CFR50.54
- (4) NRC Region III Emergency Response Plan and Implementing Procedures
- (5) NRC Administrative Letter 94-04: Change of the NRC Operations Center Commercial Telephone and Facsimile numbers.

6.0 ATTACHMENTS

- (1) Attachment 1 - Control Room Forms
- (2) Attachment 2 - In-Plant Operator Briefing Form

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ATTACHMENT 1

CONTROL ROOM FORMS

Control Room Forms	Form No.
OSM/CRS Checklist	CR-01
Dose Projection & ARM Data Sheet	CR-03
Control Room to TSC Command and Control Transfer Checklist	CR-04

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ATTACHMENT 2

In-Plant Operator Briefing Form

Dispatch of In-Plant Operators During Emergency Responses
With the TSC/OSC NOT Operational

No Abnormal Radiological Conditions Present:

- Operators may be dispatched to plant locations where local response actions are required.
- Emergency Coordinator informed during his Control Room briefing utilizing Form CR-04, 'Control Room to TSC Command and Control Transfer Checklist'.
- Operators briefed on associated precautions and pertinent operational information.
- Health Physics Technician informed of the operator actions and ask for any assistance as necessary.
- Personnel closely monitor in-plant and effluent radiation levels (trends/changes).
- All Operators dispatched should exit through Access Control.

IF Suspected Abnormal Radiological Conditions Exist:

Dispatch of Operations Personnel is at the discretion of the OSM/CRS provided:

- Emergency Coordinator informed during his Control Room briefing utilizing Form CR-04, 'Control Room to TSC Command and Control Transfer Checklist'.
- Operators briefed on associated event precautions listed below:
 1. Expected Radiological Conditions: _____
 2. Stay Times: _____
 3. Access Routes: _____
 4. Associated Precautions: _____
 5. Increased Exposure Limits: _____
 6. Estimate of Total Exposure: _____
- Personnel dispatched should don protective clothing, dosimetry, respiratory equipment as necessary, and obtain a high range survey instrument.
- Health Physics Technician informed of the operator actions and instruct him to provide assistance as necessary.
- Personnel closely monitor in-plant and effluent radiation levels (trends/changes).
- All personnel dispatched should exit through Access Control.

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. Johnson</u>	Date: <u>9/27/03</u>
Reviewed by: <u>Suzette J. [Signature]</u> Independent Reviewer	Date: <u>10/5/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Carol Sullivan</u> Manager, Emergency Planning	Date: <u>10/6/03</u>

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1.0 PURPOSE

- (1) This procedure provides instructions for performing radiological monitoring activities during an emergency including determination of habitable areas, In-Plant radiological monitoring, and post-accident sampling (PASS). This procedure supports the implementation of requirements in 10CFR50, Appendix A, NUREG 0654 and the DAEC Plan.
- (2) This procedure is applicable to the Site Radiation Protection Coordinator, Chemistry Technicians, the OSC Health Physics Supervisor, Health Physics Technicians and other In-Plant Monitoring Team personnel involved in In-Plant radiological monitoring activities.
- (3) This procedure should be implemented for events classified as an ALERT or greater, and may be implemented upon activation of the Operational Support Center (OSC) for an event classified as a NOTIFICATION OF UNUSUAL EVENT if necessary.

2.0 DEFINITIONS

- (1) None

3.0 INSTRUCTIONS

3.1 RESPONSIBILITIES

3.1.1 SITE RADIATION PROTECTION COORDINATOR

- (1) Ensure that DAEC personnel are dispatched to monitor the environs in and around the plant for radiological consequences associated with the event.

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- (2) Conduct an initial evaluation and assessment of the results of radiological monitoring activities. Upon activation of the Emergency Operations Facility (EOF), this function will be assumed by the Rad & EOF Manager for all Off-Site monitoring activities.
- (3) Assess the On-Site radiological consequences and directing protective measures, including evacuation of the plant.
- (4) During the initial stages of the event, appraise local and State authorities, through the Emergency Coordinator, of the results of radiological monitoring activities and providing protective action recommendations based upon the projected radiological consequences to the population-at-risk. Upon activation of the EOF, this function will be assumed by the Rad & EOF Manager.

3.1.2 OSC HEALTH PHYSICS SUPERVISOR

- (1) Ensure that personnel dispatched from the OSC are properly outfitted with protective clothing and equipment, are briefed regarding ALARA and are apprised of existing and potential radiological hazards.
- (2) Coordinate with the Site Radiation Protection Coordinator to obtain information regarding plant status, problems, response options, significant radiological releases in progress, offsite dose rates, plume location and meteorological conditions as necessary.
- (3) Ensure the determination of habitability of assembly areas and ERO facilities.
- (4) Coordinate the dispatch of monitoring teams, PASS team and Offsite Relocation Assembly Area (ORAA) and Offsite Radiological Analysis Laboratory/Offsite Decontamination Facility (ORAL/ODEF) personnel when necessary. Ensure the continued briefing of the ORAA in terms of plant and radiological conditions.
- (5) Supervise efforts to prepare injured/contaminated personnel for transport to offsite medical facilities.
- (6) Brief rescue and emergency repair team personnel regarding radiological hazards which exist, or which potentially may be encountered, and provide

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guidance regarding precautions to be taken and limits that shall not be exceeded.

3.2 DETERMINATION OF ASSEMBLY AREA HABITABILITY

- (1) The assembly areas of concern at the DAEC include the following:
 - (a) Control Room
 - (b) TSC
 - (c) OSC, which includes the OSC Break Room, Security Building, the Health Physics Access Control Area, and interconnecting passageways.
 - (d) Hot Lab
 - (e) Warehouse
 - (f) Badging Center
 - (g) Training Center
 - (h) Plant Support Center (PSC)
- (2) The OSC HP Supervisor should determine the habitability of the PSC, Badging Center and Training Center through the use of an On-Site Radiological monitoring team or, if unavailable, use additional H.P. personnel to perform this function.
- (3) Initial determinations of habitability for the Control Room, TSC and Hot Lab should be accomplished by ensuring that the radiation levels being detected by the permanently installed radiation monitoring (Area Radiation Monitoring) system are normal.
 - (a) .When the Plant Process Computer is operational, this data is available to the TSC and EOF. The CR-TSC Communicator need only to forward the Main Steamline Rad Monitor data to the Site Radiation Protection Coordinator as these do not have computer points associated with them

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NOTE

EPIP Form TSC-40, "ARM Locations", provides a listing of the installed Area Radiation Monitors throughout the plant, including their locations and ranges.

- (b) As specified in EPIP 2.2, "Activation and Operation of the TSC", the three TSC radiation monitors (two monitoring the ventilation intake duct work and one in the TSC general area) shall be monitored upon initially activating the TSC, by the Radiation Support Staff. This information should be forwarded to the Site Radiation Protection Coordinator.
- (4) If radiation levels being monitored in the above areas are greater than normal, the Site Radiation Protection Coordinator should be advised and protective measures instituted.

NOTE

If the monitors are alarming, the Site Radiation Protection Coordinator may recommend evacuation of such areas to the Emergency Coordinator.

If radiation levels are higher than normal, priority should be given to radiation survey and sampling activities in those areas to determine their acceptability for continued access.

- (5) The OSC HP Supervisor shall be responsible to initiate radiation survey and airborne sampling of the OSC, TSC, PSC, Warehouse, Badging Center, Training Center, Control Room, or other areas, based upon the priority assigned by the Site Radiation Protection Coordinator. The following activities will be conducted by Health Physics Technicians assigned by the Emergency Assignment Tag Board.

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- (a) Area radiation surveys shall be conducted and documented as prescribed in HP Procedures and Attachment 1, HP: E-Plan Habitability Data Sheet.
 - (b) Airborne radioactivity surveys shall be conducted and documented as prescribed in HP Procedures.
- (6) The results of such survey and sampling activities shall be reviewed by the OSC HP Supervisor, and their degree of conformance to normal DAEC Administrative Guidelines determined. The OSC Supervisor and Site Radiation Protection Coordinator (SRPC) shall be informed of any abnormal conditions.

NOTE

Normal personnel external and internal exposure limits in effect are prescribed in ACP 1411.18 "Personnel Dosimetry".

Standard area contamination limits to be observed are prescribed in ACP 1411.22 "Personnel Access and Egress in Radiological Areas".

- (7) Survey and sampling activities prescribed above should be conducted in the Control Room, TSC, and Hot Lab if increasing trends are detected by the installed radiation monitors or as directed by the Site Radiation Protection Coordinator.
- (8) If an assembly area is determined to be uninhabitable or not suitable for long term habitability, the following should occur:
- (a) The Site Radiation Protection Coordinator shall recommend evacuation of selected assembly areas or of the site, and, as appropriate, relocation of essential personnel to alternate assembly areas on site. Evacuation of non-essential personnel is required for a SITE or GENERAL EMERGENCY.

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- (b) Non-essential personnel should be evacuated to the ORAA, as prescribed in EPIP 2.4, "Activation and Operation of the ORAA".
- (c) Essential personnel shall be relocated to another assembly area determined to be safe, or occupancy times established for the affected areas and relief shift assignments made so that essential functions can be conducted on a continuing basis.
- (9) If evacuation of one or more assembly areas is required, essential personnel should be relocated to an alternate area, as follows:

<u>Primary Area</u>	<u>1st Alternate</u>	<u>2nd Alternate</u>
Control Room	As required to achieve a stable, safe, shutdown condition	
TSC/OSC	Control Room	Security Bldg or ORAA
Hot Lab	ORAL	N/A
Warehouse	ORAA	N/A
Badging Center	ORAA	N/A
Training Center	ORAA	N/A
PSC	ORAA	N/A
ORAA	ODEF	N/A

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NOTE

When selecting "essential" personnel, consideration should be given to the minimum shift staffing requirements defined in the DAEC Plan, Table B-1. The Emergency Telephone Book may be used as a reference for obtaining shift staffing designations.

Guidance regarding TSC personnel considered to be essential is contained in EPIP 1.3, "Plant and Site Evacuation".

- (10) The OSC HP Supervisor shall assure that follow-up monitoring of Assembly Areas is conducted, and shall obtain/seek the concurrence of the OSC Supervisor.
- (a) Survey and sampling activities to be conducted and their frequency should be based upon the potential radiological hazards as well as the results of prior monitoring activities and the capability of installed instrumentation to detect changes in radiological conditions.
 - (b) In defining the type, frequency and location of monitoring activities to be conducted, consideration should be given to increases in radiation levels throughout the plant.
- (11) The results of such monitoring activities shall be reviewed by the OSC HP Supervisor. The OSC Supervisor and Site Radiation Protection Coordinator shall be advised of any problems or adverse trends detected.
- (a) The Site Radiation Protection Coordinator should provide guidance to the OSC Supervisor regarding further monitoring activities to be conducted and protective measures to be instituted for personnel in those areas; for example, use of protective clothing and respirators, implementation (or modification) of occupancy times, administration of KI, etc.

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NOTE

Use of accepted Health Physics practices (i.e., clothing and limiting the stay time) should only be considered for Control Room and TSC personnel.

3.3 IN-PLANT RADIOLOGICAL MONITORING

- (1) Radiological monitoring activities inside the plant shall be conducted to support required response actions.
- (2) A Health Physics Technician should accompany each rescue, repair and reentry team upon initial entry into an area where an actual or potential radiological hazard exists.
 - (a) As discussed in EPIP 4.3, "Rescue and Emergency Repair Work", repair activities may be conducted during the course of several staged entries; therefore, entries subsequent to the initial entry may be conducted without the presence of a Health Physics Technician, providing the hazards are well known and the possibility of a transient occurring is non-existent.
 - (b) The determination as to whether or not a Health Physics Technician shall accompany a repair team or an operator into the plant and remain in their presence shall be made by the Site Radiation Protection Coordinator or OSC HP Supervisor.
- (3) The OSC HP Supervisor shall provide guidance to the Health Physics Technician on the radiological conditions to expect and monitoring activities to be conducted prior to dispatch of personnel into an actual or potential radiological hazard area.
 - (a) The OSC HP Supervisor shall ensure that required protective clothing is donned properly.

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- (b) Respiratory protection equipment, if required, will be checked and determined to be operable, and the user aware of equipment operating limitations.
 - (c) Dosimetry of sufficient range will be worn to adequately monitor whole body and extremity doses, where applicable.
 - (d) Equipment and supplies anticipated to be required for the assignment are available and checked to ensure operability.
 - (e) Briefings will be conducted, to the extent required, to ensure that personnel are aware of the jobs to be performed.
- (4) Upon being dispatched, the Health Physics Technician should, in addition to monitoring dose rates and total exposures:
- (a) Provide guidance to team members regarding precautions to be taken to minimize their total exposure.
 - (b) Advise the OSC HP Supervisor of unexpected radiological conditions encountered.
- (5) The OSC HP Supervisor or designee should, as time permits, monitor the activities of in-plant personnel utilizing the network of cameras available on-site.
- (6) Upon egress from the plant, the Health Physics Technician should provide guidance, as required, in discarding protective clothing and in the performance of personnel monitoring and decontamination, if required, prior to passing through the Health Physics Access Control Area.

3.4 POST-ACCIDENT SAMPLING

- (1) The OSC Supervisor and OSC HP Supervisor shall be advised by the Site Radiation Protection Coordinator of post-accident sampling and analysis activities to be conducted.
- (2) If a particulate filter and charcoal cartridge sample from the KAMAN Effluent Monitoring System is to be obtained for analyses,

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- (a) The Site Radiation Protection Coordinator should determine which cartridge(s) are to be obtained and the radiation level of the cartridge, as monitored by the KAMAN System.
- (b) The OSC HP Supervisor should be advised of the projected radiation levels and review with the Site Radiation Protection Coordinator appropriate radiological protective measures to be taken.

NOTE

Calculations have been completed which verify that the samples listed in EPIP Form TSC-41 can be retrieved without exceeding exposure levels of 5 rem Deep Dose Equivalent to the whole body. Proper protective measures for personnel involved in sampling activities should be taken.

- (3) Based upon the expected dose rates, an estimate should be made of the total exposure to be received while obtaining and analyzing a sample and exposure limit increases authorized, if required, as specified in EPIP 4.3, "Rescue and Emergency Repair Work".

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- (4) The OSC HP Supervisor shall designate the Chemistry Technician(s) accompanied by a Health Physics Technician to obtain the samples. The OSC HP Supervisor will conduct a briefing consisting of, at a minimum, the expected radiological conditions and associated precautions, increased exposure limits, stay times, access routes and that adequate protective clothing, dosimetry and respiratory protection equipment is donned before each entry.

NOTE

Prior to dispatching the PASS Sampling Team personnel into the Power Block Structure, the OSM/OSS should be advised and Emergency Coordinator authorization received.

- (a) Sample retrieval from the Off-Gas Stack should be accomplished in accordance with PASAP's.
- (b) Sample retrieval from the Reactor Building Stacks and Turbine Building Vent should be accomplished in accordance with PASAP's.
- (c) Grab samples from the Reactor Building should be obtained as prescribed in PASAP's.
- (5) Post-accident sampling conducted at the Post-Accident Sample System station should be conducted by Chemistry Technicians in accordance with PASAP's.
- (6) Personnel dispatched to remote locations to obtain samples should maintain communications with the OSC, advising the OSC HP Supervisor of any unusual phenomena observed.
- (7) Analyses of samples and documentation of results should be conducted using the PASAP's.

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4.0 RECORDS

- (1) All records generated as a result of this procedure shall be forwarded to the Site Radiation Protection Coordinator for retention and is considered a QA Record (exception is for records generated during drills/exercises) in accordance with EPDM 1007.

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) NUREG 0654, Rev. 1, Planning Standard H, I, J, K
- (3) EPIP 1.3, "Plant and Site Evacuation"
- (4) EPIP 2.5, "Control Room Emergency Response Organization"
- (5) EPIP 2.2, "Activation and Operation of the TSC"
- (6) HP Procedures
- (7) ACP 1411.22 "Personnel Access and Egress in Radiological Areas"
- (8) ACP 1411.18 "Personnel Dosimetry"
- (9) EPIP 4.3, "Rescue and Emergency Repair Work"
- (10) EPIP 2.4, "Activation and Operation of the ORAA"
- (11) ENVIRONMENTAL SAMPLING PROCEDURES
- (12) PASAP's
- (13) OFFSITE DOSE ASSESSMENT MANUAL (ODAM)

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6.0 ATTACHMENTS

- (1) Attachment 1, HP: E-Plan Habitability Data Sheet

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. Johnson</u>	Date: <u>10/4/03</u>
Reviewed by: <u>Bessie Miller</u> Independent Reviewer	Date: <u>10/6/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Paul Sullivan</u> Manager, Emergency Planning	Date: <u>10/7/03</u>

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1.0 PURPOSE

- (1) This procedure provides guidance associated with the performance of both onsite and offsite field radiological monitoring activities during an emergency.
- (2) This procedure is applicable to the Site Radiation Protection Coordinator (SRPC), the Operational Support Center (OSC) Supervisor, OSC Health Physics (HP) Supervisor and Field Radiological Monitoring Teams personnel.
- (3) Guidance associated with direction and control of the Field Radiological Monitoring Teams, and coordination of local, State and Federal agencies is contained in Emergency Plan Implementing Procedure (EPIP) 3.3, "Dose Assessment and Protective Action."
- (4) This procedure is intended to be used in conjunction with the Offsite Dose Assessment Manual (ODAM), and the DAEC Environmental Sampling Procedures (ESP's).

NOTE

It is expected that the majority of the offsite radiological monitoring activities described in this procedure will be conducted under the direction of the Radiological Assessment Coordinator (RAC) in the Emergency Operations Facility (EOF).

2.0 DEFINITIONS

- (1) None

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3.0 INSTRUCTIONS

3.1 RESPONSIBILITIES

(1) Site Radiation Protection Coordinator (SRPC)

- (a) Ensuring that DAEC personnel are dispatched to monitor the environs in and around the plant for radiological consequences associated with the event.**
- (b) Conducting an initial evaluation and assessment of the results of radiological monitoring activities. Upon activation of the EOF, this function will be assumed by the Radiological Assessment Coordinator (RAC) for all offsite monitoring activities.**
- (c) Assessing the onsite radiological consequences and directing protective measures, including evacuation of the plant in part or in whole.**
- (d) During the initial stages of the event, apprising local and State authorities, through the Emergency Coordinator, of the results of radiological monitoring activities and providing protective action recommendations based upon the projected radiological consequences to the population-at-risk. Upon activation of the EOF, this function will be assumed by the RAC.**

(2) OSC Health Physics (HP) Supervisor

- (a) Ensuring that personnel dispatched from the OSC are properly outfitted with protective clothing and equipment, are briefed regarding ALARA (As Low As Reasonably Achievable) and are apprised of existing and potential radiological hazards.**
- (b) Coordinating with the SRPC in the TSC to obtain information regarding plant status, problems, response options, significant radiological releases in progress, offsite dose rates, plume location and meteorological conditions as necessary.**
- (c) Ensure the determination of habitability of assembly areas and ERO facilities.**
- (d) Coordinate the dispatch of Field Radiological Monitoring teams.**

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3.2 TEAM PREPARATION AND DISPATCH

- (1) Personnel are assigned to the Field Radiological Monitoring Teams as specified in EPIP 2.1, "Activation and Operation of the Operational Support Center."
 - (a) The OSC HP Supervisor may elect to reassign personnel initially assigned to the Teams to take maximum advantage of the capabilities and experience of assigned personnel.
 - (b) Activities to be completed by the Field Radiological Monitoring Teams prior to being dispatched are identified on the referenced checklists.
- (2) Once an ALERT has been declared, and until there is a radiological release in progress, the OSC HP Supervisor will assemble, brief and dispatch the Field Monitoring Teams to assemble gear and establish radio contact with the SRPC. The OSC HP Supervisor will inform the Emergency Coordinator via the SRPC of all teams dispatched.

NOTE

Once set-up activities are complete, with concurrence from the Emergency Coordinator, personnel may be reallocated as necessary.

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(3) In preparation for conducting monitoring activities:

- (a) The SRPC shall evaluate the location and magnitude of the plume if a release is in progress, as specified in EPIP 3.3, "Dose Assessment and Protective Action" and provide direction to the field monitoring teams. Both the computerized and manual methods of dose projection are covered in this procedure.

<p><u>NOTE</u></p> <p>Field radiological monitoring is required for events classified as a SITE or GENERAL EMERGENCY and should be considered as a precautionary measure during an ALERT.</p>
--

- (b) Additionally, the SRPC shall pass on this information to the OSC HP Supervisor and shall review the briefing information identified in Attachment 1, "Typical Radiological Monitoring Team Briefing Topics", with the OSC HP Supervisor.
- (c) The OSC HP Supervisor shall ensure that the Team members are appropriately dressed, have their required dosimetry and have checked out the operation of their equipment.

<p><u>NOTE</u></p> <p>Each Team shall ensure that instrumentation is within calibration and has been source checked.</p>

- (d) The OSC HP Supervisor should conduct the Team briefing, reviewing, at a minimum, items noted in Attachment 1, and dispatch the Teams to their vehicles.

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- (e) Upon completing their vehicle checkout, including fueling, if required, and loading their equipment in the vehicle, the Team should contact the OSC HP Supervisor and advise him of their readiness to be dispatched offsite.

NOTE

If an adequate number of functioning vehicles cannot be obtained, the OSC Supervisor should be advised, who in turn should advise the Security and Support Supervisor.

The Emergency Coordinator may authorize the use of personal vehicles, or if time permits, may elect to have the Security and Support Supervisor coordinate with the Emergency Support Manager to secure additional vehicles.

- (4) The SRPC shall be advised by the OSC HP Supervisor of the readiness of the Teams to be dispatched, and responsibility for further Team communications should be transferred to the Field Team Director in the TSC.
- (5) Upon receiving authorization from the Emergency Coordinator to dispatch the Teams, the SRPC should:
- (a) Advise the Security and Support Supervisor that the Field Radiological Monitoring Teams are to be dispatched.
 - (b) Instruct the Field Team Director to advise the teams that they are under the control of the TSC and that all further communications are to be conducted with the TSC.
 - (c) Instruct the Field Team Director to dispatch the Teams to specific locations, to await further instructions.
 - (d) The SRPC will advise the Field Radiological Monitoring Teams of any releases in progress and the magnitude of the release.

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NOTE

The Security and Support Supervisor should coordinate egress of monitoring teams from DAEC with DAEC Security personnel and members of Local Law Enforcement Agencies, as appropriate.

3.3 PLUME DETECTION AND MONITORING PRECAUTIONS

- (1) The presence of a radioactive plume should be detected by the Field Radiological Monitoring Team by observing increasing count rates or dose rates on survey instrumentation used with the window of the vehicle rolled down and the instrument held outside the vehicle.
 - (a) Upon observing an increase in count rates or dose rates, the Team should inform the TSC of levels encountered and their location. The data should be documented in accordance with instructions.
- (2) To determine if the plume is on the ground, open and closed shield surveys should be made with the probe held outside the vehicle.

NOTE

For the E-140 (or equivalent), place hand over the window for closed window surveys.

- (a) If the open shield and closed shield readings are approximately the same, the team IS NOT in the plume.
 - (b) An open shield reading that significantly exceeds a closed shield reading (i.e., two to three times higher indicates that the team IS in the plume.
- (3) If abnormally high dose rates persist even after it is expected that the plume has been exited, perform a radiation survey of the vehicle. (Inside and outside - including personnel)

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NOTE

Caution should be observed near the air cleaner and radiator since the area is likely a source of the high radiation levels.

- (a) Dose rates within the vehicle may be high enough to preclude use of the vehicle for further monitoring activities.
 - (b) If such is the case, the TSC (EOF) should be contacted regarding actions to be taken.
 - (c) If continued use of the vehicle is desired for some period of time, it may be necessary to leave the vehicle to obtain accurate survey data.
- (4) Upon encountering radiation levels of 500 mRem/hr or greater, Teams should:
- (a) Proceed to an area of lower dose rate (preferably background).
 - (b) Document the location of the high dose rate on Attachment 2, "Emergency Monitoring Log"
 - (c) Inform the TSC (EOF) of the dose rate encountered and the location.
 - (d) Review instructions with the TSC (EOF) before resuming monitoring activities.
 - (e) Check team members personal dosimeters and record on Attachment 2, "Emergency Monitoring Log".

NOTE

Entries into radiation levels of 500 mRem/Hr or greater may be allowed with authorization from the SRPC (TSC) or RAC (EOF).

- (5) Communications with the Teams will normally be transmitted via radio.
- (a) If the radio is inoperative, the Team should proceed to a telephone and contact the SRPC to obtain a spare radio. Caution should be used in not passing through the last known plume location.

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- (b) The SRPC should take action as required to obtain a radio and provide it to the Team.
- (c) The SRPC should advise the Radiological Assessment Coordinator, if activated, of problems and response actions being taken, as soon as possible.

NOTE

Intermittent radio communications may be due to the terrain. When this occurs, the Teams should proceed to a higher location and try to establish contact with the TSC(EOF).

3.4 RADIOLOGICAL MONITORING ACTIVITIES

- (1) The Field Radiological Monitoring Teams shall proceed to locations, as directed.
 - (a) The maps of the Emergency Planning Zone, posted in the facility and the maps in the Teams' kits, may be used to plan routes.
 - (b) Survey instrumentation should be operating on the lowest range available to enable initial detection of elevated levels of radioactivity.
- (2) Upon reaching the assigned locations, the Teams shall report to the TSC(EOF) and advise that they are standing by and ready to obtain data as requested.
 - (a) Initial offsite radiological monitoring will usually be accomplished under the direction of the SRPC.
 - (b) Upon activation of the EOF this responsibility will be assumed by the RAC.

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NOTE

Instructions regarding coordination of this turnover are contained in EPIP 3.3, "Dose Assessment and Protective Action."

- (3) Upon receiving direction to traverse the plume, the Teams should proceed as follows:
 - (a) Obtain survey information as necessary to identify plume edges and areas of highest dose rate (centerline), or as directed.
 - (b) Take air samples as requested at the centerline of the plume (or as directed).
 - (c) After each traverse of the plume, report survey information to the EOF, if activated; otherwise, report to TSC.
 - (d) Monitor each team member's dosimeter reading periodically.
 - (e) Periodically monitor the team vehicle for contamination after exiting the plume. Monitor the team vehicle after completion of plume tracking.
- (4) Document all radiological data in accordance with instructions.
- (5) The Field Teams may be directed to change out the particulate filters and charcoal cartridges at the environmental monitoring stations located offsite in the downwind direction prior to, following and/or during the time when a release is in progress.
 - (a) The location of each of the air samplers is provided in the ODAM.

NOTE

Sample stations located on-site are identified in EPIP 3.1, "Inplant Monitoring."

Instructions for obtaining air samples are provided in this procedure.

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- (6) Team members should be alert to local conditions or situations which may not be reflected on maps or which could not be anticipated by personnel involved in directing Team activities.
- (a) Examples include locations of members of the public who appear to be remaining in evacuated areas, accidents and whether further radiological surveys should be obtained, etc.
- (b) Additionally, information of this nature should be recorded by the Team.

NOTE

Recording of information of this nature as well as recording of as much radiological information as is possible by the Field Radiological Monitoring Teams will weigh heavily during post-accident evaluation of total man-rem exposure to the public. Consequently, offsite monitoring activities should be documented as well and as extensively as possible.

- (7) Team members should periodically check their pocket dosimeters and record the readings and time on Attachment 2, "Emergency Monitoring Log," and report these readings to the TSC/EOF.
- (8) Authorization for team members to exceed the DAEC administrative exposure limits or the administration of potassium iodide (KI) must be recommended by the SRPC and approved by the Emergency Coordinator, on a case-by-case basis.
- (9) While conducting surveys, the Field Teams should minimize the contamination of survey equipment.

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3.5 AIR SAMPLING (LOW VOLUME SAMPLES)

- (1) Load the air sampler with appropriate filters (Particulate and Iodine).

NOTE

During drills, charcoal cartridges should be used in lieu of silver zeolite cartridges.

- (2) If the vehicle battery is used, raise the hood on the vehicle and leave the vehicle running.
- (3) Connect the air sampler to the battery, ensuring the red lead goes to the positive (+) terminal.
- (4) Turn the air sampler "ON".
 - (a) Take precautions to prevent contamination of the sampler.
 - (b) The sampler should be positioned approximately waist high.
 - (c) Obtain a 1, 5 or 10 cubic foot air sample, as instructed.

NOTE

Normally, a 10 cubic foot air sample will be obtained in those areas where dose rates are low, ie; <5 mr/hr. A 1 cubic foot sample will be taken if dose rates are high, ie; > 200 mr/hr.

- (5) Periodically perform a radiation survey on the radiator of the vehicle.
- (6) Record information regarding the sample on Attachment 3, "Air Sample Identification." Include the count rate and airborne activity based on field assessment, as appropriate.

NOTE

The filter paper and silver zeolite cartridge should be stored separately.

- (7) Remove the sample from the sampler, taking precautions to prevent sample contamination.

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- (a) Place the sample in a plastic bag, attach the Air Sample Identification label and seal the bag.
- (b) Position the sample in the vehicle to minimize exposure to the occupants of the vehicle.
- (8) Monitor the filter cartridge with a survey instrument, determine the airborne activity concentration, record the results, and report same to the TSC (or EOF) as follows:
 - (a) Record the count rate or dose rate, as appropriate, using either an E-140 (or equivalent) or an open window RO-2 (or equivalent).
 - (b) Using Attachment 4, "Conversion of Air Sample Results into Radioiodine Concentrations," convert the survey instrument reading to airborne activity concentration based upon the sample volume drawn.
- (9) Deliver samples as described in this procedure.

3.6 RADIOLOGICAL SAMPLING

- (1) As directed by either the SRPC or RAC, team members should initiate selected environmental sampling activities in accordance with DAEC ESP's.

3.7 TRANSPORTATION OF SAMPLES TO THE OFFSITE RADIOLOGICAL AND ANALYTICAL LABORATORY

- (1) As directed by the SRPC (RAC), offsite environmental sample media should be transported to the Offsite Radiological and Analytical Laboratory (ORAL) by one of the following means:
 - (a) Samples may be taken directly to the ORAL by the Monitoring Teams, if they are close to that facility (refer to EPIP APPENDIX 1 form ODEF-3, "Travel Routes to the ORAL/ODEF").
- (2) If samples are to be delivered to the offsite laboratory, the RAC should contact the ORAA Supervisor (if activated) or the SRPC and request that he dispatch a "Sample Runner."
 - (a) Prior to dispatching the Sample Runner, the ORAA Supervisor or the SRPC should ensure that the Sample Runner has been properly briefed regarding:
 - i) Sample pickup point.

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NOTE

The sample pickup point designated for environmental sample media transfer should be selected such that it will minimize the amount of time the Monitoring Team(s) will have to suspend plume monitoring activities.

- ii) Route(s) recommended for travel to the sample pickup point to avoid the plume.
- iii) Travel route to the ORAL. (See EPIP APPENDIX 1 form ODEF-3, "Travel Routes to the ORAL/ODEF").
- iv) The Sample Runner should have appropriate dosimetry and a TLD.
- v) The RAC, or SRPC, should advise the Security and Support Supervisor in the TSC of the planned transport of samples to the ORAL.
- vi) Once the Sample Runner and Monitoring Team(s) have reached the sample pickup point, samples should be transferred to the Sample Runner's vehicle by the Monitoring Team Leader. Samples should be located in the vehicle such that the exposure to the Sample Runner will be minimized. The outside of the bags should be wiped down to minimize spread of contamination.

NOTE

The Sample Runner should at all times avoid handling samples. Samples are to be handled by qualified personnel only.

- vii) The Sample Runner should proceed to the ORAL to deliver samples.

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3.8 ON-SITE FIELD RADIOLOGICAL MONITORING

- (1) Personnel shall be assigned to the On-Site Field Monitoring Team as specified in EPIP 2.1, "Activation and Operation of the OSC".
 - (a) The OSC HP Supervisor may elect to reassign personnel initially assigned to the Teams to take maximum advantage of the capabilities and experience of personnel available to perform radiological monitoring functions.
 - (b) Activities to be completed by personnel assigned to the On-Site Team prior to being dispatched are identified on the checklists.

NOTE

EPIP Form TSC-42 "Onsite Map", should be used when reporting location of survey data to the TSC/OSC.

- (2) In making preparations for conducting monitoring activities:
 - (a) The SRPC shall evaluate location and magnitude of the projected on-site dose rates, as specified in EPIP 3.3, "Dose Assessment and Protective Action", relay this information to the OSC HP Supervisor and identify the sequence of monitoring activities to be conducted.
 - (b) The OSC HP Supervisor shall brief the Team with this information, as well as the precautions to be taken, and ensure that the team members are appropriately dressed, have the required dosimetry, and have checked out the operation of their equipment.
- (3) The Onsite Team may be directed to change out the particulate filters and charcoal cartridges at the environmental monitoring stations located onsite prior to, following and/or during the time when a release is in progress.
 - (a) The particulate filters and charcoal cartridges located at both stations on site should be changed.

NOTE

When changing out charcoal cartridges, they should be replaced with Silver Zeolite cartridges.

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- (b) Directions to each air sampler are provided in the ODAM.
- (4) The Onsite team may be directed to perform habitability checks of the Badging Center, PSC, and Training Center prior to evacuating these areas as necessary.
- (5) The OSC HP Supervisor shall advise the OSC Supervisor and SRPC when the Onsite Team is ready to be dispatched.
- (6) The SRPC shall assume control of the Onsite Team, and dispatch them after ensuring that the Security Shift Supervisor has been advised.
- (7) The following surveys will normally be conducted and documented in accordance with the accompanying procedure:
 - (a) Radiation survey in accordance with HP Procedures.
 - (b) Radiation contamination surveys in accordance with HP Procedures.
 - (c) Airborne radioactivity surveys in accordance with HP Procedures.

NOTE

Instructions for obtaining a low volume air sample and estimating the activity concentration using a portable survey instrument are provided in this procedure.

- (8) Onsite Monitoring personnel should maintain communications with the TSC via radio.
- (9) Upon completion of the survey and as directed Team members shall return to the OSC, observing all control point requirements, and report to the OSC HP Supervisor for further instructions and debriefing.

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3.9 AIR SAMPLING (LOW VOLUME SAMPLES)

- (1) Load the air sampler with appropriate filters.

NOTE

Use of Silver Zeolite cartridges is recommended when obtaining low volume air samples to detect radioiodines.

- (2) Perform a radiation survey on the radiator of the vehicle.
- (3) Raise the hood on the vehicle and leave the vehicle running.
- (4) Connect the air sampler to the battery, ensuring the red lead goes to the positive terminal.
- (5) Turn the air sampler "ON".
 - (a) Take precautions to prevent contamination of the sampler.
 - (b) The sampler should be held approximately waist high.
- (6) Obtain a 1, 5 or 10 cubic foot air sample, as instructed.

NOTE

Normally, a 10 cubic foot air sample will be obtained in those areas where dose rates are low, i.e., <5 mr/hr. A 1 cubic foot sample will be taken if dose rates are high, i.e., >200 mr/hr.

- (7) Record information regarding the sample on Attachment 3, "Air Sample Identification". Include the count rate and airborne activity based on field assessment, as appropriate.
- (8) Remove the sample from the sampler, taking precautions to prevent sample cross-contamination.
 - (a) Place the sample in a plastic bag, attach the Air Sample Identification label and seal the bag.

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- (b) Position the sample in the vehicle to minimize exposure to monitoring team members.

NOTE

The filter paper and Silver Zeolite cartridge should be stored separately.

- (9) Evaluate the filter cartridge (Silver Zeolite) with a portable survey instrument, determine the airborne activity concentration, record the results, and report same to the TSC (or EOF), as follows:

NOTE

Sample evaluation must be conducted in a low background area; therefore, the Team may be required to travel to another location in order to evaluate the sample.

- (a) Record the count rate or dose rate, as appropriate, using either an E-140 (or equivalent) or an open window RO-2 (or equivalent).
- (b) Using Attachment 4, "Conversion of Air Sample Results into Radiological Concentrations", convert the survey instrument reading to airborne activity concentration based upon the sample volume drawn.
- (c) Report results as iodine concentration in $\mu\text{Ci/cc}$.

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3.10 DOCUMENTATION AND ROUTING OF ONSITE MONITORING ACTIVITIES

- (1) Documentation of radiological monitoring activities results should be provided to the Admin Supervisor in the TSC where three copies of each document shall be made.

NOTE

As conditions warrant, the SRPC and the OSC HP Supervisor may need this documentation immediately; therefore, they should be allowed to review the documentation before it is forwarded to the Records Clerk.

- (2) The original should be retained by the Admin Supervisor in the TSC.
- (3) The SRPC and the OSC HP Supervisor should be provided one copy each of all documentation.
- (4) The other copy should be distributed, as follows:
 - (a) Habitability surveys - Health Physics Access Control Point
 - (b) In-Plant surveys - Health Physics Access Control Point
 - (c) On-Site monitoring activities - Health Physics Access Control Point

3.11 DOCUMENTATION OF RADIOLOGICAL MONITORING DATA

- (1) Radiological monitoring data gathered at the offsite areas shall be recorded on Attachment 2, "Emergency Monitoring Log" (or equivalent).
- (2) Entries shall include the following information, as applicable.
 - (a) Date
 - (b) Page number
 - (c) Team Leader and Team Member names
 - (d) Exposure limit
 - (e) Wind conditions

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- (f) Personal dosimetry readings
 - (g) Survey instrument information
 - (h) Air sample data
 - a. Time
 - b. Location
 - c. Volume (ft³)
 - d. Activity (μCi/cc) (Refer to Attachment 4, "Conversion of Air Sample Results into Radioiodine Concentrations").
 - (i) Location of survey (See Step 3.12, "Determining Sample Point and Plume Locations")
 - (j) Date and time of survey
 - (k) Radiation levels in mR/hr or R/hr (open and closed window readings)
 - (l) Pertinent observations by Monitoring Team members, including physical hazards
 - (m) Initials of the individual rewording the data.
- (3) The Emergency Monitoring Logs and any other pertinent notes should be provided to the OSC HP Supervisor upon returning to the plant and subsequently provided to the Admin Supervisor in the TSC.

3.12 DETERMINING SAMPLE POINT AND PLUME LOCATIONS

- (1) By use of available maps:
 - (a) Use the maps provided to determine your location as close as possible. Be sure to capture and document information such as landmarks and demarcations in order to be able to return to the same location if necessary. This is the 'normal' method of determining sample point and plume location.

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(2) By use of the Garmin 45XL GPS Unit:

Note

The Garmin 45XL GPS Unit is needed when providing exact location information for use when performing back-calculations for Dose Projections (MIDAS). The location information needed for MIDAS is distance from the Offgas Stack and the direction from YOUR location TO the Offgas Stack.

The Garmin 45XL GPS Unit is also needed when providing information in coordination with government agencies in support of an emergency at DAEC. The common standard is to document location information using latitude and longitude.

(a) To determine where you are in relation to the Offgas Stack:

1. Turn on and initialize GPS unit (reference instructions provided with unit).
2. Press 'GOTO' and select 'Stack'
3. Press 'PAGE' until you get to the screen that has Bearing (BRG) and Distance (DST) on it. Inform the TSC(EOF) of the Bearing and Distance from your position to the Offgas Stack.

(b) To determine where you are in Latitude and Longitude:

1. Turn on and initialize GPS unit (reference instructions provided with unit).
2. Press 'PAGE' until you get to the screen that has 'TRACK' and 'SPEED' on it. The coordinates under 'POSITION' are latitude and longitude (in that order). Inform the TSC(EOF) of your latitude and longitude.

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4.0 RECORDS

- (1) All records generated by this procedure shall be retained in accordance with EPDM 1007 and QA Record Retention Requirements.

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) NUREG 0654 FEMA-REP-1 Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980
- (3) NUREG-CR-5212, "Emergency Environmental Sampling and Analysis for Radioactive Material Facilities"
- (4) EPIP 3.3, "Dose Assessment and Protective Action"
- (5) EPIP 2.1, "Activation and Operation of the Operational Support Center"
- (6) EPIP 3.1, "Inplant Monitoring"
- (7) Offsite Dose Assessment Manual for Gaseous and Liquid Effluents (ODAM)
- (8) HP Procedures
- (9) DAEC Environmental Sampling Procedures (ESP's)

6.0 ATTACHMENTS

Attachment 1, "Typical Radiological Monitoring Team Briefing Topics"

Attachment 2, "Emergency Monitoring Log"

Attachment 3, "Air Sample Identification"

Attachment 4, "Conversion of Air Sample Results into Radioiodine Concentrations"

Attachment 5, "Emergency Environmental Sample Collection Record, typical"

Attachment 6, "Emergency Environmental Sample Log, typical"

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ATTACHMENT 1

TYPICAL RADIOLOGICAL MONITORING TEAM BRIEFING TOPICS

- (1) Meteorological Information, including:
 - (a) Wind Speed
 - (b) Wind Direction
- (2) Radiological Information - if a release is in progress:
 - (a) Release Point
 - (b) Release rate
 - (c) Maximum projected dose rate and location
 - (d) Plume boundaries
 - (e) Affected sectors/area
- (3) Location to which Teams will initially be dispatched, routes to be used to avoid radiological hazard areas if such exists, and tasks to be accomplished.
- (4) To the extent capable of being projected, the duration of time until either a release begins or is stopped.
- (5) Documentation requirements (maintenance of logs and charts).
- (6) Protective measures to be employed.
 - (a) Consider the need for dose extensions.
 - (b) Authorize use of KI.
 - (c) Protective clothing/respiratory protection equipment usage.
- (7) Reporting requirements, including, for example:
 - (a) Radiation survey readings
 - (b) Airborne sample estimates
 - (c) Unusual or unexpected problems or situations which may impact the ability to perform monitoring functions
 - (d) Observations of actions taken by local, State or Federal assistance groups or the public
- (8) Precautions to be observed upon entering the plume and as appropriate, in high radiation fields.

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ATTACHMENT 2
EMERGENCY MONITORING LOG

Date _____

TEAM - _____

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TEAM LEADER (T)	
TEAM MEMBER (TM)	
EXPOS. LIMITS	
EXTENDED TO	
WIND SPEED / TIME	
DIRECTION/TIME	

PERSONAL DOSIMETRY READINGS					
TIME	T _L	T _M	TIME	T _L	T _M

SURVEY INSTR. INFORMATION		
TYPE	SERIAL NO.	CAL. DUE

AIR SAMPLE DATA							
INST. USED	SAMPLE LOCATION	START TIME	STOP TIME	FLOW (CFM)	VOL (FT ³)	NET CPM (IODINE)	IODINE 131 (μC)

RADIOLOGICAL DATA							
LOCATION	TIME	OPEN/CLOSED	REMARKS	LOCATION	TIME	OPEN/CLOSED	REMARKS
		/				/	
		/				/	
		/				/	
		/				/	
		/				/	
		/				/	
		/				/	
		/				/	
		/				/	

PERFORMED BY: _____ DATE: _____

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ATTACHMENT 3
AIR SAMPLE IDENTIFICATION

AIR SAMPLE

SAMPLE LOCATION _____

DATE/TIME ON _____ / _____

DATE/TIME OFF _____ / _____

SAMPLE FLOW RATE _____ **CFM**

SAMPLE COLLECTED BY _____

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ATTACHMENT 4

NOTE: This chart is only applicable for 6 hours after the Reactor scram.

**Conversion of Air Sample Results Into Radioiodine Concentrations
E-140 or RO-2**

COUNT RATE (cpm)	1ft ³			COUNT RATE (cpm)	5ft ³			COUNT RATE (cpm)	10ft ³		
	1ft ³	5ft ³	10ft ³		1ft ³	5ft ³	10ft ³		1ft ³	5ft ³	10ft ³
100	3.18E-8	6.36E-9	3.18E-9	5700	1.81E-6	3.63E-7	1.81E-7	23K	7.32E-6	1.46E-6	7.32E-7
200	6.36E-8	1.27E-8	6.36E-9	5800	1.85E-6	3.69E-7	1.85E-7	24K	7.64E-6	1.53E-6	7.64E-7
300	9.54E-8	1.91E-8	9.54E-9	5900	1.88E-6	3.75E-7	1.88E-7	25K	7.95E-6	1.59E-6	7.95E-7
400	1.27E-7	2.54E-8	1.27E-8	6000	1.91E-6	3.82E-7	1.91E-7	26K	8.27E-6	1.65E-6	8.27E-7
500	1.59E-7	3.18E-8	1.59E-8	6100	1.94E-6	3.88E-7	1.94E-7	27K	8.59E-6	1.72E-6	8.59E-7
600	1.90E-7	3.82E-8	1.90E-8	6200	1.97E-6	3.94E-7	1.97E-7	28K	8.91E-6	1.78E-6	8.91E-7
700	2.22E-7	4.45E-8	2.22E-8	6300	2.00E-6	4.00E-7	2.00E-7	29K	9.23E-6	1.85E-6	9.23E-7
800	2.54E-7	5.09E-8	2.55E-8	6400	2.04E-6	4.07E-7	2.04E-7	30K	9.54E-6	1.91E-6	9.54E-7
900	2.86E-7	5.72E-8	2.86E-8	6500	2.07E-6	4.14E-7	2.07E-7	31K	9.86E-6	1.97E-6	9.86E-7
1000	3.18E-7	6.36E-8	3.18E-8	6600	2.10E-6	4.20E-7	2.10E-7	32K	1.01E-5	2.04E-6	1.02E-6
1100	3.49E-7	6.99E-8	3.50E-8	6700	2.13E-6	4.26E-7	2.13E-7	33K	1.05E-5	2.10E-6	1.05E-6
1200	3.81E-7	7.64E-8	3.82E-8	6800	2.16E-6	4.33E-7	2.16E-7	34K	1.08E-5	2.16E-6	1.08E-6
1300	4.13E-7	8.27E-8	4.14E-8	6900	2.20E-6	4.39E-7	2.20E-7	35K	1.11E-5	2.23E-6	1.11E-6
1400	4.45E-7	8.91E-8	4.45E-8	7000	2.23E-6	4.45E-7	2.23E-7	36K	1.15E-5	2.29E-6	1.15E-6
1500	4.77E-7	9.54E-8	4.77E-8	7100	2.26E-6	4.52E-7	2.26E-7	37K	1.18E-5	2.35E-6	1.18E-6
1600	5.09E-7	1.02E-7	5.09E-8	7200	2.29E-6	4.58E-7	2.29E-7	38K	1.21E-5	2.41E-6	1.21E-6
1700	5.40E-7	1.08E-7	5.41E-8	7300	2.32E-6	4.64E-7	2.32E-7	39K	1.24E-5	2.48E-6	1.24E-6
1800	5.73E-7	1.15E-7	5.73E-8	7400	2.35E-6	4.71E-7	2.35E-7	40K	1.27E-5	2.54E-6	1.27E-6
1900	6.04E-7	1.21E-7	6.04E-8	7500	2.39E-6	4.77E-7	2.39E-7	41K	1.30E-5	2.61E-6	1.30E-6
2000	6.36E-7	1.27E-7	6.36E-8	7600	2.41E-6	4.84E-7	2.42E-7	42K	1.34E-5	2.67E-6	1.34E-6
2100	6.68E-7	1.34E-7	6.68E-8	7700	2.45E-6	4.90E-7	2.45E-7	43K	1.38E-5	2.74E-6	1.37E-6
2200	6.99E-7	1.39E-7	6.99E-8	7800	2.48E-6	4.96E-7	2.48E-7	44K	1.40E-5	2.80E-6	1.40E-6
2300	7.31E-7	1.46E-7	7.32E-8	7900	2.51E-6	5.03E-7	2.51E-7	45K	1.43E-5	2.86E-6	1.43E-6
2400	7.63E-7	1.52E-7	7.64E-8	8000	2.55E-6	5.09E-7	2.55E-7	46K	1.46E-5	2.92E-6	1.46E-6
2500	7.95E-7	1.59E-7	7.95E-8	8100	2.58E-6	5.15E-7	2.58E-7	47K	1.50E-5	2.99E-6	1.50E-6
2600	8.27E-7	1.65E-7	8.27E-8	8200	2.61E-6	5.22E-7	2.61E-7	48K	1.53E-5	3.05E-6	1.53E-6
2700	8.59E-7	1.72E-7	8.59E-8	8300	2.64E-6	5.28E-7	2.64E-7	49K	1.56E-5	3.12E-6	1.56E-6
2800	8.90E-7	1.78E-7	8.91E-8	8400	2.67E-6	5.34E-7	2.67E-7	50K	1.59E-5	3.18E-6	1.59E-6
2900	9.22E-7	1.85E-7	9.23E-8	8500	2.70E-6	5.40E-7	2.70E-7	51K	1.62E-5	3.25E-6	1.62E-6
3000	9.54E-7	1.91E-7	9.54E-8	8600	2.74E-6	5.47E-7	2.74E-7	52K	1.65E-5	3.31E-6	1.65E-6
3100	9.86E-7	1.97E-7	9.86E-8	8700	2.77E-6	5.54E-7	2.77E-7	53K	1.69E-5	3.37E-6	1.69E-6
3200	1.01E-6	2.04E-7	1.02E-7	8800	2.80E-6	5.60E-7	2.80E-7	54K	1.72E-5	3.43E-6	1.72E-6
3300	1.04E-6	2.10E-7	1.05E-7	8900	2.83E-6	5.66E-7	2.83E-7	55K	1.75E-5	3.49E-6	1.75E-6
3400	1.08E-6	2.16E-7	1.08E-7	9000	2.86E-6	5.73E-7	2.86E-7	56K	1.78E-5	3.56E-6	1.78E-6
3500	1.11E-6	2.23E-7	1.11E-7	9100	2.89E-6	5.79E-7	2.89E-7	57K	1.81E-5	3.63E-6	1.81E-6
3600	1.14E-6	2.29E-7	1.15E-7	9200	2.92E-6	5.85E-7	2.92E-7	58K	1.85E-5	3.69E-6	1.85E-6
3700	1.17E-6	2.35E-7	1.18E-7	9300	2.95E-6	5.92E-7	2.95E-7	59K	1.88E-5	3.75E-6	1.88E-6
3800	1.20E-6	2.42E-7	1.21E-7	9400	2.99E-6	5.98E-7	2.99E-7	60K	1.91E-5	3.82E-6	1.91E-6
3900	1.24E-6	2.48E-7	1.24E-7	9500	3.02E-6	6.04E-7	3.02E-7	61K	1.94E-5	3.88E-6	1.94E-6
4000	1.27E-6	2.54E-7	1.27E-7	9600	3.05E-6	6.11E-7	3.05E-7	62K	1.97E-5	3.94E-6	1.97E-6
4100	1.30E-6	2.61E-7	1.30E-7	9700	3.09E-6	6.17E-7	3.09E-7	63K	2.00E-5	4.01E-6	2.00E-6
4200	1.33E-6	2.67E-7	1.34E-7	9800	3.12E-6	6.24E-7	3.12E-7	64K	2.04E-5	4.07E-6	2.04E-6
4300	1.36E-6	2.74E-7	1.37E-7	9900	3.15E-6	6.30E-7	3.15E-7	65K	2.07E-5	4.14E-6	2.07E-6
4400	1.40E-6	2.79E-7	1.40E-7	10K	3.18E-6	6.36E-7	3.18E-7	66K	2.10E-5	4.20E-6	2.10E-6
4500	1.43E-6	2.86E-7	1.43E-7	11K	3.50E-6	6.99E-7	3.50E-7	67K	2.13E-5	4.25E-6	2.13E-6
4600	1.48E-6	2.93E-7	1.48E-7	12K	3.82E-6	7.64E-7	3.82E-7	68K	2.16E-5	4.33E-6	2.16E-6
4700	1.50E-6	2.99E-7	1.49E-7	13K	4.14E-6	8.27E-7	4.14E-7	69K	2.20E-5	4.39E-6	2.20E-6
4800	1.52E-6	3.05E-7	1.53E-7	14K	4.45E-6	8.91E-7	4.45E-7	70K	2.23E-5	4.45E-6	2.23E-6
4900	1.56E-6	3.12E-7	1.56E-7	15K	4.77E-6	9.54E-7	4.77E-7	8mR/hr	2.55E-5	5.10E-6	2.55E-6
5000	1.59E-6	3.18E-7	1.59E-7	16K	5.09E-6	1.02E-6	5.09E-7	10mR/hr	3.18E-5	6.36E-6	3.18E-6
5100	1.62E-6	3.25E-7	1.62E-7	17K	5.41E-6	1.08E-6	5.41E-7	12mR/hr	3.82E-5	7.64E-6	3.82E-6
5200	1.65E-6	3.31E-7	1.65E-7	18K	5.73E-6	1.15E-6	5.73E-7	15mR/hr	4.77E-5	9.54E-6	4.77E-6
5300	1.69E-6	3.37E-7	1.69E-7	19K	6.04E-6	1.21E-6	6.04E-7	20mR/hr	6.36E-5	1.27E-5	6.36E-6
5400	1.72E-6	3.44E-7	1.72E-7	20K	6.36E-6	1.27E-6	6.36E-7	25mR/hr	7.95E-5	1.59E-5	7.95E-6
5500	1.75E-6	3.50E-7	1.75E-7	21K	6.68E-6	1.34E-6	6.68E-7	30mR/hr	9.54E-5	1.91E-5	9.54E-6
5600	1.78E-6	3.56E-7	1.78E-7	22K	6.99E-6	1.40E-6	6.99E-7	50mR/hr	1.59E-4	3.18E-5	1.59E-6

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. John</u>	Date: <u>10/4/03</u>
Reviewed by: <u>Russell H. [Signature]</u> Independent Reviewer	Date: <u>10/6/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Caen Dellein</u> Manager, Emergency Planning	Date: <u>10/7/03</u>

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1.0 PURPOSE

- (1) This procedure provides instructions for directing offsite radiological monitoring activities performed by Duane Arnold Energy Center (DAEC), coordinating such activities with those accomplished by the State of Iowa, assessing the offsite radiological impacts of an event at the DAEC, and formulating Protective Action Recommendations.

2.0 DEFINITIONS

- (1) MIDAS Meteorological Information and Dose Assessment System.
- (2) PAR (Protective Action Recommendation) - Made to the State with regards to evacuation or sheltering of subareas within the Emergency Planning Zone (EPZ).
- (3) PAG (Protective Action Guides) - Established by the Environmental Protection Agency (EPA) Reference 2.

3.0 INSTRUCTIONS

3.1 PROTECTIVE ACTION RECOMMENDATION DECISION MAKING

- (1) At the initial Emergency Classification declaration, the on-shift chemist reports to the TSC MIDAS Computer to initiate MIDAS dose projection runs. Projected off-site doses shall be communicated to the Control Room, until the TSC is activated.
- (2) Plant conditions and/or dose projections (as available) shall be reviewed to determine:
 - (a) If the Emergency Action Level (EAL) has changed, reclassification of the event is necessary and/or protective actions are warranted.

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- (b) If the EPA Protective Action Guides (PAGs) are being exceeded and if protective actions are warranted or need to be revised.
- (3) There are two tables intended to assist in the recommendation of appropriate protective actions to the State of Iowa, PAR-01 and PAR-02. The Protective Action Recommendations for emergency classification levels and radiological releases impacting the areas outside of the site boundary, are in PAR-01. The Protective Action Recommendations for Severe Core Damage or loss of control of plant functions are contained in PAR-02. All protective actions listed are appropriate for the conditions indicated but do not restrict the decision-maker(s) should it be desirable to recommend other protective actions based on the situation at the time of the emergency.
- (4) When an emergency class has been declared, or dose projections are available for radiological releases, go to PAR-01. PAR-01 allows for the assessment of appropriate protective actions based on downwind dose projections resulting from airborne radiological releases.
 - (a) Protective Action Recommendations shall be recorded in your log, the Status Board and NOTE-05.
 - (b) To determine the subareas affected and the maximum evacuation time (if needed), refer to Attachment 1, "Evacuation Time Estimates".
 - (c) Continue to work through the table as new classifications are determined or dose projection information becomes available.
- (5) If the incident is classified as a General Emergency, with core damage as specified in PAR-02, recommend the minimum protective action as given in PAR-02. PAR-02 allows for the assessment of a core melt sequence and provides appropriate protective actions based on the conditions adopted from Section G of the RTM-96.
 - (a) Enter the table at the top decision block which asks, "Actual or projected severe damage or loss of control of facility".
 - (b) To determine the sectors affected and the maximum evacuation time (if needed), refer to Attachment 1, "Evacuation Time Estimates."
- (6) Continue to work through the table as new information becomes available.

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- (7) Protective Action Recommendations should be determined (forecast weather information should be considered during all Protective Action Decision Making) by:
- (a) The Operations Shift Manager/Supervisor if neither the TSC nor the EOF is activated. This person is responsible for ensuring that Protective Action Recommendations are provided to offsite authorities.
 - (b) The Site Radiation Protection Coordinator once the TSC is activated. This person shall develop these recommendations for approval by the Emergency Coordinator. The Emergency Coordinator shall ensure that this information is provided to offsite authorities.
 - (c) The Radiological and EOF Manager, assisted by the Radiological Assessment Coordinator, upon activation of the EOF. These persons shall assume responsibility for development and recommendation of the Protective Actions and, upon approval by the Emergency Response and Recovery Director, provide formal communication of these recommendations to offsite agencies.
- (8) Recommend the Protective Actions as specified in PAR-01 for all declared events.
- (a) If the situation is degrading such that a potential exists for declaration of a General Emergency, evaluate trends and prognosis for change to determine the need for precautionary protective measures for the general public.
 - (b) Pay special attention to wind direction and speed as this may lead to a Protective Action Recommendation for other affected subareas, reference Attachment 2, 'Wind Direction and Affected Subareas'.
- (9) Field readings should be used to evaluate Protective Action Recommendations. If a significant number of actual dose rates, measured in the field, are greater than those projected to be occurring at the time, consideration should be given to upgrading or expanding the current protective actions, as appropriate.
- (10) Formulated Protective Action Recommendations shall be recorded on NOTE-05, 'Emergency Action Level Notification Form'.

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- (a) The Emergency Coordinator/Emergency Response and Recovery Director shall approve the Protective Action Recommendations by signing NOTE-05, 'Emergency Action Level Notification Form'.
- (11) The SRPC/Radiological and EOF Manager should release Protective Action Recommendations in the following manner:
 - (a) Short pre-briefing of impending recommendations and related plant conditions should be given to State EOC Dose Assessment personnel via the microwave phone.
 - (b) When the EOF is activated this briefing shall be followed by official recommendations being delivered via the "Administrative Hotline" within 15 minutes of recognizing the criteria.
 - (c) State, County, and Federal notifications shall be made in accordance with EPIP 1.2, 'Notification'.
- (12) Information regarding emergency classification, plant status, offsite radiological data, Protective Action Recommendations, and response actions underway shall be provided when significant changes occur and on a periodic basis to the ERO, Linn and Benton County EOCs, the State EOC, and the NRC in accordance with EPIP 1.2, 'Notification'.
- (13) If protective actions actually implemented by local and State officials differ from those recommended by DAEC, the Emergency Coordinator/Emergency Response & Recovery Director should be informed.
- (14) The Protective Action Recommendations will be continuously assessed and changed, as appropriate, depending upon the changing conditions.

3.2 INITIAL AND PERIODIC BRIEFINGS

- (1) Prior to assuming responsibility for offsite radiological monitoring and dose assessment activities, the Site Radiation Protection Coordinator/Radiological Assessment Coordinator should obtain the following information:
 - (a) Effluent release information, if a release is in progress, including the release point and release concentration from the KAMAN Effluent Monitoring System.
 - (b) Weather forecast information. This information can be obtained from the National Weather Service (phone number listed in the ETB).

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- (c) Meteorological information, including stability class (or ΔT), wind speed and wind direction from the Safety Parameter Display System (SPDS). If meteorological information cannot be obtained from SPDS via the Met Tower, then call the National Weather Service phone number and request an update of the current Met conditions.
 - (d) The results of dose projection calculations.
 - (e) Containment High Range Radiation Monitor levels.
 - (f) Protective Action Recommendations which have been made.
 - (g) On-site radiological information, post-accident sampling activities, and effluent release isotopic mixes, if available.
 - (h) Status of off-site monitoring activities conducted, if any, and locations of the DAEC Off-site Radiological Monitoring Teams.
 - (i) Plant status information and prognosis for deteriorating conditions.
 - (j) The status of activation of the Off-site Radiological and Analytical Laboratory (ORAL).
 - (k) The status of activation of the Off-site Radiological and Assembly Area (ORAA).
- (2) The Site Radiation Protection Coordinator should summarize this information, advise the Emergency Coordinator of pertinent points discussed, and brief the Radiological Assessment Group.

OR

The Radiological Assessment Coordinator should summarize this information, advise the Radiological and EOF Manager of pertinent points discussed, and brief the Radiological Assessment Group.

- (a) The Field Team Director should ensure that the Offsite Radiological Monitoring Teams are apprised of pertinent information regarding plant potential radiological problems expected.
- (b) Caution should be exercised in relaying information to teams over the radio, since the radio transmission becomes public information. Only transmit information that is necessary for the field teams to perform their duties safely and information that is made public through news releases.

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- (3) The Field Team Director should ensure that the meteorological and field team information on the DAEC EPZ maps/status boards are updated and maintained. Items such as the following should be considered for display.
- (a) Wind direction
 - (b) Wind speed
 - (c) Stability class
 - (d) Weather forecast information
 - (e) Plume width and centerline
 - (f) Team locations
 - (g) Survey results at selected locations and an outline of the subarea Protective Action Recommendations as necessary.
 - (h) Projected TEDE doses or dose rates in the plume path
 - (i) Projected thyroid doses or dose rates in the plume path
- (4) Additionally, the Radiological Data Plotter in the EOF should display selected radiological information obtained by the State monitoring teams, as reported by the State Field Team Captain in the EOF.

3.3 OFFSITE RADIOLOGICAL MONITORING TEAMS

- (1) Offsite Radiological Monitoring Teams should be initially briefed and dispatched in accordance with EPIP 3.2, "Field Radiological Monitoring."
- (2) In preparation for directing the Offsite Radiological Monitoring Teams, the Field Team Director should:
 - (a) Conduct a radio check with the Teams and verify their locations.
 - (b) Advise the Teams of the latest radiological and plant status information, as necessary to perform their duties safely.
 - (c) Inform the Site Radiation Protection Coordinator of readiness to assume control of the Offsite Radiological Monitoring Teams.

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- (3) Direction and control of the Offsite Radiological Monitoring Teams should be done in accordance with the directions given in EPIP 3.2.
- (4) In preparation for assuming control of the Offsite Radiological Monitoring Teams, the Field Team Director should:
 - (a) Contact the TSC Field Team Director and inform them of the intent to establish contact with Teams.
 - (b) Conduct radio check with the Teams and verify their locations.
 - (c) Advise the Teams of the latest radiological and plant status information, as necessary to perform their duties safely.
 - (d) Inform the Radiological Assessment Coordinator of readiness to assume control of the Field Radiological Monitoring Teams.

NOTE

There are 2 TSC Field Team Directors that report to the TSC when activated. When the EOF is to be activated, 1 of these Field Team Directors relocates to the EOF to assume control of the Offsite Field Teams. The remaining Field Team Director in the TSC maintains control over the Onsite Field Team, and the Offsite Field Team while the other Field Team Director is in transit to the EOF.

- (5) When the EOF has been activated, the Radiological Assessment Coordinator should contact the Site Radiation Protection Coordinator and advise that the EOF is ready to assume control of the Offsite Radiological Monitoring Teams.
 - (a) The Site Radiation Protection Coordinator should inform the Emergency Coordinator that control of the field radiological monitoring teams and dose assessment has been transferred to the EOF.
 - (b) The Radiological Assessment Coordinator should then advise the Radiological and EOF Manager that the Radiological Assessment Group is ready to assume responsibility for offsite monitoring and dose assessment activities.
 - (c) The Field Team Director should follow up with each Team and advise them that all further communications should be conducted with the EOF.

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- (d) Transfer of responsibility should be recorded in both the TSC and EOF Logs.

3.4 DOSE PROJECTION ACTIVITIES

- (1) Until the TSC is activated, the Operations Shift Manager/Supervisor, as the Emergency Coordinator, is responsible for assuring dose projections by the on-duty shift chemist are performed.
 - (a) The results of these projections will normally be summarized for the Site Radiation Protection Coordinator as part of the initial briefing.
- (2) Until the EOF is activated, the Site Radiation Protection Coordinator and/or the Operations Shift Manager/Supervisor are responsible for performing dose projections.
 - (a) The results of these projections will normally be summarized for the Radiological Assessment Coordinator as part of the initial briefing.
- (3) Dose projection calculations will be performed by the MIDAS Operator using one of the following methodologies:
 - (a) MIDAS computer, MIDAS Instruction Manual User's Guide.
 - (b) MIDAS Backup on the Personal Computer.
 - (c) MIDAS Laptop Personal Computer.
- (4) Dose projections will normally be performed in accordance with the MIDAS instructions in the MIDAS User's Guide. If MIDAS is unavailable, the options below will be reviewed by the Site Radiation Protection Coordinator/Radiological Assessment Coordinator to determine the appropriate back-up methodology.
 - (a) If real-time data collection in MIDAS is not functional, the TSC MIDAS Operator should coordinate directly with the Control Room Communicator to determine updated radiological and meteorological parameters applicable to actual or potential release rates.
 - (b) If there is a loss of MIDAS in the TSC consider using the following:
 - (i) MIDAS Backup on the Personal Computer

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(ii) Use of MIDAS Laptop Computer

(c) If real-time data collection in MIDAS is not functional, the EOF MIDAS Operator should coordinate directly with the Site Radiation Protection Coordinator to determine updated radiological and meteorological parameters applicable to actual or potential release rates.

(d) If there is a loss of MIDAS in the EOF consider the following:

(i) Transfer of dose assessment back to the TSC

(ii) Use the MIDAS Backup on the Personal Computer

(iii) Use of MIDAS Laptop Computer

(5) Following review of the latest dose projection, the Site Radiation Protection Coordinator/RAC should brief the Field Team Director on the magnitude of the projected doses and the need to adjust offsite radiological monitoring activities.

(6) If Field Team readings are significantly higher than those projected by MIDAS, consider the possibility of an unmonitored release.

3.5 COORDINATION OF DOSE ASSESSMENT WITH THE STATE OF IOWA

(1) Upon activation of the EOF, the RAC shall verify that the "Rad Data Line" is established and operable or contact the State EOC and request that it be established.

(2) Once established, the RAC shall communicate with the State EOC and the Benton and Linn County EOCs as necessary.

(3) Radiological release, dose projections, and meteorological data from the electronic MIDAS print out shall be provided to the State in order for the State to conduct dose assessment and projection activities.

(4) The RAC shall request the State's dose projection results as they become available.

3.6 DATA RECORDING AND TREND ANALYSIS FROM THE TSC

(1) The Site Radiation Protection Coordinator should initiate and ensure conduct of trend analysis.

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- (a) Parameters of interest include KAMAN System Effluent Monitor readouts, analyses conducted of effluent stream particulate filters and iodine cartridges, meteorological data, ARM levels and Containment High Range Radiation Monitor levels.
- (b) ARM and Containment High Range Radiation Monitor levels are of dual importance due to their direct impact on response activities within the plant and their significance with respect to determining the quantity of radioactive material potentially available for release offsite.
- (2) An estimate of fuel failure can be determined by direction found in the PASAPs.
- (3) An estimate of the potential release rate can be determined by using the PASAPs.
- (4) The Site Radiation Protection Coordinator should evaluate the trending plot periodically to determine if any significant trends are apparent.
- (5) The Emergency Coordinator and the Radiological Assessment Team should be periodically advised of the current radiological status, significant trends, and potential implications.
 - (a) The SRPC should ensure to periodically inform representatives of the, State and Federal Government of the current radiological status, significant trends, and potential implications (prior to operation of the EOF).

3.7 DATA RECORDING AND TREND ANALYSIS FROM THE EOF

- (1) The Radiological Assessment Coordinator or his designee should trend the following information:
 - (a) Projected TEDE and Thyroid dose rates at the following locations:
 - (i) Site Boundary
 - (ii) Two Miles
 - (iii) Five Miles
 - (iv) Ten Miles

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(v) Greater than ten miles

(vi) Location(s) of peak Whole Body and Thyroid dose rates if other than at one of the above locations.

- (b) Containment High Range Radiation Monitors levels for both the Drywell and Torus
- (2) An estimate of fuel failure can be determined by using the PASAPs.
- (3) An estimate of the potential release rate can be determined using the PASAPs.
- (4) The Radiological and EOF Manager and the Radiological Assessment Group should be periodically advised of the current radiological status, significant trends, and potential implications.
 - (a) The Radiological and EOF Manager should periodically inform the EOF staff and representatives of local, State and Federal governments of the current radiological status, significant trends, and potential implications.
 - (b) The Field Team Director should ensure that the Offsite Radiological Monitoring Teams are provided updated information periodically.
- (5) The trending of offsite doses can be utilized as an estimation of integrated dose(s) to the general public throughout the course of the event.

3.8 RE-ENTRY AND FOLLOW-UP ACTIVITIES

- (1) Once releases have been terminated, the Radiological and EOF Manager, Radiological Assessment Coordinator and Site Radiation Protection Coordinator should coordinate with local, State and Federal officials to identify the activities required prior to re-entry of the general public into areas that have been evacuated.
- (2) As directed by the Emergency Response and Recovery Director, the Radiological and EOF Manager should establish an environmental monitoring program as part of the Recovery Plan to more adequately quantify the impact of this release on the environment.
 - (a) As a minimum, this program should include sampling and analysis of milk, surface water, vegetation, and soil in the affected area surrounding DAEC.

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- (b) This program should be structured such that it complements the routine DAEC environmental sampling program.
- (c) This program should be coordinated with the State's environmental program.

4.0 RECORDS

- (1) All logs forms and other pertinent information shall be maintained in accordance with EPDM 1007, (exception is for material generated during drills and exercises.)

5.0 REFERENCES

- (1) DAEC Emergency Plan
- (2) Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA-400-R-92-001)
- (3) DAEC Radiological Engineering Calculation 93-022-H; dated December 17, 1993
- (4) EPIP 3.2 "Field Radiological Monitoring"
- (5) EPIP 1.2 "Notification"
- (6) Response Technical Manual (RTM) 1996 Section G.

6.0 ATTACHMENTS

- (1) Attachment 1 -Evacuation Time Estimates
- (2) Attachment 2 -Wind Direction and Affected Subareas.

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ATTACHMENT 1

EVACUATION TIME ESTIMATES

- (1) Select the appropriate table for the event scenario (Summer or Winter, Midweek or Weekend, Midday or Evening)
- (2) Select the section of the table corresponding to the extent of the evacuation recommendation (Within 2, 5, or 10 miles, or to the EPZ boundary).
- (3) Select the wind range for the expected wind direction, and read across for the evacuation time estimate under the expected weather condition for both the general population and special population (special population consists of those at hospitals, nursing homes, and other residential care facilities).
- (4) Following the tables are evacuation time estimates for two recreational events occurring annually within the DAEC EPZ: the All-Iowa Fair and the Cedar Rapids Freedom Festival.
- (5) Times in the tables are given in hours and minutes (i.e., 03:35 = 3 hours, 35 minutes).

NOTES

For Summer or Winter Weekend Evening times, use the Summer or Winter Midweek Evening times, respectively.

Summer defined as Memorial Day through Labor Day. Winter defined as Labor Day to Memorial Day.

ATTACHMENT I (Cont.)

EVACUATION TIME ESTIMATES FOR SUMMER WEEKEND MIDDAY,
SUMMER WEEKEND EVENING, SUMMER WEEKDAY MIDDAY AND SUMMER WEEKDAY EVENING
SCENARIOS

Table 5.5 Evacuation Times Estimates for Scenarios 1-8

Region	Subareas	Scenarios							
		1	2	3	4	5	6	7	8
		Summer Weekend Midday Fair	Summer Weekend Midday Poor	Summer Weekend Evening Fair	Summer Weekend Evening Poor	Summer Weekday Midday Fair	Summer Weekday Midday Poor	Summer Weekday Evening Fair	Summer Weekday Evening Poor
1	1	2:45	2:45	2:45	3:00	2:45	3:15	2:45	3:15
2	1-8	5:30	5:45	5:15	5:45	5:45	6:00	5:15	5:30
3	1-24	10:45	11:45	11:15	11:45	10:30	11:15	10:15	11:00
4	1,2,8	3:00	3:45	3:15	4:15	3:30	3:45	3:15	3:30
5	1,2,3	3:00	3:45	3:15	4:15	3:30	3:45	3:15	3:30
6	1,2,3,8	3:00	3:45	3:15	4:15	3:30	3:45	3:15	3:30
7	1,2,3,4	3:00	3:45	3:15	4:15	3:30	3:45	3:15	3:30
8	1,3,4	3:00	3:45	3:00	4:15	3:30	3:45	3:15	3:30
9	1,3,4,5	3:15	4:00	3:15	4:00	3:30	3:45	3:15	3:30
10	1,4,5,6	3:15	4:00	3:15	4:00	3:30	3:45	3:15	3:30
11	1,5,6,7	3:15	4:00	3:15	4:00	3:30	3:45	3:15	3:30
12	1,7,8	3:00	4:00	3:00	4:00	3:45	4:00	3:30	3:45
13	1,5,6,7,17-20	4:15	5:15	4:15	4:30	4:30	4:45	4:00	4:15
14	1,5,6,7,18-21	4:15	5:15	4:15	4:30	4:30	4:45	4:00	4:15
15	1,7,8,18-21	4:00	5:15	4:00	4:15	4:30	4:45	4:00	4:15
16	1,7,8,19-22	4:00	5:15	4:00	4:15	4:30	4:45	4:00	4:15
17	1,7,8,9,20-22	4:00	5:45	4:00	4:15	4:30	4:45	4:00	4:15
18	1,2,8,9,10,21,22	4:00	5:45	4:00	4:15	4:30	4:45	4:00	4:15
19	1,2,3,8-12,21,22	4:00	5:45	4:00	4:15	4:30	4:45	4:00	4:15
20	1,2,3,9-13,22	4:00	5:45	4:00	4:15	4:30	4:45	4:00	4:15
21	1,2,3,10-13	3:45	5:45	3:45	4:00	4:30	4:45	4:00	4:15
22	1,2,3,4,10-14	4:30	5:45	4:30	5:00	4:45	5:00	4:30	5:00
23	1,4,5,6,15-18,23,24	9:45	10:15	9:45	10:00	7:45	8:00	7:30	7:45
24	1,5,6,7,16-19,24	9:00	10:00	9:00	9:00	7:30	8:00	7:30	7:45
25	1,3,4,12-15,23	9:00	10:00	9:00	9:30	7:45	8:00	7:30	7:45
26	1,3,4,5,12-16,23,24	10:30	11:45	11:30	11:45	10:45	11:00	10:30	10:45
27	1,3,4,5,13-17,23,24	10:45	11:45	11:15	11:45	10:45	11:00	10:30	10:45
28	1,4,5,6,14-18,23,24	10:30	11:45	11:15	11:45	10:45	11:00	10:30	10:45

Table 5.6 Evacuation Times Estimates for Scenarios 9-16.

Region	Subareas	Scenarios							
		9	10	11	12	13	14	15	16
		Winter Weekend Midday Fair	Winter Weekend Midday Poor	Winter Weekend Evening Fair	Winter Weekend Evening Poor	Winter Weekday Midday Fair	Winter Weekday Midday Poor	Winter Weekday Evening Fair	Winter Weekday Evening Poor
1	1	2:45	2:45	2:45	3:00	2:45	3:15	2:45	3:45
2	1-8	5:30	6:15	5:15	6:30	6:00	6:45	5:30	6:00
3	1,24	10:45	12:30	9:45	14:15	12:00	14:30	11:00	12:45
4	1,2,8	3:00	4:45	3:00	4:45	3:15	3:45	3:00	3:30
5	1,2,3	3:00	4:45	3:00	4:45	3:15	3:45	3:00	3:30
6	1,2,3,8	3:00	4:45	3:00	4:45	3:15	3:45	3:00	3:30
7	1,2,3,4	3:00	4:45	3:00	4:45	3:15	3:45	3:00	3:30
8	1,3,4	3:00	4:45	3:00	4:45	3:15	3:45	3:00	3:30
9	1,3,4,5	3:15	5:00	3:15	5:00	3:30	3:45	3:00	3:30
10	1,4,5,6	3:15	5:00	3:15	5:00	3:30	3:45	3:00	3:30
11	1,5,6,7	3:15	5:00	3:15	5:00	3:30	3:45	3:00	3:30
12	1,7,8	3:00	5:00	3:00	5:00	3:15	3:45	3:00	3:30
13	1,5,6,7,17-20	4:15	6:30	4:15	6:30	4:30	7:00	4:00	5:15
14	1,5,6,7,18-21	4:15	6:30	4:15	6:30	4:30	7:00	4:00	5:15
15	1,7,8,18-21	4:00	6:00	4:00	6:00	4:30	7:00	4:00	5:15
16	1,7,8,19-22	4:00	6:00	4:00	6:00	4:15	7:00	4:00	5:15
17	1,7,8,9,20-22	4:00	6:00	4:00	6:00	4:15	7:00	4:00	5:15
18	1,2,8,9,10,21,22	4:00	6:00	4:00	6:00	4:15	7:00	4:00	5:15
19	1,2,3,8-12,21,22	4:00	6:00	4:00	6:00	4:15	7:00	4:00	5:15
20	1,2,3,9-13,22	4:00	6:00	4:00	6:00	4:15	7:00	4:00	5:15
21	1,2,3,10-13	3:45	6:00	3:45	6:00	5:00	7:00	4:45	5:45
22	1,2,3,4,10-14	4:30	6:30	4:30	6:30	5:00	7:45	4:45	6:45
23	1,4,5,6,15-18,23,24	9:45	10:15	9:45	10:15	10:30	13:00	10:00	12:45
24	1,5,6,7,16-19,24	9:00	10:00	9:00	10:00	10:15	13:00	10:00	12:30
25	1,3,4,12-15,23	9:00	10:00	9:00	10:00	10:15	13:00	10:00	12:30
26	1,3,4,5,12-16,23,24	10:30	12:15	10:30	12:30	11:00	13:00	10:15	12:45
27	1,3,4,5,13-17,23,24	10:46	12:30	10:46	12:30	11:00	14:30	10:15	12:45
28	1,4,5,6,14-18,23,24	10:30	12:30	10:30	12:45	11:15	14:30	10:15	12:45

EVACUATION TIME ESTIMATES FOR WINTER WEEKEND MIDDAY, WINTER WEEKEND EVENING, WINTER WEEKDAY MIDDAY, WINTER WEEKDAY EVENING SCENARIOS

ATTACHMENT J (Cont.)

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EVACUATION TIME ESTIMATES FOR SUMMER WEEKEND EVENING SCENARIOS

Table 5.7 Evacuation Times Estimates for Scenario 17.

Region	Subareas	Scenarios
		17
		Summer Weekend Evening Fair
1	1	2:45
2	1-8	5:15
3	1-24	16:00
4	1,2,8	3:15
5	1,2,3	3:15
6	1,2,3,8	3:15
7	1,2,3,4	3:15
8	1,3,4	3:00
9	1,3,4,5	3:15
10	1,4,5,6	3:15
11	1,5,6,7	3:15
12	1,7,8	3:00
13	1,5,6,7,17-20	4:15
14	1,5,6,7,18-21	4:15
15	1,7,8,18-21	4:00
16	1,7,8,19-22	4:00
17	1,7,8,9,20-22	4:00
18	1,2,8,9,10,21,22	4:00
19	1,2,3,8-12,21,22	4:00
20	1,2,3,9-13,22	4:00
21	1,2,3,10-13	3:45
22	1,2,3,4,10-14	4:30
23	1,4,5,6,15-18,23,24	15:45
24	1,5,6,7,16-19,24	15:30
25	1,3,4,12-15,23	15:00
26	1,3,4,5,12-16,23,24	16:00
27	1,3,4,5,13-17,23,24	16:00
28	1,4,5,6,14-18,23,24	16:00

Table 5.10 Evacuation time estimates for schools in winter fair weather (based on scenario 13).

Subarea	1st Trip			2nd Trip								ETE
	Mobilization time (hr.min.)	Travel to schools	Loading time	Travel to EPZ edge	EPZ Edge to TRC	Unload/Load	TRC to EPZ Edge	EPZ Edge to School	Loading time	Travel to EPZ edge		
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	1:00	0:20	0:15	1:30	0:30	0:30	0:30	0:30	0:15	1:30	6:50	
5	1:00	0:20	0:15	2:15	0:45	0:30	0:45	0:30	0:15	2:15	8:50	
6	-	-	-	-	-	-	-	-	-	-	-	-
7	1:00	0:20	0:15	1:30	0:35	0:30	0:35	0:30	0:15	1:30	7:00	
8	-	-	-	-	-	-	-	-	-	-	-	-
9	1:00	0:20	0:15	0:45	0:35	0:30	0:35	0:30	0:15	0:45	5:30	
10	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-
12	1:00	0:20	0:15	0:45	0:30	0:30	0:30	0:30	0:15	0:45	5:20	
13	-	-	-	-	-	-	-	-	-	-	-	-
14	1:00	0:20	0:15	1:45	0:35	0:30	0:35	0:30	0:15	1:45	7:30	
15	1:00	0:20	0:15	2:00	0:40	0:30	0:40	0:30	0:15	2:00	8:10	
16	1:00	0:20	0:15	1:45	0:40	0:30	0:40	0:30	0:15	1:45	7:40	
17	-	-	-	-	-	-	-	-	-	-	-	-
18	1:00	0:20	0:15	0:45	0:40	0:30	0:40	0:30	0:15	0:45	5:40	
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	1:00	0:20	0:15	0:45	0:25	0:30	0:25	0:30	0:15	0:45	5:10	
23	1:00	0:20	0:15	1:30	0:35	0:30	0:35	0:30	0:15	1:30	7:00	
24	1:00	0:20	0:15	1:45	0:35	0:30	0:35	0:30	0:15	1:45	7:30	

ATTACHMENT 1 (Cont.)

EVACUATION TIME ESTIMATES FOR SCHOOLS IN WINTER FAIR WEATHER SCENARIOS

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Table 5.11. Evacuation time estimates for schools in winter poor weather (based on scenario 14).

Subarea	1st Trip			2nd Trip							ETE
	Mobilization time (hr.min.)	Travel to schools	Loading time	Travel to EPZ edge	EPZ Edge to TRC	Unload/Load	TRC to EPZ Edge	EPZ Edge to School	Loading time	Travel to EPZ edge	
1	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	1:00	0:20	0:15	2:00	0:30	0:30	0:30	0:30	0:15	1:30	7:20
5	1:00	0:20	0:15	2:30	0:45	0:30	0:45	0:30	0:15	2:15	9:05
6	-	-	-	-	-	-	-	-	-	-	-
7	1:00	0:20	0:15	2:00	0:35	0:30	0:35	0:30	0:15	1:30	7:30
8	-	-	-	-	-	-	-	-	-	-	-
9	1:00	0:20	0:15	1:15	0:35	0:30	0:35	0:30	0:15	0:45	5:45
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	1:00	0:20	0:15	1:15	0:30	0:30	0:30	0:30	0:15	0:45	5:50
13	-	-	-	-	-	-	-	-	-	-	-
14	1:00	0:20	0:15	2:00	0:35	0:30	0:35	0:30	0:15	1:45	7:45
15	1:00	0:20	0:15	2:30	0:40	0:30	0:40	0:30	0:15	2:00	8:40
16	1:00	0:20	0:15	2:15	0:40	0:30	0:40	0:30	0:15	1:45	8:10
17	-	-	-	-	-	-	-	-	-	-	-
18	1:00	0:20	0:15	1:15	0:40	0:30	0:40	0:30	0:15	0:45	6:10
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	1:00	0:20	0:15	1:15	0:25	0:30	0:25	0:30	0:15	0:45	5:40
23	1:00	0:20	0:15	1:45	0:35	0:30	0:35	0:30	0:15	1:30	7:15
24	1:00	0:20	0:15	2:15	0:35	0:30	0:35	0:30	0:15	1:45	8:00

EVACUATION TIME ESTIMATES FOR SCHOOLS IN WINTER POOR WEATHER SCENARIOS

ATTACHMENT I (Cont.)

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ATTACHMENT 1 (Cont.)
EVACUATION TIME ESTIMATES FOR HEALTH-RELATED SPECIAL FACILITIES UNDER FAIR WEATHER SCENARIOS

Table 5.12 Evacuation time estimates for the evacuation of health-related special facilities under fair weather conditions.

Evacuation Trip	Mobilization time (hr:min.)	Travel to facility	Loading time	Travel to EPZ edge	EPZ Edge to RC	Unload/Load	RC to EPZ Edge	Trip Time
1	1:00	0:45	0:30	2:00	1:15	0:30	1:00	7:00
2	-	0:15	0:30	0:15	0:15	0:30	1:00	2:45
3	-	0:15	0:30	0:15	0:15	0:30	1:00	2:45
4	-	0:15	0:30	0:15	0:15	0:30	1:00	2:45
5	-	0:15	0:30	0:15	0:15	0:30	1:00	2:45
								18:00

Table 5.13 Evacuation time estimates for the evacuation of health-related special facilities under poor weather conditions.

Evacuation Trip	Mobilization time (hr:min.)	Travel to facility	Loading time	Travel to EPZ edge	EPZ Edge to RC	Unload/Load	RC to EPZ Edge	Trip Time
1	1:15	0:45	0:30	2:30	1:30	0:30	1:15	8:45
2	-	0:15	0:30	0:30	0:30	0:30	1:15	3:30
3	-	0:15	0:30	0:30	0:30	0:30	1:15	3:30
4	-	0:15	0:30	0:30	0:30	0:30	1:15	3:30
5	-	0:15	0:30	0:30	0:30	0:30	1:15	3:30
								22:45

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ATTACHMENT 1 (Cont.)

EVACUATION TIME ESTIMATES

The evacuation time estimates for the Cedar Rapids Freedom Festival consider an evacuation of the general population within the entire DAEC Emergency Planning Zone (Subareas 1-24) this event is in progress.

Cedar Rapids Freedom Festival: 11:15

ATTACHMENT 2

WIND DIRECTION and AFFECTED SUBAREAS

Wind direction and affected subarea populations for the DAEC EPZ (based on Table 5.2 from the Evacuation Time Estimate Study report).

Wind Direction	(degrees)	Subareas (Population)				Total Population
		0-2 Miles	2-5 Miles	5-10 Miles	10-EPZ edge	
N	(348.76-11.25)	1 (1,134)	4,5,6 (1,781)	15,16,17,18 (64,839)	23,24 (57,214)	(124,968)
NNE	(11.26-33.75)	1 (1,134)	5,6,7 (5,491)	16,17,18,19 (35,237)	24 (22,140)	(64,002)
NE	(33.76-56.25)	1 (1,134)	5,6,7 (5,491)	17,18,19,20 (4,065)	-	(10,690)
ENE	(56.26-78.75)	1 (1,134)	5,6,7 (5,491)	18,19,20,21 (2,814)	-	(9,439)
E	(78.76-101.25)	1 (1,134)	7,8 (1,711)	18,19,20,21 (2,814)	-	(5,659)
ESE	(101.26-123.75)	1 (1,134)	7,8 (1,711)	19,20,21,22 (2,679)	-	(5,524)
SE	(123.76-146.25)	1 (1,134)	7,8 (1,711)	9,20,21,22 (4,721)	-	(7,566)
SSE	(146.26-168.75)	1 (1,134)	2,8 (559)	9,10,21,22 (4,758)	-	(6,451)
S	(168.76-191.25)	1 (1,134)	2,3,8 (1,262)	9,10,11,12,21,22 (5,744)	-	(8,140)
SSW	(191.26-213.75)	1 (1,134)	2,3 (1,019)	9,10,11,12,13,22 (5,710)	-	(7,863)
SW	(213.76-236.25)	1 (1,134)	2,3 (1,109)	10,11,12,13 (2,097)	-	(4,250)
WSW	(236.26-258.75)	1 (1,134)	2,3,4 (3,523)	10, 11,12,13,14 (37,057)	-	(41,714)
W	(258.76-281.25)	1 (1,134)	3,4 (3,207)	12,13,14,15 (66,340)	23 (35,074)	(105,755)
WNW	(281.26-303.75)	1 (1,134)	3,4,5 (7,160)	12,13,14,15,16 (97,880)	23,24 (57,214)	(163,388)
NW	(303.76-326.25)	1 (1,134)	3,4,5 (7,160)	13,14,15,16,17 (99,017)	23,24 (57,214)	(164,525)
NNW	(326.26-348.75)	1 (1,134)	4,5,6 (7,160)	14,15,16,17,18 (99,790)	23,24 (57,214)	(164,674)

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Effective Date: 10/13/03

TECHNICAL REVIEW	
Prepared by: <u>Don A. Johnson</u>	Date: <u>10/3/03</u>
Reviewed by: <u>Russell J. [Signature]</u> Independent Reviewer	Date: <u>10/6/03</u>

PROCEDURE APPROVAL	
I am responsible for the technical content of this procedure.	
Approved by: <u>Lucien Sullivan</u> Manager, Emergency Planning	Date: <u>10/7/03</u>

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1.0 PURPOSE

- (1) This procedure provides guidance for the planning and performance of recovery and reentry operations. The basis for this procedure is documented in NUREG-0654 (Reference 1), 10 CFR 50 (Reference 2), and the DAEC Emergency Plan (Reference 4).

2.0 DEFINITIONS

- (1) **Recovery:** that point following an emergency condition when the plant is in a stable state, necessary plant operating equipment is functioning properly and there is no potential for uncontrolled radiological releases.

3.0 INSTRUCTIONS

3.1 OVERVIEW

- (1) The Emergency Response and Recovery Director (ER&RD) will determine when the response phase has ceased and the recovery/re-entry phase has begun and coordinate the assembly of personnel and resources to manage the recovery organization.
 - (a) The ER&RD will assign personnel to develop the recovery phase plan.
- (2) The ER&RD will direct the notification of State, local and federal authorities and the Emergency Response Organization (ERO) of the initiation of the recovery phase. {IC001}
- (3) The Radiological and EOF Manager will coordinate with State and county officials to provide assistance in environmental sampling and decontamination activities and provide information to the State to support the development of estimates of total population exposure, as requested.
- (4) The Radiological Assessment Coordinator (RAC) will direct DAEC monitoring and sampling personnel assisting the State and counties.
- (5) The Support Services Coordinator will coordinate with other DAEC organizations to obtain necessary resources.

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- (6) The Emergency Coordinator will coordinate and manage recovery activities at DAEC.
 - (a) Ensure that within 30 days after the Director of the Office of Nuclear Reactor Regulation is notified, that the reactor is and can be maintained in a safe and stable condition, a cleanup plan is developed for submittal for the Director's approval.
 - (b) The Emergency Coordinator shall notify the Site Emergency Response Organization of the transition from emergency status to recovery status. He/she shall assign an ERO member to produce a "Deactivation Report" as described on Form TSC-36.
- (7) The Site Radiation Protection Coordinator will establish and manage radiological controls for re-entry and recovery activities.
 - (a) Develop plans and procedures to process and control liquid, gaseous and solid waste in conjunction with recovery operation.
 - (b) Coordinate development of the cleanup plan to be submitted to the Office of Nuclear Reactor Regulation.

3.2 INITIATION OF THE RECOVERY PHASE

- (1) Following the initial response phase to an emergency at the DAEC, the emergency classification level may be downgraded or canceled, as appropriate. Reclassification of the emergency is not a prerequisite to entering the recovery phase.
 - (a) Any changes to the declared emergency classification level are communicated to offsite authorities and the ERO in accordance with Reference 5.
- (2) The "Prerequisites to Recovery" found on EOF-33, "Recovery Issues" provide requirements and considerations to be addressed prior to initiating recovery activities. {IC001} (Reference 7)
- (3) The ER&RD will notify offsite authorities and the ERO that the recovery phase of the response is being initiated. {IC001} This can be accomplished through:

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1. Communications methods established during the initial response phase;
2. By pager message;
3. Through the conference call;
4. A combination of the above methods.

(a) This notification will include any changes in the response organization's structure.

3.3 CONFERENCE CALL

- (1) A conference call involving members of the ERO will be held between the EOF and the TSC and the JPIC.
 - (a) This call is coordinated and directed by the ER&RD.
 - (b) The NRC should be incorporated into the recovery process.
 - (c) The purpose of the conference call is to collectively review the status of the emergency, and to verify an accurate understanding of its status. (TSC-37 from Appendix 1 of the EPIP Manual can be used to determine if the plant is in a de-escalating condition).
 - (d) This call will also serve to assign responsibilities for recovery activities. These responsibilities should be noted on Form TSC-35.
 - (e) Guidance in EOF-34, "EOF Activities" and TSC-38, "TSC/Control Room/OSC Activities" may be used during these discussions. {IC001}
- (2) Participants in the conference call may include, but are not limited to the following:
 - (a) From the EOF:
 1. ER&RD
 2. Radiological and EOF Manager
 3. Radiological Assessment Coordinator

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4. EOF OPS Liaison

(b) From the JPIC

1. JPIC Manager
2. DAEC Spokesperson

(c) From the TSC:

1. Emergency Coordinator
2. Site Radiological Protection Coordinator
3. Technical and Engineering Supervisor
4. OSC Supervisor
5. TSC Operations Supervisor

(3) Following the conference call, participants in the call will return to their facilities to discuss details of recovery and reentry activities with their organizations.

(4) EOF-35, "Recovery Phase Plan Outline" may be used as a guide in developing a Recovery Plan.

3.4 CLEANUP PLAN

(1) A cleanup Plan shall be developed and submitted to the Director of the Office of Nuclear Reactor Regulation within 30 days of notifying the Director of stable state operation.

(2) The plan shall identify all cleanup operations that will be required to decontaminate the reactor sufficiently to allow resumption of operations consistent with the Commission's occupational exposure limits in 10 CFR Part 20.

(3) The plan may also include:

(a) Processing of any contaminated water generated.

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- (b) Decontamination of surfaces inside the turbine and reactor buildings to levels consistent with limits in 10 CFR Part 20.
- (c) Decontamination and/or disposal of equipment.
- (d) Decontamination or removal and disposal of internal parts and damaged fuel from the reactor vessel.

3.5 ESTIMATES OF TOTAL POPULATION EXPOSURE

- (1) When requested, the Radiological and EOF Manager will provide information to the State to support the development of exposure estimates for the total population. Estimates can be based on information from field monitoring activities, dose projection data, and population estimates documented in the Evacuation Time Estimate.

3.6 RADIOLOGICAL PREREQUISITES FOR RE-ENTRY

- (1) Prior to a planned entry into any area of the plant which has been subjected to physical or radiological damage, the following conditions shall be met:
 - (a) Establish objectives for re-entry team.
 - (b) Based on the extent, severity and location of the emergency and other plant data available, an optimum point of entry into the affected area shall be determined.
 - (c) The Emergency Coordinator shall grant authorization for entry.
 - (d) Exposure limits shall comply with the appropriate Health Physics Procedures.
 - (e) An entry team shall consist of a minimum of two persons with one being a Health Physics Technician.

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NOTE

In order to minimize personnel exposure, the total number of team members and stay times shall be limited. Activities of Health Physics personnel shall be limited to radiological monitoring functions.

- (f) Entry team personnel shall be briefed as described in form EOF-36.

3.7 RE-ENTRY

NOTE

Prior to entry, precautions shall be taken to ensure the safety of the entry team(s), including radiological and environmental assessment, surveys, atmosphere ambient temperature readings and gaseous or particulate surveys, if possible.

- (1) The entry team shall enter the affected area cautiously and shall perform the following tasks:
 - (a) Complete radiation and contamination surveys.
 - (b) Obtain visual data, or photographs, if possible.
 - (c) Verify the operability of permanently installed communications within the entry area, time permitting.
- (2) Upon completion of initial observations and data collection, the entry team shall exit the affected area.
- (3) Decontamination activities shall be in compliance with Health Physics Procedure.

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3.8 ANALYSIS OF THE RE-ENTRY DATA

- (1) Personnel shall be debriefed as described in Form EOF-37.
- (2) Determine if the objectives of the re-entry were accomplished.
- (3) The operability of equipment as indicated in the Control Room shall be compared with the data taken during re-entry as follows:
 - (a) Cross-check instrument readings of the radiation monitors against the survey readings.
 - (b) Compare the operable equipment with the non-operable equipment as recognized by the re-entry team.
- (4) Evaluate initial observations to develop a plan for subsequent entries to determine:

NOTE

Repairs should initially be made only on equipment that is essential to the safe and efficient operation of the plant.

- (a) If equipment and/or systems require additional inspection or repair.
- (b) If equipment is operable.
- (c) If additional personnel are required.
- (d) If additional decontamination is required.

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4.0 RECORDS

- (1) All records generated by this procedure shall be maintained iaw QA Record Retention requirements, exception is for records generated during drills and exercises.

5.0 REFERENCES

- (1) NUREG-0654, Rev. 1, Planning Standard M
- (2) 10 CFR 50.54(w)
- (3) EPA PAG Manual, EPA 400-R-92-001, Chapters 4, 7
- (4) DAEC Emergency Plan
- (5) EPIP 1.2, "Notification"
- (6) QA Audit I-90-22, Obs. B
- (7) {IC001} CC M 91009
- (8) NRC IR 90018

6.0 ATTACHMENTS

- (1) EOF/TSC FORMS

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ATTACHMENT 1

<u>EOF/TSC FORMS</u>	<u>Form No.</u>
RECOVERY ISSUES	EOF-33
EOF ACTIVITIES	EOF-34
RECOVERY PHASE PLAN OUTLINE GUIDELINE	EOF-35
RE-ENTRY BRIEFING GUIDE	EOF-36
RE-ENTRY DEBRIEFING GUIDE	EOF-37
ASSIGNMENT FORM	TSC-35
DEACTIVATION REPORT	TSC-36
PLANT OPERATIONS STATUS	TSC-37
TSC/CONTROL ROOM/OSC ACTIVITIES	TSC-38