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An Exelon/British Energy Company

10 CFR 50 App. E

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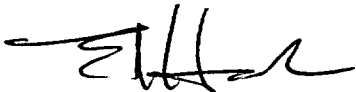
Subject: Oyster Creek Generating Station
Docket 50-219
Emergency Plan Implementing Procedure Revision

In accordance with 10 CFR 50 Appendix E, Section V, enclosed is the revised index for the Oyster Creek Emergency Plan Implementing Procedures and the below listed procedure:

<u>Procedure Number</u>	<u>Title</u>	<u>Revision</u>
EPIP-OC-.35	Radiological Controls Emergency Actions	16

If any further assistance or information is required, please contact Mr. John Rogers, of my staff, at 609.971.4893

Very truly yours,



Ernest J. Harkness P.E., Vice President
Oyster Creek Generating Station

EJH/JJR

cc: Administrator, Region I (2 copies)
NRC Senior Resident Inspector

A045

EPIP SERIES - EMERGENCY PLAN IMPLEMENTING PROCEDURES

<u>PROCEDURE NO.</u>	<u>TITLE</u>	<u>REV.</u>
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April 18, 2003

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EPIP-OC-.35 REV. 16

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**OYSTER CREEK
EMERGENCY PREPAREDNESS
IMPLEMENTING PROCEDURE**

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EPIP-OC-.35

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Usage Level

Revision No.

RADIOLOGICAL CONTROLS EMERGENCY ACTIONS**1****16**

Prior Revision 15 incorporated the
following Temporary Changes:

N/A

This Revision 16 incorporates the
following Temporary Changes:

N/AList of Pages

1.0 to 9.0
E1-1 to E1-4
E2-1 to E2-2
E3-1 to E3-2
E4-1
E5-1 to E5-2
E6-1
E7-1 to E7-2
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E14-1
E15-1
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E18-1 to E18-2
E19-1 to E19-5
E20-1
E21-1
E22-1

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PROCEDURE HISTORY

REV.	DATE	ORIGINATOR	SUMMARY OF CHANGE
8	10/94	A. T. Smith	Delete Parsippany Field Monitoring Teams.
9	07/95	A. T. Smith	Add note to clarify Radiological Controls Coord. Responsibilities in reference to sending technicians with personnel into radiation areas during emergencies. Add note for use of North Gate only during outages.
10	07/96	J. Bontempo	Update telephone number for INPO.
11	10/96	T. Blount	Change PAR directions to meet NRC guidance of Evacuation as Preferred Recommendation. Incorporate RAC/RCC integration of duties (ref Rev. 12 & 11 of E-Plan).
12	01/99	J. Rayment	Reuse Rad Monitor set points to reflect current status. Deleted 3.1 EREIF. Deleted reference to Radiological Controls support coordinator. Assigned responsibility to RAC for arranging alternate sample analysis that was previously handled by Radiological Controls support coordinator position which has been eliminated. Clarified old A120 procedure references to 6632. Clarified reference designations throughout procedure.
13	05/99	A. T. Smith	Update E-Plan number & title. Change Exhibit 9 request for sample analysis from TMI to "INPO Emerg. Resource Manual".
14	DOS	A. T. Smith	Change references from GPU or GPUN to OCNCS. Remove TMI as listed in Es. 12 for Emerg. Assist. Org.
15	11/01	G. Seals	Add requirements for control and access of High Radiation Areas. Also clarify Comm. Req. for Rad. Eng. CAP-2000-0509-8.
16	04/03	P. Thompson	Update description of RAC; Update reference number.

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RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

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16**1.0 PURPOSE**

- 1.1 This procedure provides guidance for radiological controls during a declared emergency at Oyster Creek Nuclear Generating Station.

2.0 APPLICABILITY/SCOPE

- 2.1 This procedure applies to all personnel responding in support of an emergency, drill, or exercise.
- 2.2 This procedure addresses radiological controls during an emergency including:

- *Assessment and Protective Action Recommendations
- *Emergency Dosimetry and Exposure Authorizations
- *Survey and Sample Analysis
- *Protective Clothing Considerations
- *Monitoring and Decontamination

3.0 DEFINITIONS

None.

4.0 RESPONSIBILITIES

- 4.1 Radiological Assessment Coordinator (RAC) is responsible, initially, for directing the onsite and offsite Radiological/Environmental Survey Teams after they are dispatched, Radiological Engineering Support, and the Radiological Controls Coordinator.
- 4.1.1 Reports to Group Leader R&EC.
- 4.1.2 He/she shall coordinate initial on-site and offsite radiological assessment activities, review results, report findings and make recommendations to the Emergency Director.
- 4.1.2.1 This includes, but is not limited to, performance of dose projections, direction of Onsite and Offsite Radiological/Environmental Survey Teams, onsite protective actions and formulating Protective Action Recommendations (PARs) which are then relayed to the Emergency Director.
- 4.1.2.2 In addition, he shall interface with the Environmental Assessment Coordinator (EAC) to keep him/her current as to plant conditions and radiological source terms.

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4.1.2.3 The RAC may continue to estimate source terms which will be relayed to the EAC for use in projecting offsite dose using appropriate methods as necessary.

4.2 Radiological Controls Coordinator (RCC)

- 4.2.1 Responsible for coordinating the in-plant radiological controls activities from the OSC and initially dispatching the Radiological/Environmental Survey Teams until they have established communications with the IREO RAC at the TSC. The RCC may maintain control of the Onsite Radiological/Environmental Survey Team as a designee of the RAC or the RAC may assume the RCC duties in conjunction with the RAC duties until such time that additional resources are available to take on the RCC role.
- 4.2.2 His/her functions include supervising the radiological controls technicians in the areas of radiological access control; radiological control coverage for emergency repair, corrective actions, search and rescue, first aid, assembly area monitoring, fire fighting, and personnel monitoring.
- 4.2.3 He/she shall be responsible for prioritizing the immediate radiological controls response in-plant.
- 4.2.4 He/she shall advise the RAC of problems (high background, significant backlogs, etc.) with sample analysis.
- 4.2.5 He/she shall keep the RAC advised of radiological conditions, jobs in progress, etc.
- 4.2.6 He/she shall keep the OSC Coordinator advised of the jobs he/she is covering in order to effectively coordinate the on-site radiological control needs with plant operational needs.
- 4.3 Radiological Engineering Support**
- 4.3.1 Assists the RAC in performing dose projection calculations, source term calculations, and other calculations or determinations necessary to assess radiological hazards and to minimize personnel exposure.

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16**5.0 PROCEDURE****5.1 Control and Access of High Radiation Areas during a Declared Emergency****NOTE**

During declared emergencies, some areas of the plant that do not normally require control as High Radiation or Locked High Radiation Areas could have dose rates in excess of 100 mR/hr at 30 cm or 1000 mR/hr at 30 cm respectively. This section of the EPIP applies to those areas. Posting of guards or installation of locked doors at areas in excess of 1000 mR/hr at 30 cm is not a prudent or safe measure during emergency conditions and will cause unnecessary personnel radiation exposure. During a declared emergency, the actions specified in this section satisfy the intent of 10CFR20.1601 and the Oyster Creek Technical Specifications and a 10CFR50.54x deviation authorization is not required.

5.1.1 **IF** a General Emergency or Site Area emergency has been declared.
THEN the RAC or RCC shall require teams entering known or suspected radiation areas to be composed of a minimum of two members.

AND

Briefings for teams entering known or suspected radiation areas shall include doses and dose rates at which team members shall turn around and return to the area from which they were dispatched (normally the OSC).

AND

Briefings for all dispatched teams shall include:

- Duties and responsibilities of the team
- Travel route

AND

Site accountability will be initiated by the Emergency Director to remove all non-essential personnel from the Protected Area.

AND

Security shall provide positive control over personnel attempting to enter the Protected Area.

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5.1.2 IF teams are sent to areas having known or suspected changing radiological conditions or dose rates in excess of 100 mR/hr at 30 cm,

THEN at least one team member shall be a qualified Radiation Protection Technician equipped with a dose rate monitoring device who will be responsible for maintaining positive exposure control over the team's activities.

5.1.3 IF an Unusual Event or an Alert has been declared,
THEN the RAC or the RCC may invoke 5.1.1 and 5.1.2 above at his or her discretion, except that Site Accountability is not required.

5.2 Radiological Assessment Coordinator

5.2.1 The Radiological Assessment Coordinator (RAC) qualified individual assumes the duties of the RAC and the duties of the on-shift RAC/IREO RCC, until relieved by the IREO RAC.

5.2.2 Consults and accomplishes applicable portions of Exhibit 1, "Radiological Assessment Coordinator Guide".

NOTE

The on-shift RAC consults and accomplishes applicable portions of Exhibit 3, "On-Shift RAC/IREO Radiological Controls Coordinator (RCC) Guide".

5.2.3 Completes Exhibit 6, "Radiological" of the Station Status Form from EPIP-OC-.03, "Emergency Notification".

5.2.4 The RAC shall complete the actions in Exhibit 9 when it is necessary to obtain assistance in completing sample analysis.

5.2.5 Consults and accomplishes tasks listed in Exhibit 2 as necessary.

5.2.6 Arrange for alternate sample analysis facilities when required. Such facilities may be found in the INPO Emergency Resource Manual (Reference 6.11).

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- 5.3 Radiological Controls Coordinator
- 5.3.1 Consults and accomplishes applicable portions of Exhibit 3, "Radiological Controls Coordinator Guide".
- 5.3.2 Consults and accomplishes tasks listed in Exhibit 4 as necessary.
- 5.4 Radiological Engineering Support
- 5.4.1 Consults and accomplishes applicable actions of EPIP-OC-.26, The Technical Support Center, Exhibit 5, "Radiological Engineering Support Checklist".
- 5.5 Dosimetry will be issued in accordance with guidance provided in Exhibit 6, Emergency Dosimetry Guidelines.
- 5.6 The RAC or RCC shall follow the guidance in Exhibit 10 when directing personnel to conduct surveys.
- 5.7 Respiratory protection equipment shall be prescribed in accordance with Exhibit 11, "Respiratory Protection".
- 5.8 Protective clothing shall be prescribed in accordance with Exhibit 14.
- 5.9 The RAC shall perform dose assessment activities in accordance with Exhibit 15.
- 5.10 Contamination monitoring and decontamination practices shall be conducted in accordance with Exhibit 16.

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RADIOLOGICAL CONTROLS EMERGENCY ACTIONS**6.0 REFERENCES**

- 6.1 Title 10, Code of Federal Regulations, Part 20.
- 6.2 Procedure 2000-PLN-1300.01, "OCNGS Emergency Plan".
- 6.3 Procedure EPIP-OC-.01, "Classification of Emergency Conditions".
- 6.4 Procedure EPIP-OC-.02, "Direction of Emergency Response".
- 6.5 Procedure EPIP-OC-.13, "Site Evacuation and Personnel Mustering at the Remote Assembly Area".
- 6.6 Procedure EPIP-OC-.25, "Emergency Operations Facility".
- 6.7 Procedure EPIP-OC-.26, "Technical Support Center".
- 6.8 Procedure EPIP-OC-.27, "Operations Support Center".
- 6.9 Procedure OEP-ADM-1319.02, "Emergency Response Facilities and Equipment Maintenance".
- 6.10 Plant Chemistry Procedure 831.11, "Post Accident Sampling and Analysis: Cask Transport Offsite".
- 6.11 INPO 86-032, "Emergency Resources Manual".
- 6.12 Procedure 6630-ADM-4020.01, "Respiratory Protection Program".
- 6.13 Procedure 6632-OPS-4030.07, "Operation of the New Respiratory Equipment Cleaning and Maintenance Facility".
- 6.14 Procedure 6632-OPS-4030.02, "Issue and Control of Respiratory Protection Equipment".
- 6.15 Procedure 6632-OPS-4030.03, "Inspection and Maintenance of Respiratory Protection Equipment".
- 6.16 Procedure 6630-ADM-4020.03, "Use of Respiratory Protective Equipment".
- 6.17 Procedure 6630-ADM-4330.02, "Monitoring for Personnel Contamination".
- 6.18 Procedure 6630-ADM-4200.01, "Radiological Surveys".
- 6.19 Procedure 6630-ADM-4025.01, "Bioassay Program".
- 6.20 Action Item 920197, "Fluid Intake for Emergency Workers."
- 6.21 Memo 6610-94-0016, D. W. Ethridge, Dose To Save A Life (1-14-94).
- 6.22 NRC Letter to M. B. Roche - 4/24/96 - E. P. Meeting of 3/15/96.
- 6.23 Procedure EPIP-OC-.44, "Thyroid Blocking".

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16**7.0 EXHIBITS**

- 7.1 Exhibit 1, "Radiological Assessment Coordinator (RAC) Guide"
- 7.2 Exhibit 2, "Radiological Assessment Coordinator Periodic Tasks"
- 7.3 Exhibit 3, "On-Shift RAC/IREO Radiological Controls Coordinator (RCC) Guide"
- 7.4 Exhibit 4, "Radiological Controls Coordinator (RCC) Periodic Tasks"
- 7.5 Exhibit 5, "Radiological Engineering Support Guide"
- 7.6 Exhibit 6, "Emergency Dosimetry Guidelines"
- 7.7 Exhibit 7, "Emergency Exposure Criteria"
- 7.8 Exhibit 7A, "Dose Limits for Emergency Personnel"
- 7.9 Exhibit 8, "Emergency Dose Authorization"
- 7.10 Exhibit 9, "Actions for Assistance with Analysis Capabilities"
- 7.11 Exhibit 10, "Radiological Surveys"
- 7.12 Exhibit 11, "Respiratory Protection"
- 7.13 Exhibit 12, "Emergency Assistance Organizations"
- 7.14 Exhibit 13, "Emergency Respirator Issue Log"
- 7.15 Exhibit 14, "Protective Clothing"
- 7.16 Exhibit 15, "Dose Assessment"
- 7.17 Exhibit 16, "Contamination Monitoring and Decontamination Practices"
- 7.18 Exhibit 17, "Form EPIP-OC-.35-3, Radiation Monitor Status"
- 7.19 Exhibit 18, "Form EPIP-OC-.35, Radiation Monitor Status"
- 7.20 Exhibit 19, "ARM Location"
- 7.21 Exhibit 20, "PASS Sample Request Identification"
- 7.22 Exhibit 21, "Emergency Sample Request Form"
- 7.23 Exhibit 22, "Emergency Equipment Locations"

EXHIBIT 1**Radiological Assessment Coordinator (RAC) Guide**

NOTE: The on shift RAC shall initiate these actions until relieved by the IREO RAC.

The IREO RAC should report to the TSC and establish communications (either face to face or by telecon) with the on shift RAC for an update on plant conditions prior to assuming duties as RAC.

If the ED has not or is not expected to relocate to the TSC within 10 minutes of the IREO RAC arriving at the TSC the IREO RAC should report to the ECC.

1.0 **UPON ARRIVAL AT ECC or TSC**

- 1.1** Report to and receive direction from the Emergency Director. After activation of the EOF, he/she will administratively report to the Group Leader R&EC but will continue to provide operational support to the Emergency Director.
- 1.2** Determine if personnel contamination monitoring is required and establish monitoring station at the ECC and TSC. Ensure that the ECC and TSC CAMS and ARMS are operational.
- 1.3** Activate the dose assessment computer and ensure operability.
- 1.4** Initiate and maintain a log of significant events and activities pertinent to radiological controls.
- 1.5** Establish radiological communications as needed when other Emergency Centers are activated. Maintain a communication log. Use Emergency Message forms to record communications requiring a reply.
- 1.6** Verify that the current emergency classification is consistent with the most serious radiological EAL and advise the ED. (Ref. 6.3-"EPIP-OC-.01")

EXHIBIT 1 (continued)Radiological Assessment Coordinator (RAC) Guide**2.0 DUTIES AT ALERT OR PRECAUTIONARY ACTIVATION**

- 2.1 Move to TSC when activated
- 2.2 Monitor the radiological status of the Plant via the CHRRMS, ARMS, effluent monitors, ventilation system status, meteorological data and survey data. Periodically brief the ED and the other emergency centers on the plant radiological status. Use Exhibit 18, EPIP-OC-.35-A, "Radiation Monitor Status" to record ARM data. See Exhibits 17 & 19 for ARM locations.
- 2.3 If requested from other emergency centers, periodically (every 15-30 minutes) transmit CHRRM and ARM readings, wind speed and direction and plant release rate, if applicable, via the Communications Coordinator. Ensure proper clock time is indicated.
- 2.4 Periodically ensure the center radiation and airborne radioactivity levels are monitored.
- 2.5 Periodically request from Radiological Engineering Support parallel assessment of the offsite radiological consequences of the event.
- 2.6 Request an analysis of RAGEMS, PASS, etc. samples (as applicable) to better assess the isotopic composition of any release or potential release. Discuss the desired PASS samples with the Chemistry Coordinator. The Chemistry Coordinator will tell you if these samples are available. Decide sample priorities in concert with the Chemistry Coordinator. Have the ED authorize the desired samples using Exhibit 21. Refine offsite dose projections as isotopic data becomes available.

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16**EXHIBIT 1**
(continued)**Radiological Assessment Coordinator (RAC) Guide****DUTIES AT ALERT OR PRECAUTIONARY ACTIVATION (con't)**

- 2.7 Authorize personnel exposure up to 10 CFR 20 limits as necessary. Document in the RAC log. (This is a specific exemption from Procedure 6630-ADM-4000.01, "Administrative Dose Limits").
- 2.7.1 Ensure emergency personnel authorized by the Emergency Director to receive exposure in excess of 10 CFR 20 limits, Exhibit 8, are advised of potential health effects using Exhibit 7A, "Dose Limits For Emergency Personnel". This task may be performed by any Rad Con personnel conducting team briefings.
- 2.8 Direct the activities of the offsite survey teams until relieved by the EACC. [Refer to Procedure EPIP-OC-.11]. On request by the EAC, provide input for the completion of the EAC/RAC Turnover Checklist, EPIP-OC-.31, Exhibit 1B.
- 2.9 The RAC should maintain awareness regarding the status of activation of Onsite and Offsite Monitoring Teams.
- 2.9.1 If team activation is being delayed due to the equipment inventory process, the RAC should evaluate the immediate need for monitoring team dispatch and authorize the waiver or modification of the inventory as appropriate.
- 2.9.2 If the RAC is not immediately available, i.e., within 5 minutes, the RCC may make the determination regarding authorizing the waiver or modification of the inventory.

3.0 ADDITIONAL DUTIES AT A SITE AREA EMERGENCY:

- 3.1 Recommend to the ED evacuation of the reactor building if the potential exists for high radiation and/or airborne radioactivity. (e.g. initiation of Core Spray, Containment Spray, Iso Condensers, etc.).
- 3.2 Transmit source term and dose projection data to the EACC and to the TSC if not in the TSC. Transmit dose projections until relieved by the EAC. Continue to transmit source term data for the duration of the event.
- 3.3 Perform offsite dose calculations if the release rates have or are expected to exceed normal levels. Review EAL's for appropriate classification based on projection (Ref. 6.3, EPIP-OC-.01).
- 3.4 Designate site evacuation route (north or south) if site evacuation is to be called.
- 3.5 Impact of Radiological conditions on Site Accountability should be evaluated continuously.

4.0 ADDITIONAL DUTIES AT A GENERAL EMERGENCY:

- 4.1 If EOF is not activated, perform offsite dose projections and provide suggested Protective Action Recommendation in accordance with Procedure EPIP-OC.02 to the ED within 15 minutes after declaration of a General Emergency.
 - 4.1.1 In accordance with NRC guidance, Evacuation is the preferred recommendation unless it is KNOWN that Sheltering will offer greater protection. In general-Evacuate a two mile radius and five miles downwind; Shelter any areas of the ten mile EPZ not evacuated. Refer to PAR Logic diagram - EPIP-OC-02. (ref. NRC letter to M. B. Roche dated 4/24/96.

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16**EXHIBIT 2****Radiological Assessment Coordinator****Periodic Tasks**

- 1.0 Monitor the high-range RAGEMS monitors. When the high-range monitors are required, the RAC shall advise the ED that a turbine building exhaust fan (EF-1-6 or EF-1-7) should be started or remain operating to provide the dilution required by the RAGEMS system.
- 2.0 Recommend that the ED request the appropriate radiological PASS samples be taken and analyzed.
- 3.0 Contact the Chemistry Coordinator and discuss the PASS samples desired to assure that the sample is available and to decide sample priorities.
 - 3.1 As appropriate, discuss with the Chemistry Coordinator conduct of necessary radiological surveys in accordance with Procedure 831.8, Post Accident Sampling and Analysis: Estimation of Percent Fuel Failure.
 - 3.2 Inform the Radiological Controls Coordinator of the necessary surveys to be conducted.
- 4.0 Use Exhibit 21, "Emergency Sample Request Form" to avoid confusion over which samples are requested.
- 5.0 Use the PASS sample results in the development and verification of dose projection source terms.
- 6.0 He/she shall advise the Radiological Controls Coordinator when the ED requires activation establishing the operation of the Remote Assembly Area or Forked River Assembly Area including personnel or vehicular monitoring and/or decontamination.

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(Continued)**Radiological Assessment Coordinator****Periodic Tasks**

- 7.0 He/she shall approve emergency exposure upgrades up to 10CFR20 exposure limits and provides input to the ED if emergency authorizations above 10CFR20 limits are requested.
- 8.0 Ensure the PAR Status Board is maintained up-to-date with the current status and emergency conditions.
- 9.0 Personnel conducting duties as response team may be authorized by the RAC to consume liquids to prevent dehydration during periods when "Eating, drinking, and smoking" have been prohibited.
- 9.1 The RAC should designate appropriate control to minimize uptake of radiological materials while personnel consume these liquids.

EXHIBIT 3**On-Shift RAC/Radiological Controls Coordinator (RCC) Guide****1.0 ALERT OR ACTIVATION:**

- 1.1 Report to and receive direction from the RAC.
- 1.2 Maintain liaison with the OSC Coordinator.
- 1.3 Establish personnel contamination monitoring at the OSC. Ensure that the OSC CAM and ARM are operational. Periodically ensure that the radiation and airborne radioactivity levels of the OSC are evaluated.
- 1.4 Establish radiological communications as the other emergency centers become activated. Maintain a communication log. Use Emergency Message forms to record communications requiring a reply.
- 1.5 Initiate and maintain a log of significant events and activities pertinent to radiological controls.
- 1.6 Direct the activities of the onsite survey teams. Periodically advise the RAC and the OSC Coordinator of survey results.
- 1.7 Obtain current copies of the Personnel Exposure Report and the Personnel Qualification Report for OSC use.
- 1.8 The RAC should maintain awareness regarding the status of activation of Onsite and Offsite Monitoring Teams. If team activation is being delayed due to the equipment inventory process and the RAC is immediately unavailable, i.e., within 5 minutes, the RCC may make the determination regarding authorizing the waiver or modification of the inventory.

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16**EXHIBIT 3**

(continued)

On-Shift RAC/Radiological Controls Coordinator (RCC) Guide**2.0 SITE AREA EMERGENCY:**

- 2.1 Control access into radiological controlled areas based on actual or expected conditions. Inform the RAC of all RCA entries.
- 2.2 Brief all teams on the expected radiological conditions prior to their entry into the RCA.
- 2.3 Assign Radiological Control Technicians to the Emergency Assembly Area (EAA) to monitor personnel and the facility when site accountability is required by the ED.
- 2.4 Dispatch Rad Techs to the Main and North Gate Processing Centers to determine the habitability of the Processing Centers.

NOTE

North Gate only applicable when the gate is open during outages.

3.0 GENERAL EMERGENCY:

- 3.1 Assign Radiological Control Technicians to the Remote Assembly Area (RAA) or Forked River Assembly Area (FRAA), as required.
- 3.2 Dispatch Rad Techs to the Main and North Gate Processing Centers to determine the habitability of the Processing Centers if Rad Tech not already at each center.

NOTE

North Gate only applicable when the gate is open during outages.

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16**EXHIBIT 4****Radiological Controls Coordinator****Periodic Tasks**

- 1.0 Dispatches Radiological Controls personnel to the Remote Assembly Area or Forked River Assembly Area to implement personnel and vehicle monitoring and decontamination.
- 2.0 Coordinates sample counting between the available Oyster Creek counting rooms and other counting facilities identified for use by the RAC.
- 3.0 When advised by the Radiological Assessment Coordinator that surveys required by Procedure 831.8, Post Accident Sampling and Analysis: Estimation of Percent Fuel Failure are required, assign the appropriate personnel.

EXHIBIT 5
Radiological Engineering Support Guide

1.0 ALERT OR ACTIVATION:

- 1.1 Report to and receive direction from the Radiological Assessment Coordinator.
- 1.2 Periodically, ensure the TSC radiation and airborne radiation levels are evaluated.

CAUTION

Turn on HEPA filter when continuous air monitor trends upwards.

- 1.3 Perform radiological hazard/ALARA analysis for investigative, corrective, and recovery actions.
- 1.4 Determine source terms for ground and elevated releases.
- 1.5 Perform internal and external personnel exposure evaluations.
- 1.6 Provide technical support and analysis for the radiological aspects in support of radiological control activities.
- 1.7 Monitor the radiological status of the Plant via ARMS Worksheet Data (including CHRRMS), effluent monitors, ventilation system status, meteorological data and survey data. Periodically brief the RAC on present and expected radiological conditions both onsite and offsite.
- 1.8 Establish radiological communications as the other ERF's are activated. Maintain appropriate logs of communications.
- 1.9 Recommend onsite and near site protective actions as appropriate.
- 1.10 Perform offsite dose projections and recommend offsite Protective Action Recommendations until relieved of this by the EAC.

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16**EXHIBIT 5**
(continued)**Radiological Engineering Support Guides**

1.11 Maintain the PAR and Meteorology Status Boards.

1.12 Present all documentation generated during the performance of their duties to the TSC Coordinator.

1.13 Perform additional task as directed by the RAC.

2.0 SITE AREA EMERGENCY:

2.1 Recommend to the RAC evacuation of the Reactor Building if required by actual or expected radiological conditions.

3.0 GENERAL EMERGENCY:

3.1 No additional actions.

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16**EXHIBIT 6****Emergency Dosimetry Guidelines**

- 1.0 Individual doses should be evaluated for personnel selected for emergency team assignments.
- 2.0 Ensure an individual is designated to review personnel exposure status for personnel requiring entry during an emergency. Administrative exposure limits are not to be exceeded except as indicated below:
 - 2.1 The RAC can verbally authorize exposure in excess of administrative limits up to those allowed by 10CFR20.
 - 2.2 Personnel exposure limits are not to exceed 10CFR20 personnel exposure limits without written authorization from the ED as documented on Exhibit 8, "Emergency Dose Authorization". For planned exposures exceeding 10CFR20 personnel exposure limits, follow emergency exposure criteria provided in Procedure EPIP-OC-.02, "Direction of Emergency Response; Protective Action Recommendation Guide; Emergency Exposure Guidelines".
 - 2.3 Exhibit 7, "Emergency Exposure Criteria" provides Emergency Exposure criteria.
- 3.0 Increases in dose rates above normal background at the Main or North Gates may affect results for dosimetry stored in those locations. RAC should consider relocating dosimetry devices stored in these locations to an area of lower background.
- 4.0 Planned exposure to the whole body and/or specific organs shall not exceed 10CFR20 without Emergency Director approval.

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16**EXHIBIT 7**
EMERGENCY EXPOSURE CRITERIA**ADDITIONAL GENERAL CRITERIA**

1. Persons authorized to receive exposures listed for Life Saving or Protective Actions (EPIP-OC-.02, Exhibit 1b 1.8A) shall be made aware of the voluntary nature of their assignment and the potential health effects and approximate cancer risks.
2. Persons assigned to receive exposures listed for Life Saving or Protective Actions (EPIP-OC-.02, Exhibit 1b. 1.8B) shall be made aware of the potential health effects and approximate cancer risks. (Exhibit 7A).
3. All reasonable measures must be taken to control contamination and internal exposure.
4. Persons performing emergency activities should be familiar with exposure consequences. (Exhibit 7A).
5. Women capable of reproduction should not take part in actions requiring emergency exposures in accordance with NRC Regulatory Guide 8.13.
6. Retrospective doses shall be evaluated on an individual case basis.

NOTES:

- (1) Authorization to receive these recommended exposures is the sole responsibility of the Emergency Director.
- (2) Thyroid exposure may be minimized to the extent feasible by the use of respirators and/or thyroid prophylaxis (Ref. 6.23-EPIP-OC-.44).

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16**EXHIBIT 7A****POTENTIAL HEALTH EFFECTS BRIEFING GUIDELINE**

Emergency personnel should consider the risks involved in accepting the dose verses the benefits of the emergency action prior to volunteering to receive such dose. the table below is provided to assist potential volunteers in deciding whether to volunteer.

HEALTH EFFECTS FROM ACUTE WHOLE BODY DOSES:
(from Rad Health Handbook)

<25 RAD	No Observable Effects
25-100 RAD	Range from No Symptoms to Nausea. Changes in white blood cells are anticipated so the individual is more susceptible to diseases.
110 RAD	10% chance of being lethal with no medical intervention.*
340 RAD	50% chance of being lethal with no medical intervention.*
585 RAD	90% chance of being lethal with no medical intervention.*

*Note that medical intervention will approximately double the chance of survival.

Note: In addition to the acute health effects, the worker may have an increased long-term risk of fatal cancer. This risk is roughly estimated to be about 2% per 25 REM of exposure (based on a risk factor of $8E-4$ per REM from Table 4.3, BEIR V). By comparison, natural cancer incidence is about 18%.

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16**EXHIBIT 8****EMERGENCY DOSE AUTHORIZATION**

Time: _____

Date: _____

	<u>Name</u>	<u>Social Security Number</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____

Dosage Authorized:

_____ Total Whole Body (TEDE)

_____ Extremities (SDE-E)

_____ Skin of Whole Body (SDE-WB)

_____ Internal (CEDE)

For (Action): _____

Reviewed By: _____
Radiological Assessment CoordinatorApproved By: _____
Emergency Director

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16**EXHIBIT 9****Actions for Assistance with Analysis Capabilities**

- 1.0 Contact the Group Leader Administration at the Emergency Operations Facility (EOF) to request assistance from another utility for sample analysis. This can be accomplished by using the INPO Emergency Resource manual.
- 2.0 Contact Radwaste Shipping Department at the Radwaste Control Room (X-4683) to arrange for offsite transport of samples. PASS samples may be shipped offsite to Babcock & Wilcox for analysis by using Reference 6.10.

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16**EXHIBIT 10****Radiological Surveys**

- 1.0 The RAC or RCC shall direct personnel to locations where radiation measurements are required.
- 2.0 A team briefing shall be conducted in accordance with Procedure EPIP-OC-.27, "OSC; Emergency Team Briefing".
- 2.1 Prior to team entry, the RCC shall ensure an initial evaluation of the Area Radiation Monitor (ARM) status. This data may be obtained from the Plant Computer System Terminal available in the OSC, Control Room (ECC) or the RAC/Radiological Engineering Support (TSC).

NOTE

If the ARMs are offscale, further evaluation of the affected building shall be performed by the RAC prior to entry.

- 2.2 Silver zeolite cartridges should be dose rate surveyed prior to gamma spectroscopy analysis. This ensures that radioiodine quantification is accurate and dead time counting losses are kept within acceptable limits. To accomplish this, the "loaded side" of the cartridge face shall be measured on contact, closed window with an Eberline RO-2. Cartridge iodine content will be approximately 0.3 uCi per mrem/hr assuming a clad damage iodine mix. Use a counting shelf which keeps the dose rate to the detector <1.5 mR/hr.

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16**EXHIBIT 10****Radiological Surveys (Continued)**

When iodine concentrations are known or projected, use a sampling runtime/flowrate that will result in a cartridge activity that will not exceed 1.5 mR/hr to the counting detector.

CAUTION

Do not use dehydrated silver zeolite in environments where a potential exists for hydrogen concentrations above 4% and oxygen concentrations above 5%. A fire or explosion can occur when used in combustible environments.

- 3.0 The RCC shall designate the proper surveys to be conducted, i.e., dose rate, smear, and/or air sample.
- 3.1 The assigned survey team shall conduct the designated surveys, document the results, transmit the results to the RCC, and retain all appropriate samples.

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16**EXHIBIT 11**
Respiratory Protection**NOTE**

Only NIOSH certified respiratory protection equipment which has been approved by the Respiratory Protection Supervisor is to be issued for use.

NOTE

Individuals issuing or supervising the issue of respiratory protective equipment must be trained in the proper application and operation of the equipment for routine, outage, and emergency situations.

NOTE

If a Respirator Maintenance Technician is not available or an immediate response is needed to a plant emergency, respiratory equipment may be issued by Radiological Controls personnel in accordance with Reference 6.14.

NOTE

Emergency respiratory equipment to be issued shall be specified in a valid, up-to-date RWP or NRP when time permits. Respiratory equipment may be issued at the direction of the ED/RAC/RCC and documented in Exhibit 13, "Emergency Respirator Issue Log".

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16**EXHIBIT 11****Respiratory Protection (Continued)**

- 1.0 The RCC (RAC) shall request that the OSC Coordinator arrange for callout of qualified RMT personnel as necessary to support respiratory equipment issue.
- 2.0 If outside respiratory protection equipment should be required, the ED/ESD, in cooperation with the Respiratory Protection Supervisor and the Group Leader R&EC, may contact one or more of the organizations in Exhibit 12, "Emergency Assistance Organization".
- 3.0 When issuing respirators, the following conditions should be met for the purpose of controlling inventory in addition to the normal process:
 - 3.1 The emergency respirator cabinet(s) shall remain locked except when respirators are being issued, inventoried, or restocked.
 - 3.2 The Emergency Respirator Issue Log, Form Exhibit 13, shall be kept in the Emergency Respirator Issue Cabinets (e.g., TSC, OSC).
- 4.0 Issue of Respiratory Equipment
 - 4.1 Issue of respiratory protective equipment from the EREIF shall be performed by assigned RMT's or Radiological Controls Technicians in accordance with Reference 6.15.

NOTE

The respirators are located in Bldg. 14, in the Training Respirator Issue cabinet. These may be used in cases when on-site respiratory issue location is not habitable.

- 4.2 All issued respiratory protective equipment shall be returned to the Respirator Maintenance Facility or a designated alternate collection point in accordance with Reference 6.15.

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EXHIBIT 12

EMERGENCY ASSISTANCE ORGANIZATIONS

INSTITUTE OF NUCLEAR POWER OPERATIONS (INPO)

MEMBER UTILITIES OF THE "INPO NUCLEAR POWER PLANT
EMERGENCY RESPONSE VOLUNTARY ASSISTANCE PROGRAM"
INPO--(800) 321-0614

MINE SAFETY APPLIANCES (MSA)

MSA NUCLEAR EMERGENCY STOCK PROGRAM
(800) MSA-5555

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16**EXHIBIT 14****Protective Clothing**

- 1.0 Protective clothing is maintained at the various emergency centers for donning as required.
- 2.0 Protective clothing may be worn by personnel entering an emergency center as a reverse contamination control process, i.e., if personnel outside a center cannot monitor for contamination, protective clothing may be donned at the discretion of the senior Rad Con representative present in the emergency center by personnel entering from a potentially contaminated area.
 - 2.1 Gloves should be donned first to minimize the potential for spreading contamination.
 - 2.2 Shoe covers should then be donned.
 - 2.3 Coveralls should then be donned.
- 3.0 The RCC, with input from the RAC as necessary, shall prescribe the necessary protective clothing for emergency response teams and record this information on the Emergency Team Briefing EPIP-OC-.27, Exhibit 4A.

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16**EXHIBIT 15****Dose Assessment****1.0 Onsite Dose Assessment**

- 1.1 The RCC, in coordination with the RAC, shall direct the onsite field monitoring team(s) in an effort to detect and quantify any radiological releases.

2.0 Offsite Dose Assessment

- 2.1 Until relieved of offsite dose projection responsibility by the EAC, the RAC will perform dose projections using the RAC computer code. RAGEMS data shall be monitored and used for source term determination when appropriate. Other indications, such as ARM readings, process monitor readings, field samples, etc., shall be used to determine a source term when no RAGEMS data or RAGEMS stack sample data are available.
- 2.2 When the EACC is activated, the RAC will be relieved of responsibility for offsite dose projections which are based on RAGEMS data. The RAC is then responsible for ensuring that RAGEMS data are relayed to the EAC and should focus dose projection efforts on non-RAGEMS based source term generation (contingency calculations). All dose projections should be relayed to the Group Leader R&EC after the EOF is activated.

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16**EXHIBIT 16****Contamination Monitoring and Decontamination Practices****1.0 Personnel**

- 1.1 Radiological Controls personnel shall establish personnel frisking at each emergency facility that is being utilized.
- 1.2 Radiological Controls personnel shall establish an area for personnel monitoring at the south entry to the RAA from the parking lot when the RAA is activated or in the vicinity of Building 18 if the Forked River Assembly Area is activated.
- 1.3 Personnel monitoring shall be performed in accordance with Reference 6.18.
 - 1.3.1 A log shall be kept listing all personnel determined to be contaminated, contamination levels in cpm location of contamination and disposition to decontaminate individual.
- 1.4 The RCC (RAC) should arrange for personnel suspected of internal deposition to be monitored in accordance with Reference 6.20.

2.0 Equipment

- 2.1 Potentially contaminated equipment shall be monitored for contamination prior to being returned to emergency kits, lockers, or other storage facilities.

3.0 Facilities

- 3.1 Radiological Controls personnel shall conduct facility habitability surveys periodically to determine if radiological conditions warrant protective measures.

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16**EXHIBIT 16****Contamination Monitoring and Decontamination Practices****(Continued)****4.0 Vehicles**

- 4.1 Radiological Controls personnel shall monitor vehicles onsite, in use offsite, and at the RAA as required when contamination is suspected.
- 4.2 Radiological Controls personnel shall survey and segregate vehicles arriving at the RAA or Forked River Assembly Area (Ref. 6.5-EPIP-OC-.13).
- 4.2.1 Direct occupants to remain in vehicle.
- 4.2.2 Contaminated areas of the vehicle shall be marked with tape and annotated on the survey record.
- 4.2.3 Vehicle survey records shall include:
- License plate number
 - Date/time
 - Survey location
- 4.2.4 Results for the following areas shall be recorded:
- Tires
 - Vehicle interior
 - Inside door handles
 - Steering wheels
 - Accessible dashboard controls
 - Pedals and accessible floor board areas

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16**EXHIBIT 16****Contamination Monitoring and Decontamination Practices****(Continued)**

5.0 Contaminated vehicles shall be processed on the following basis:

5.1 The RAC should establish a location and methodology for decontamination of contaminated vehicles located at the Oyster Creek or Forked River sites on a case by case situation.

5.2 Vehicles at the RAA or Forked River Assembly Area required for immediate use:

5.2.1 Wash (or spot decontamination if appropriate).

The Repair and Wash Bay is to be used if at the RAA.

5.2.2 Resurvey vehicle per 4.2.

5.2.3 If vehicle is no longer contaminated, move to parking area north or west of the RAA or other designated area if not at the RAA.

5.2.4 If the vehicle remains contaminated, disposition shall be directed by the Radiological Assessment Coordinator or on a case-by-case basis.

5.3 Vehicles at the RAA or Forked River Assembly Area not required for immediate use:

5.3.1 Vehicle may remain parked for four (4) or more hours then resurvey.

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- 5.3.2 If vehicle is found to be contaminated, follow the action described in Paragraph 5.2 when vehicle is required or as time and personnel becomes available.
- 5.3.3 If vehicle is no longer contaminated, move to parking area north or west of the RAA or other designated area if not at the RAA.

EXHIBIT 17 EPIP-OC-.35 RADIATION MONITOR PANEL LAYOUT

E17-1

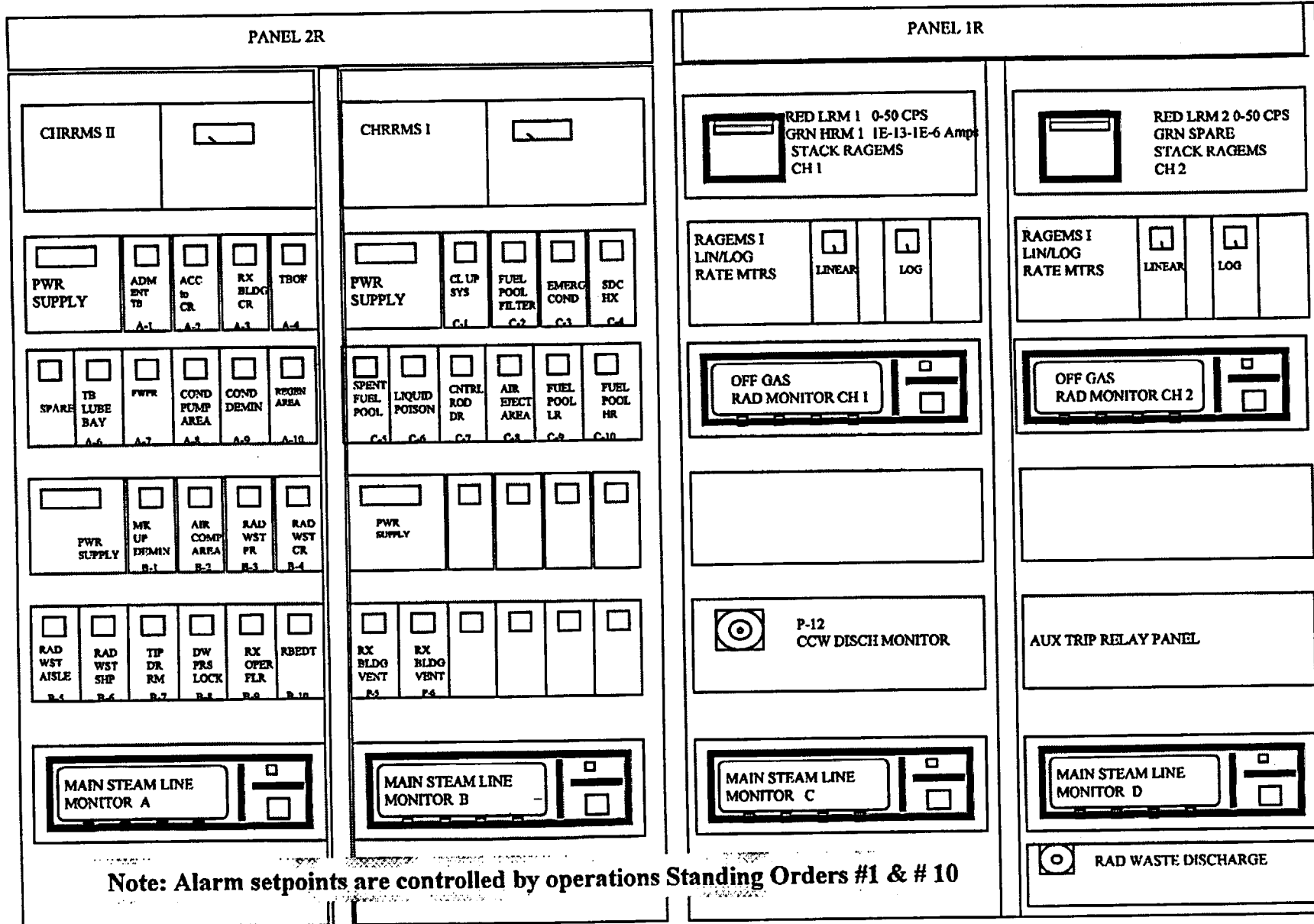


EXHIBIT 18 EPIP-OC-.35 RADIATION MONITOR STATUS

DATE: _____

E18-1

Monitor	RANGE	Panel	Time	Reading (mr/hr)**	A*	Time	Reading (mr/hr)**	A*	Time	Reading (mr/hr)**	A*	Time	Reading (mr/hr)**	A*
A-1: ADM. ENT. TB	0.01-100	2R												
A-2: ACC. TO CR	0.01-100	2R												
A-3: RX BLDG CR	0.01-100	2R												
A-4: TBOF	0.1-1000	2R												
A-6: TB LUBE OIL BAY	0.1-1000	2R												
A-7: FWPR	0.1-1000	2R												
A-8: COND PUMP AREA	0.1-1000	2R												
A-9: COND DEMIN	0.1-1000	2R												
A-10: REGEN AREA	0.1-1000	2R												
B-1: MK UP DEMIN	0.1-1000	2R												
B-2: AIR COMP AREA	0.1-1000	2R												
B-3: RAD WST PR	0.1-1000	2R												
B-4: RAD WST CR	0.1-1000	2R												
B-5: RAD WST AIBLE	0.1-1000	2R												
B-6: RAD WST SHIP	0.1-1000	2R												
B-7: TP DRIVE RM	0.1-1000	2R												
B-8: DW PRS LOCK	0.1-1000	2R												
B-9: RX OPER FLOOR	0.1-1000	2R												
B-10: RBEDT RM	0.1-1000	2R												
C-1: CLN UP SYS	0.1-1000	2R												
C-2: FUEL POOL FILTER	0.1-1000	2R												
C-3: EMER. COND	0.1-1000	2R												
C-4: SDC HX	0.1-1000	2R												
C-5: SPENT FUEL POOL	0.1-1000	2R												
C-6: LIQUID POISON	0.1-1000	2R												
C-7: CNTRL ROD DRIVE	0.1-1000	2R												
C-8: AIR EJECT. AREA	0.1-1000	2R												
C-9: FUEL POOL LR	0.1-1000	2R												
C-10: FUEL POOL HR	10-1E6	2R												

* ✓ Indicates Alarm Is In ** readings are in mr/hr unless otherwise noted

NOTE: OSH Indicates Off Scale High reading

EXHIBIT 18 EPIP-OC-.35-4 RADIATION MONITOR STATUS

Monitor	RANGE	Panel	Time	ReadingNOTE 1	A*	Time	ReadingNOTE 2	A*	Time	ReadingNOTE 3	A*	Time	ReadingNOTE 4	A*
CHARMS I (RAW)	1-1E7	2R												
CHARMS I (RAW)	1-1E7	2R												
CH1 RX BLDG VENT(mmr)	0.1-1000	2R												
CH2 RX BLDG VENT(mmr)	0.1-1000	2R												
MS LINE MONITOR A(mmr)	1-1E9	2R												
MS LINE MONITOR B(mmr)	1-1E9	2R												
MS LINE MONITOR C(mmr)	1-1E9	1R												
MS LINE MONITOR D(mmr)	1-1E9	1R												
OG RAD MONITOR CH 1(mmr)	1-1E9	1R												
OG RAD MONITOR CH 2(mmr)	1-1E9	1R												
RADMS CH 1 (HIGH RANGE)	1E-15-1E-6mcpa	1R												
RADMS CH 1 (LOW RANGE)	0-10RCPs	1R												
RX WATER LEVEL (IN TAP)NOTE 3	N/A	4F												
RX PRESSURE (PSI)	N/A	4F												
RX POWER (W)	N/A	3N, 2R												
OW PRESSURE (PSI)NOTE 3	N/A	1R/2F												
RX BLDG. PRESSURE (IN H ₂ O)	N/A	11R												
CONT SPRAY STATUS		PANEL	TIME	SPRAY MODE	ON?	TIME	SPRAY MODE	ON?	TIME	SPRAY MODE	ON?	TIME	SPRAY MODE	ON?
CONT SPRAY SYS 1	N/A	1F/2F		OW/TORUS	Y/N		OW/TORUS	Y/N		OW/TORUS	Y/N		OW/TORUS	Y/N
CONT SPRAY SYS 2	N/A	1F/2F		OW/TORUS	Y/N		OW/TORUS	Y/N		OW/TORUS	Y/N		OW/TORUS	Y/N
FAN STATUS		PANEL	TIME	ON?		TIME	ON?		TIME	ON?		TIME	ON?	
EF 1-6	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-6	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-7	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-8	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-9	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-10	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-11	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-12	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-13	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-14	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-15	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-16	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-17	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-18	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-19	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-20	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-21	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-22	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-23	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-24	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-25	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-26	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-27	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-28	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-29	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-30	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-31	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-32	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-33	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-34	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-35	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-36	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-37	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-38	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-39	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-40	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-41	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-42	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-43	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-44	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-45	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-46	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-47	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-48	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-49	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-50	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-51	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-52	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-53	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-54	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-55	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-56	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-57	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-58	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-59	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-60	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-61	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-62	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-63	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-64	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-65	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-66	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-67	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-68	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-69	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-70	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-71	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-72	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-73	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-74	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-75	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-76	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-77	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-78	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-79	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-80	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-81	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-82	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-83	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-84	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-85	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-86	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-87	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-88	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-89	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-90	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-91	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-92	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-93	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-94	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-95	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-96	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-97	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-98	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-99	N/A	11R		Y/N			Y/N			Y/N			Y/N	
EF 1-100	N/A	11R		Y/N			Y/N			Y/N			Y/N	

* Indicates Alarm in In

NOTE 1: "OSH" Indicates Off Scale High reading

NOTE 2: Digital display on 4F only goes down to 0.01m.

NOTE 3: Digital display on 4F only goes up to 4.0psi

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**OYSTER CREEK
EMERGENCY PREPAREDNESS
IMPLEMENTING PROCEDURE**

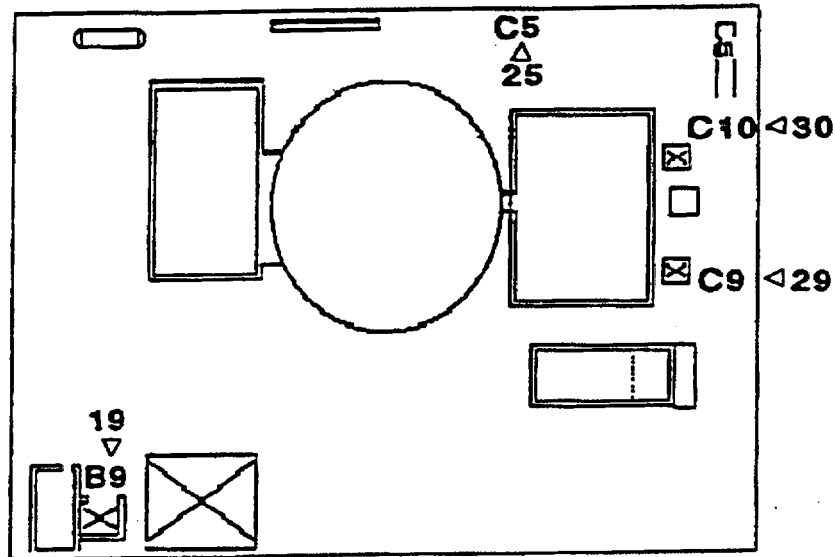
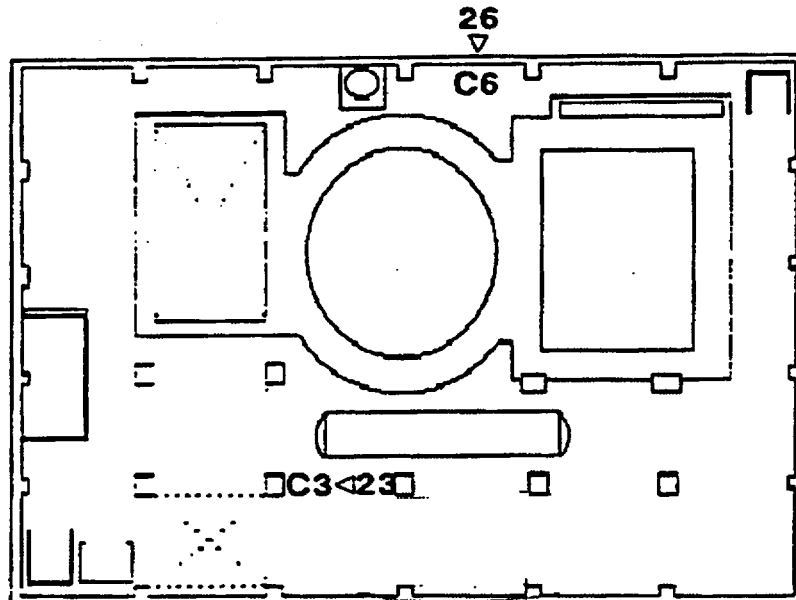
Number

EPIP-OC-.35

Title

RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

Revision No.

16**EXHIBIT 19****ARM Locations****REACTOR BLDG
119' ELEVATION****REACTOR BLDG
95' ELEVATION**

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**OYSTER CREEK
EMERGENCY PREPAREDNESS
IMPLEMENTING PROCEDURE**

Number

EPIP-OC-.35

Title

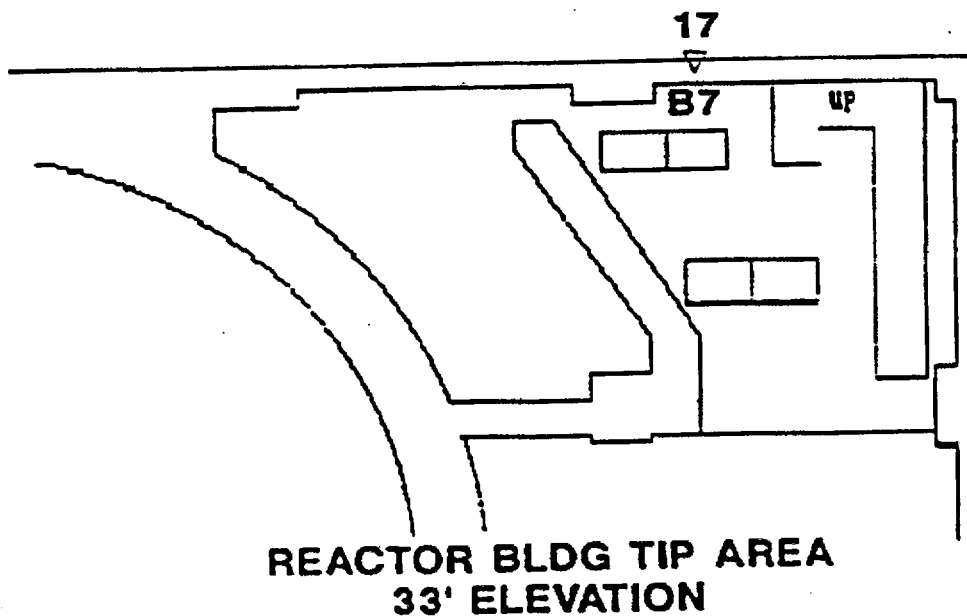
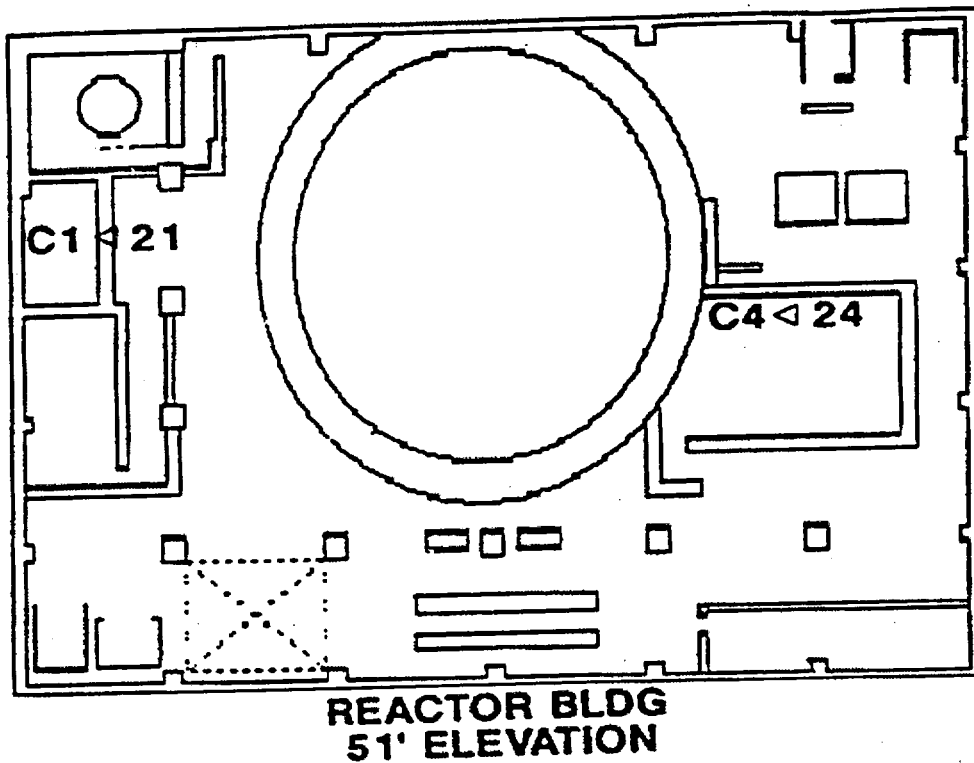
RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

Revision No.

16

EXHIBIT 19
(con't)

ARM Locations



Title

RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

Revision No.

16

EXHIBIT 19
(con't)
ARM Locations

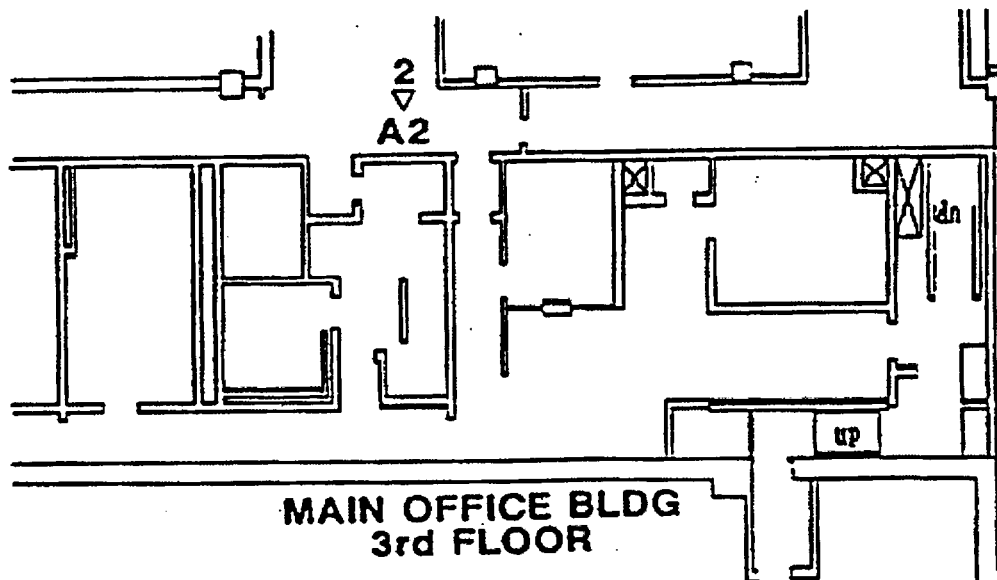
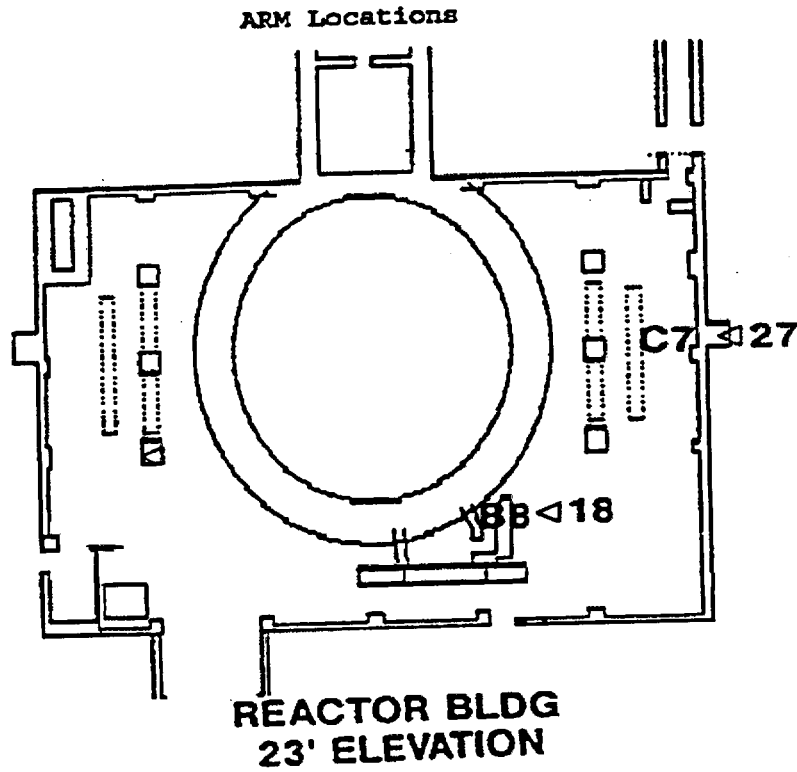
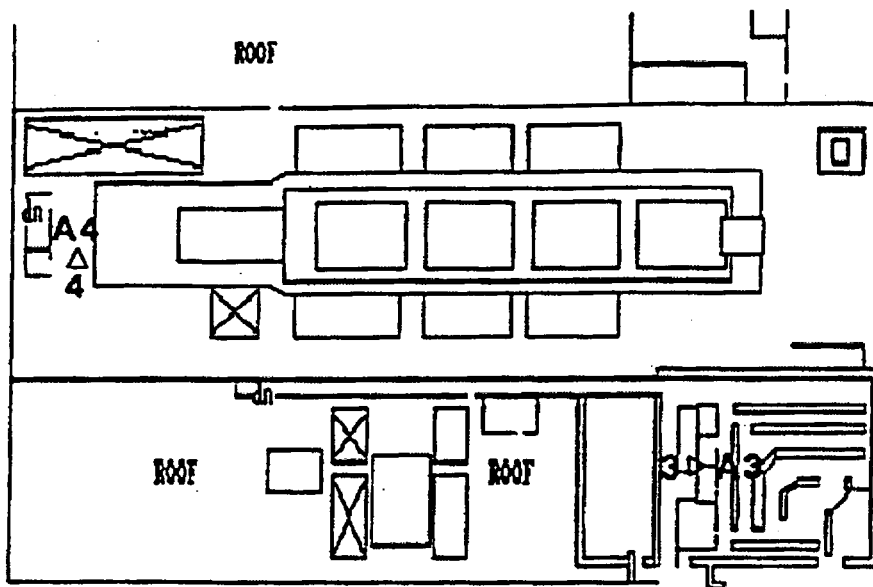
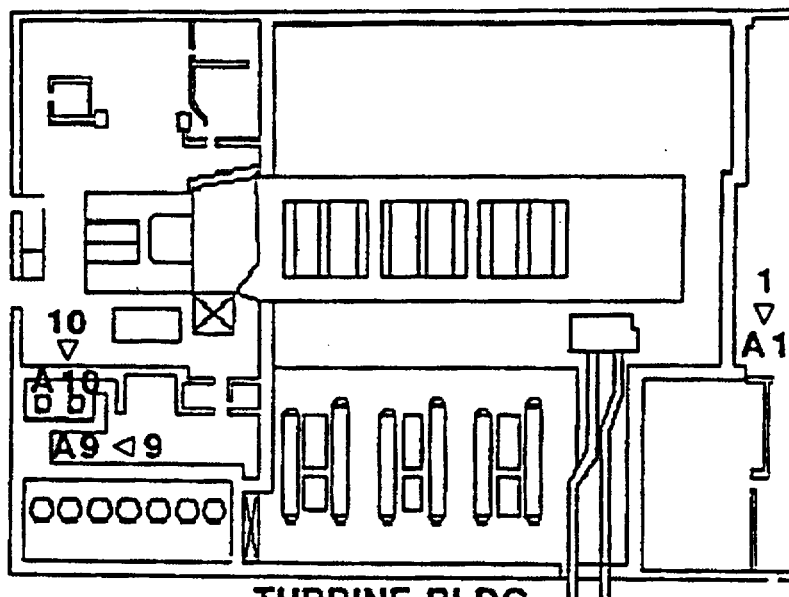


EXHIBIT 19
(con't)

ARM Locations



**TURBINE BLDG
OPERATING FLOOR
46' ELEVATION**



**TURBINE BLDG
MEZZANINE FLOOR
23' ELEVATION**

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**OYSTER CREEK
EMERGENCY PREPAREDNESS
IMPLEMENTING PROCEDURE**

Number

EPIP-OC-.35

Title

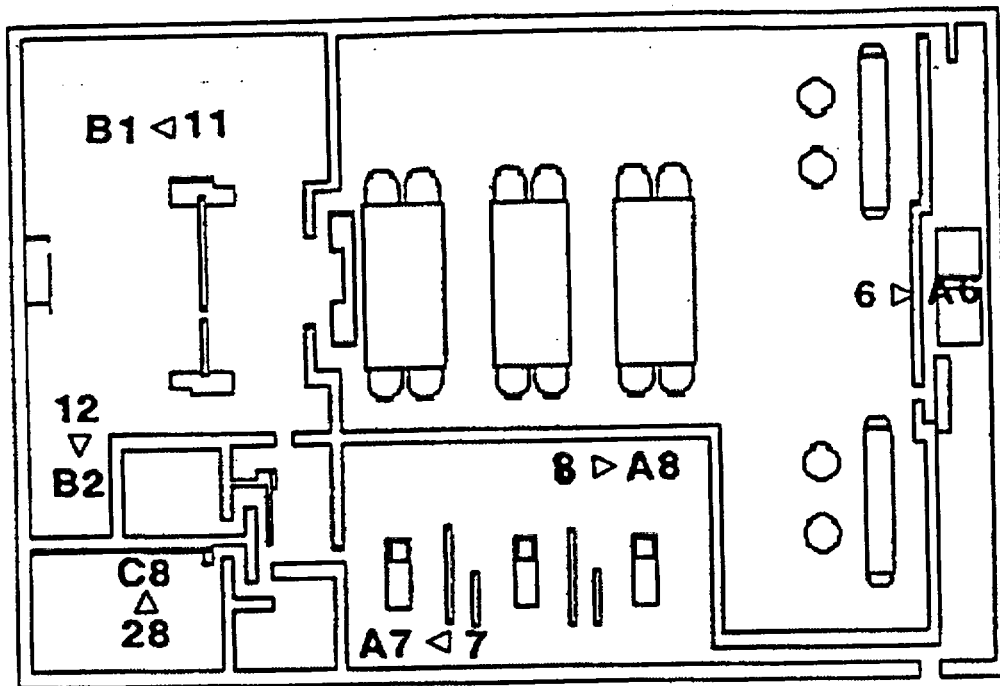
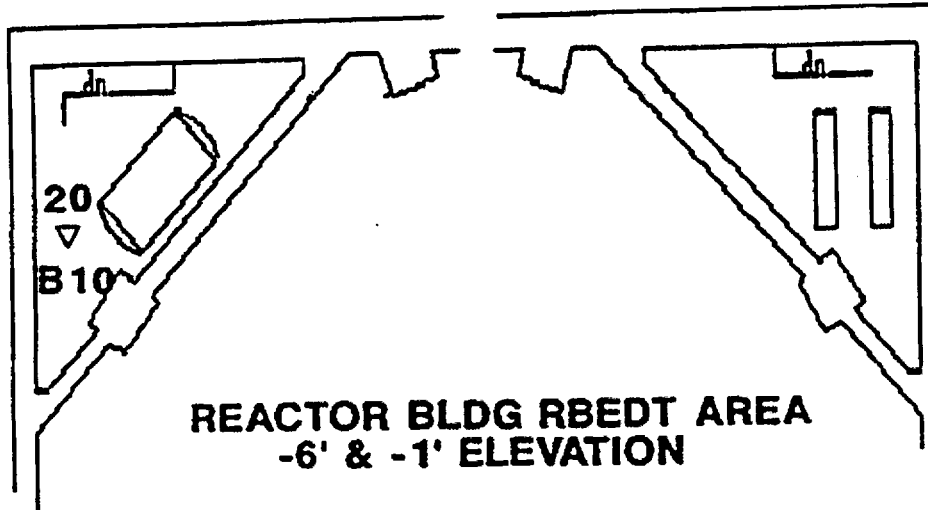
RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

Revision No.

16

EXHIBIT 19
(con't)

ARM Locations



**TURBINE BLDG
BASEMENT FLOOR
0' & 3' ELEVATION**

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EMERGENCY PREPAREDNESS
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RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

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EXHIBIT 20

PASS Sample Request Identification

- 1) * PASS Drywell Atmosphere Isotopic
 - a) Noble Gases
 - b) Iodines
 - c) Particulates
- 2) * PASS Torus Atmosphere Isotopic
 - a) Noble Gases
 - b) Iodines
 - c) Particulates
- 3) PASS Reactor Water Isotopic
- 4) PASS Torus Water Isotopic
- 5) * RAGEMS Isotopic
 - a) Noble Gases
 - b) Iodines
 - c) Particulates
- 6) * PASS Reactor Building Isotopic
 - a) Noble Gases
 - b) Iodines
 - c) Particulates

Samples are to be requested by sample identification number (i.e., 6b and 2a) to avoid confusion and desired samples must be discussed with the Chemistry Coordinator (via the Chemistry Line) before obtaining ED approval.

*NOTE: Gaseous isotopic samples must be analyzed separately for Noble Gases, Iodines, and Particulates. Particulate and iodine samples may be drawn at the same time, but analysis of all three samples will take (roughly) three times as long. If a quick turnaround is vital, request analysis only for the species you are most interested in.

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RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

Revision No.

16**EXHIBIT 21
EMERGENCY SAMPLE REQUEST FORM**

*Priority

Requestor/Position: _____ Location: _____

Date: _____ Time: _____

Sample Requested:

I P N.G.

Liquid: Rx Water

Torus Water

Gas: Drywell Atmosphere (ringheader)

Drywell Atmosphere (drywell head)

Torus Atmosphere

Secondary Containment

Other: _____

Description: _____

NOTE: Gaseous samples must be analyzed separately for noble gases, iodines and particulates. Particulate and iodine samples may be drawn at the same time, but analysis of all three (3) samples will take (roughly) three (3) times as long. Request analysis only for the species you are most interested in or prioritize them.

**Reason (be specific): _____

Remarks: _____

***Approved: _____

Results Reported to Chem. Coord.: _____ Date: _____ Time: _____

- * 1 Urgent / 2 Supportive / 3 Information (may be changed by ED)
- ** Include final objective
- *** Chemistry Coordinator

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EMERGENCY PREPAREDNESS
IMPLEMENTING PROCEDURE**

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RADIOLOGICAL CONTROLS EMERGENCY ACTIONS

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16**EXHIBIT 22****Emergency Equipment Locations**

	<u>FFNP w/GMI-H</u>	<u>Scott Pak</u>
<u>Machine Shop</u>		2
<u>O.S.C.</u>	35	8
<u>Primary Water</u>		2
<u>TSC</u>	10	
<u>Main Gate</u>	12	
<u>AOG</u>		2
<u>NRW</u>		2
<u>480 Switch</u>		2
<u>4160 Switch</u>		2
<u>Spare Exciter</u>		5
<u>Monitor & Change</u>		2
<u>51' Firelocker</u>		5
<u>Control Room</u>	10	4
<u>Emergency Battery</u>		2
<u>Offsite Monitoring Team</u>		
<u>Lockers B-12 F.R.</u>	6	
<u>Onsite Monitoring Van</u>	4	
<u>Fire Van</u>		5
Total	<u>77</u>	<u>43</u>