Southern Nuclear Operating Company
Vogtle Electric Generating Plant
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SOUTHERN COMPANY
Energy to Serve Your World℠

July 2, 2003

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

NOT-03878

VOGTLE ELECTRIC GENERATING PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE REVISIONS

Gentlemen:
In accordance with 10 CFR 50.4, as required by 10 CFR 50, Appendix E, Part V, Southern Nuclear hereby submits the following revision(s) to the Vogtle Emergency Plan Implementing Procedure(s):

Procedure	Revision	Effective Date
91102-C	21	06/17/2003
91202-C	14	06/26/2003
91302-C	11	07/02/2003
91303-C	18	06/17/2003

By copy of this letter, the NRC Region II Administrator and the Site NRC Senior Resident Inspector will receive one copy each of the revision(s).

Please contact Lawrence Mayo at (706) 826-3356 if you have questions.

Sincerely,

Lawrence E. Mayo
Emergency Preparedness Coordinator

LEM:jjm

Enclosure: Emergency Plan Implementing Procedure(s)

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A045

PRB REVIEW REQUIRED

DUTIES OF THE EMERGENCY DIRECTOR

PROCEDURE USAGE REQUIREMENTS-		SECTIONS
Continuous Use:	Procedure must be open and readily available at the work location. Follow procedure step by step unless otherwise directed.	
Reference Use:	Procedure or applicable section(s) available at the work location for ready reference by person performing steps.	Emergency Director Checklist
Information Use:	Available on plant site for reference as needed.	Remainder of Procedure

Information Use

1.0 PURPOSE

The purpose of this procedure is to provide instructions to the Emergency Director (ED) in fulfilling his responsibility for overall coordination and direction of the Vogtle Electric Generating Plant (VEGP) Emergency Response Organization (ERO).

2.0 RESPONSIBILITIES

2.1 DESIGNEES

2.1.1 Designated in procedure 91101-C, "Emergency Response Organization".

2.2 The ED shall have complete authority and responsibility to administer the Emergency Plan including the initial and unilateral initiation of required emergency response actions.

2.3 The ED shall have the following general responsibilities:

NOTE

Asterisked (*) responsibilities cannot be delegated.

*2.3.1 Classifying and declaring the emergency, including upgrading, downgrading or termination.

*2.3.2 Recommending protective actions to offsite authorities and content of notification messages.

*2.3.3 Authorizing personnel radiation exposures in excess of 10CFR20 limits, if necessary.

*2.3.4 Deciding to order site dismissal with monitoring or with no monitoring of non-involved personnel from the site at the Alert classification level.

NOTE

The Security Shift Captain may call local law enforcement agencies, including the local Federal Bureau of Investigation, without confirmation by the Emergency Director.

*2.3.5 Deciding to request assistance from federal support groups.

*2.3.6 Deciding to notify offsite authorities responsible for emergency measures.

2.3.7 Maintaining communications with offsite authorities regarding all aspects of emergency response.

2.3.8 Providing overall direction for management of procurement of site-needed materials, equipment, and supplies, documentation, accountability, and security function.

2.3.9 Directing the notification and activation of the emergency organization; including emergency response facility activation.

2.3.10 Coordinating and directing VEGP emergency operations.

2.3.11 Modifying Emergency Plan Implementing Procedures and adjusting Emergency Response Organization staffing.

2.3.12 Coordinating NRC activities to reduce the duplication of effort and reduce the impact on the plant staff during the emergency situation.

2.3.13 Filling the position of Decision Maker, if Severe Accident Management Guidelines (SAMGs) are implemented.

3.0 PREREQUISITES

3.1 The ED has identified an abnormal condition and classified it into one of the four emergency classes: Notification of Unusual Event, Alert, Site Area Emergency or General Emergency, per Procedure 91001-C, "Emergency Classification And Implementing Instructions".

3.2 The ED has completed Data Sheet 1, Classification Determination specified in Procedure 91001-C, "Emergency Classification And Implementing Instructions".

4.0 PRECAUTIONS

4.1 This procedure shall not take priority over measures required to maintain or restore the plant to a safe operating condition.

4.2 This procedure does not replace any plant operating procedure. During an emergency condition, the ED should continue to use appropriate plant procedures in parallel with this and other Emergency Plan Implementing Procedures.

4.3 Actions presented in the attached "Emergency Director Checklist" should be completed as required, not necessarily in the order presented.

5.0 PROCEDURE

5.1 ON-SHIFT EMERGENCY DIRECTOR (SHIFT SUPERINTENDENT)

5.1.1 Prior to activation of the ERO, the ED shall utilize on-shift staff as follows:

5.1.1.1 Initial notifications and communications to Federal (Savannah River Site (SRS) and NRC), State and local agencies - Control Room Communicators (e.g., Shift Administrative Assistant, operations staff and plant knowledgeable individual for NRC).

5.1.1.2 Notification of personnel in the owner controlled area - Supervisor Nuclear Security (SNS).

5.1.1.3 Activation of the Emergency Recall System – Operations personnel.

5.1.1.4 Radiological accident assessment including dose projections - Health Physics/Chemistry Shared Foreman.

5.1.1.5 Technical Support - Shift Technical Advisor.

5.1.1.6 Damage assessment/control and emergency repairs - Mechanical Maintenance, Electrical Maintenance and Instrumentation and Control personnel.

5.1.1.7 In-plant radiological protective actions - Health Physics Technicians.

5.1.1.8 Fire fighting - On-shift Fire Brigade.

5.1.1.9 Search and rescue, first aid and decontamination - Health Physics Technicians (as necessary) and other staff.

5.2 TRANSFER OF RESPONSIBILITIES

5.2.1 For an Alert or more severe classification, the Shift Superintendent shall be relieved of his responsibilities as ED by the Nuclear Plant General Manager, Vice President - Project or an alternate. The Shift Superintendent then shall return to operational duties or assume another emergency response position. This also may occur at a Notification of Unusual Event classification.

5.2.2 The Nuclear Plant General Manager, Vice President - Project (or alternate) shall report to the Technical Support Center (TSC) or Control Room before he assumes the position of ED.

5.2.3 The ED or the Shift Supervisor shall brief the Nuclear Plant General Manager, Vice President - Project (or an alternate) concerning plant status, initiating event and classification, status of notifications, and protective and corrective actions.

5.2.4 The Nuclear Plant General Manager, Vice President - Project (or an alternate) shall formally assume from the Shift Superintendent all the responsibilities of the ED position in accordance with "Emergency Director Checklist" of this procedure.

5.2.5 The ED shall complete the actions in Procedure 91001-C, "Emergency Classification And Implementing Instructions", if the Shift Superintendent has not completed them at the time of transfer.

5.2.6 If requested by offsite agencies, the ED shall dispatch GPC or SNC representatives to offsite government centers.

5.2.7 The ED shall turn over ED responsibilities to the TSC Manager for the transit time from the TSC to the Emergency Operations Facility (EOF). A formal relief sheet is not required for this temporary transfer of ED responsibilities.

5.3 EMERGENCY RESPONSE FACILITY OPERATIONS

NOTE

Emergency Response Facility activation may be delayed by the Emergency Director to protect the health and safety of plant personnel.

5.3.1 The ED may operate from the Control Room, TSC or EOF at his discretion.

5.3.2 For an Alert, the ED may act as the TSC Manager.

NOTE

Standby Status shall consist of personnel at their assigned positions ready to assume responsibility as directed by the ED.

5.3.3 The ED shall place the EOF on standby status for an Alert and may activate it if deemed appropriate. He shall activate it for a Site Area Emergency and General Emergency. The ED should manage the emergency organization from the EOF once it is fully activated.

5.4 EMERGENCY CLASSIFICATION AND NOTIFICATIONS

5.4.1 The ED shall classify (or reclassify, as necessary) an abnormal condition into one of the four emergency classifications in accordance with Procedure 91001-C, "Emergency Classification And Implementing Instructions", and in consultation with the Shift Superintendent. The Data Sheet 1 in Procedure 91001-C, "Emergency Classification And Implementing Instructions", shall be completed by the ED for any reclassification.

5.4.2 The ED shall assure that proper alarms are sounded and proper public address announcements are made per Procedure 91002-C, "Emergency Notifications" to inform onsite personnel of reclassification.

5.4.3 The ED shall determine the need for any onsite or offsite protective actions resulting from the reclassification.

5.4.4 The ED shall assure that the Communicators complete initial notifications (including protective action recommendations) to federal (SRS), state and local authorities per Procedure 91002-C, "Emergency Notifications". Notification of offsite authorities shall be made within 15 minutes of classification or reclassification of an emergency.

5.4.5 The ED shall assure that personnel within the Owner Controlled Area are notified per Procedure 91704-C, "Actions For Security During A Radiological Emergency".

5.4.6 The ED shall determine the need to request offsite assistance.

5.4.7 The ED shall direct follow-up notifications for an Alert or higher, to offsite authorities at intervals not to exceed 1 hour, or as plant conditions change. The TSC Manager and EOF Manager shall provide input for follow-up notifications.

5.4.8 The ED is responsible for ensuring completion of the Event Notification Worksheet for initial and follow-up notifications to the NRC per Procedure 91002-C, "Emergency Notifications".

5.4.9 The ED shall assure that the Vogtle Duty Manager is notified.

5.5 PROTECTIVE ACTIONS

5.5.1 Per Procedure 91305-C, "Protective Action Guidelines", the ED shall be responsible for onsite protective actions throughout the emergency and for recommending offsite protective actions.

5.5.1.1 Onsite protective actions include site dismissal of non-involved personnel and use of protective equipment and supplies.

5.5.1.2 Offsite protective action alternatives, which may be recommended to state and county agencies, include sheltering, evacuation and access control.

5.5.2 The ED should confer with the Health Physics and Dose Assessment Supervisor, TSC Manager and EOF Manager regarding the results of dose projection activities per Procedure 91304-C, "Estimating Offsite Dose", and protective action decisions concerning onsite and offsite radiation exposures.

5.5.3 If a facility is uninhabitable, the TSC Manager (onsite facilities) or EOF Manager (offsite facilities) shall make the decision to evacuate these facilities. If necessary, personnel, equipment and supplies will be relocated to an alternate location.

5.6 EMERGENCY EXPOSURES

5.6.1 Per Procedure 91301-C, "Emergency Exposure Guidelines", the ED shall be responsible for authorizing emergency exposures in excess of 10CFR20 limits for personnel involved in protecting valuable property, lifesaving or the protection of large populations.

5.6.2 The ED may receive recommendations from the HP Supervisor or Dose Assessment Supervisor concerning the use of KI as a protective measure for the VEGP ERO.

NOTE

A security related emergency may delay the ordering of assembly and accountability in order to protect plant personnel from the security threat. The decision not to order assembly and accountability will be made by the Emergency Director.

5.7 ASSEMBLY, ACCOUNTABILITY, SITE DISMISSAL WITH NO MONITORING AND SITE DISMISSAL WITH MONITORING

5.7.1 Per Procedure 91401-C, "Assembly And Accountability", the ED shall be responsible for ordering assembly and accountability, including the sounding of the plant emergency alarm and completing public address announcements.

5.7.1.1 Assembly and accountability of protected area personnel shall be mandatory for an Alert or higher classification.

5.7.1.2 Protected area accountability shall be completed within approximately 30 minutes of the emergency declaration.

5.7.2 Per Procedure 91401-C, "Assembly And Accountability", the ED shall be responsible for ordering the TSC Manager to dispatch a Search and Rescue Team in the event that accountability reveals a missing person.

WARNING

THE SITE SHOULD NOT BE EVACUATED UNDER DANGEROUS WEATHER CONDITIONS.

5.7.3 Per Procedure 91403-C, "Site Dismissal", the ED shall be responsible for determining the need for and ordering of site dismissal with no monitoring or site dismissal with monitoring, including the completion of public address announcements.

5.7.3.1 Dismissal of non-involved personnel, under conditions where contamination of these personnel is likely, shall be required for a Site Area Emergency or General Emergency.

5.7.3.2 The ED may be assisted by the HP and Dose Assessment Supervisor in determining the need for onsite dismissal, best routes and selection of relocation center(s).

6.0 REFERENCES

6.1 VEGP EMERGENCY PLAN

6.2 PROCEDURES

6.2.1 91001-C, "Emergency Classification And Implementing Instructions"

6.2.2 91002-C, "Emergency Notifications"

6.2.3 91301-C, "Emergency Exposure Guidelines"

6.2.4 91302-C, "In-Plant Sampling And Surveys"

6.2.5 91303-C, "Field Sampling And Surveys"

6.2.6 91304-C, "Estimating Offsite Dose"

6.2.7 91305-C, "Protective Action Guidelines"

6.2.8 91306-C, "Contamination Monitoring And Decontamination"

6.2.9 91307-C, "Contaminated Injury"

6.2.10 91401-C, "Assembly and Accountability"

6.2.11 91403-C, "Site Dismissal"

6.2.12 91501-C, "Recovery"

6.2.13 60613-C, "Control And Use Of Severe Accident Management Guidelines (SAMG)"

6.3 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"

6.4 10CFR20, "Standards for Protection Against Radiation"

END OF PROCEDURE TEXT

Reference Use

EMERGENCY DIRECTOR CHECKLIST

INITIAL ACTIONS

NOTE

a. A security related emergency may delay the ordering of assembly and accountability in order to protect plant personnel from the security threat. The decision not to order assembly and accountability will be made by the Emergency Director.

b. A security incident/emergency may require the ED to modify security procedures and/or emergency plan implementing procedures. See page 15 of this procedure for procedure modification instructions.

Verify the following INITIAL actions have been completed. Assign additional personnel and use alternate means as necessary:

1. Event Classification

2. Initial Tone/Public address announcements

3. For a NOUE have Operations personnel notify Plant Management by activation of the emergency recall system.

NOTE

In addition to those personnel recalled, Operations, Maintenance, and Security personnel required to report shall be contacted by on-shift personnel from their own respective department after Emergency Response Facility Activation.

4. For ALERT or higher, have Operations personnel recall off-duty ERO personnel by activation of the emergency recall system.

5. Notification of ALL State/Local agencies and the NRC

6. Control Room exceptions list faxed to SAS.

FOLLOW-UP ACTIONS

Complete the following FOLLOW-UP actions (within 30 minutes of the event declaration):

1. Notification of personnel within the Owner Controlled Area using Procedure 91704-C, Checklist A (Security).

EMERGENCY DIRECTOR CHECKLIST

FOLLOW-UP ACTIONS (Cont'd)

2. For an Alert or higher, repeat items 1 and 2 of Procedure 91002-C, Checklist 1 once about 10 minutes after the initial announcement.

3. Assignment of a Status Loop Communicator (Alert or higher classification).

NOTE

a. A radiological release is defined as a radioactive release to the environment, detected by effluent monitors or environmental monitoring, above normal levels that is attributable to a declared event. Normal levels are the highest reading in the last 24 hours prior to the emergency, excluding the current peak value for effluent monitors.

b. In addition, the Emergency Director has the discretion to declare that a radiological release is occurring based on plant conditions that would indicate that a release is in progress. (i.e., A Steam Generator Tube Rupture with an ARV lifting)

4. If a radiological release is involved, conduct Offsite Dose Projection (HP).

5. Perform and maintain accountability of Operations staff NOT badged into the Control Room.

6. Determine if a Site Dismissal, with or with no monitoring, is appropriate. Neither is required for an Alert.

7. Discuss the following with Security:

- Accountability (give time of event declaration and operations accountability listing), refer to Sheet 3 of this checklist.
- Site Dismissal with no monitoring/Site Dismissal with monitoring plans (refer to sheets 4 and 5 of this checklist).

8. Notify the Vogtle Duty Manager and remind him to contact the Corporate Duty Manager (On Call Project Manager).

9. Recall off duty operations personnel if needed. If personnel are recalled to the site, ensure that Fitness For Duty has been determined.

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS

Complete the following CONTINUING actions:

1. Follow-up ENN message(s).

2. Keep the NRC updated.

3. Make Plant Public address announcements to keep onsite personnel informed of conditions.

4. Implement the following sections of this checklist as appropriate:

- Assembly and Accountability — Sheet 3 of 11
- Site Dismissal(with or with no monitoring) — Sheet 4 of 11
- Offsite Assistance — Sheet 6 of 11
- Contaminated Injury — Sheet 6 of 11
- Protective Actions — Sheet 6 of 11
- Emergency Exposure — Sheet 7 of 11
- Reclassification — Sheet 7 of 11
- Team Deployment — Sheet 7 of 11
- Procedure Change or Modification — Sheet 8 of 11
- Emergency Termination — Sheet 9 of 11
- Recovery — Sheet 10 of 11
- Fire — Sheet 10 of 11
- Severe Accident Management Guidelines — Sheet 10 of 11
- Transfer of Responsibilities — Sheet 11 of 11

Assembly and Accountability
(Procedure 91401-C)

1. Receive a report from the SNS or Security Supervisor on accountability. The TSC should coordinate accounting for missing personnel.

2. Announce on the Plant Page Public address system the names of missing individuals, and request a response.

3. Direct the OSC Manager (HP foreman when the OSC is not activated) to dispatch "Search and Rescue" Teams (Procedure 91401-C), in the event that personnel do not respond to the plant page public address announcement.

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

WARNING

THE SITE SHOULD NOT BE EVACUATED UNDER DANGEROUS WEATHER CONDITIONS.

Site Dismissal (With or With No Monitoring)
(Procedure 91403-C)

NOTE

Site Dismissal is recommended at the Alert level. Action is required at the Site Area and General Emergency levels. If radiological monitoring is needed then a Site Dismissal with monitoring should be conducted. Exiting personnel can be directed by security to the designated relocation center.

1. Site Dismissal With No Monitoring

a. Security shall make the following announcement as ordered by the ED on the plant page and site siren public address systems:

"ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL THE EMERGENCY DIRECTOR HAS DIRECTED A SITE DISMISSAL WITH NO MONITORING OF ALL PERSONNEL NOT DIRECTLY INVOLVED WITH THE EMERGENCY. LEAVE THE PLANT SITE AND PROCEED HOME."

(Repeat the announcement)

b. Notify personnel within the Owner Controlled Area (OCA) of the Site Dismissal with no monitoring using Procedure 91704-C. (Security)

c. Notify Burke County Emergency Management Agency of the Site Dismissal with no monitoring. (Security)

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

2. Site Dismissal With Monitoring

NOTE

The Vogtle Recreation Center is the preferred location and should be used unless wind direction is from 020° to 070°, in which case, Plant Wilson should be used.

a. Confer with Health Physics regarding the need for dismissal, concurrence on the designated relocation center, and on dispatching a Relocation Center team (if OSC is not activated) for radiological monitoring.

b. Notify Security, the SNS or Security Supervisor, of the dismissal, the designated relocation center, and the need for traffic control.

NOTE

Security should set up for Site Dismissal with monitoring prior to the announcement.

c. Security shall activate the site siren and make the following announcement on the plant page and site siren public address systems:

"ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. THE EMERGENCY DIRECTOR HAS ORDERED A SITE DISMISSAL WITH MONITORING. ALL PERSONNEL NOT DIRECTLY INVOLVED WITH THE EMERGENCY ARE TO REPORT TO (THE RECREATION AREA/PLANT WILSON). REMAIN THERE UNTIL CLEARED TO LEAVE."

(Repeat the announcement)

d. Notify Burke County EMA of the Site Dismissal with monitoring.

e. Receive periodic reports from Security on the progress of the Site Dismissal.

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

Offsite Assistance

1. Determine the need to request assistance from offsite support groups.

2. Request Federal assistance other than SRS or NRC through Georgia Emergency Management Agency (GEMA).

3. Assure that Security is notified, to permit access.

Contaminated Injury

1. Evaluate the need for offsite ambulance support and/or hospital support.

2. If offsite ambulance support and/or hospital support is necessary, implement the following procedures as appropriate: 91307-C, "Contaminated Injury", 91103-C, "Duties Of The TSC Manager" (Data sheets 1 and 2).

Protective Actions

1.* Confer, as appropriate, with the Health Physics Supervisor, Dose Assessment Supervisor, TSC Manager and EOF Manager regarding protective action decisions for onsite and offsite radiation exposures. Review dose projections.

2.* Evaluate the need for onsite protective actions and for providing protective action recommendations to offsite authorities (Procedure 91305-C, "Protective Action Guidelines").

3. Review habitability of onsite facilities with the TSC Manager and offsite facilities with the EOF Manager.

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* Continuing Activity

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

Emergency Exposure

1.* Review emergency exposures as necessary, with the TSC Manager and EOF Manager.

2. If necessary, authorize radiation exposures in excess of 10CFR20 limits (Procedure 91301-C, "Emergency Exposure Guidelines"), as follows:

   a. Sign Emergency Radiation Exposure Permits (EREP).

   b. Verbal approval if time is critical.

Reclassification

1. Discuss decision with offsite authorities before reclassifying the event downward.

2. As necessary, reclassify the event per Procedure 91001-C, "Emergency Classification And Implementing Instructions", and in consultation with the TSC Manager, Shift Superintendent, and EOF Manager.

3. Complete any necessary initial actions after reclassification including ordering notifications per appropriate checklist in Procedure 91002-C, "Emergency Notifications".

4. If the EOF has been activated or is in standby status, notify the EOF Manager of the decision to reclassify.

Team Deployment

1.* Prior to TSC and OSC activation, determine the need for RETs and dispatch using the following procedures as appropriate:

   a. Procedure 91302-C, "In-Plant Sampling And Surveys"

   b. Procedure 91303-C, "Field Sampling And Surveys"

   c. Procedure 91306-C, "Contamination Monitoring And Decontamination"

   d. Procedure 91307-C, "Contaminated Injury"

   e. Procedure 91401-C, "Assembly And Accountability"

* Continuing Activity

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

2. Review staffing requirements and adjust to suit the emergency.

Procedure Change or Modification

NOTE

It should be assumed that any deviation from an EPIP or Security procedure is a departure from a regulatory commitment unless competent and knowledgeable personnel advise otherwise.

1. Authorize deviations from the Emergency Plan Implementing Procedures or Security Procedures. If these deviations result in a departure from a regulatory commitment (Emergency Plan or Security Plan) or a technical specification under the provisions of 10CFR50.54(x), then, as a minimum, a licensed SRO must approve the action in accordance with 10CFR50.54(y) and the NRC notified in accordance with 10CFR50.72 & 50.73, (one hour report/24 hour report per table 2 of 00152-C and LER).

2. Approve changes to Emergency Plan Implementing Procedures (EPIP) which do not change commitments in the Emergency Plan. These changes should be noted in the ED log and the other ERF Managers informed of the change(s).

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* Continuing Activity

EMERGENCY DIRECTOR CHECKLIST

CONTINUING ACTIONS (Cont'd)

Emergency Termination

1. Recognizing the following conditions, the ED has decided to terminate the emergency condition:

   a. Plant radiation levels are stable or decreasing with time.

   b. The affected reactor is in a stable condition and can be maintained in that condition indefinitely.

   c. Fire or other similar emergency conditions no longer constitute a hazard to safety-related systems or equipment or personnel.

   d. Releases of radioactive materials to the environment have ceased or have been controlled within permissible license limits.

   NOTE

   An NOUE or an Alert emergency can be terminated without coordination with offsite authorities.

   e. For a site area emergency or general emergency, discussions with plant management, applicable members of the VEGP Emergency Response Organization, offsite authorities (i.e., Nuclear Regulatory Commission, Georgia Emergency Management Agency, Burke County Emergency Management Agency Director, South Carolina Emergency Management Division Director, and the Savannah River Site (SRS) emergency staff) do not result in identification of any valid reason for not terminating the emergency.

2. For an NOUE, close out with a verbal summary (Event description of emergency notification form) to offsite authorities; followed by a written summary within 24 hours per Procedure 91501-C, "Recovery".

CONTINUING ACTIONS (Cont'd)

3. For an Alert or higher classification, close out with a verbal summary (Event description of emergency notification form) to the offsite authorities, followed by a written summary within 8 hours of termination per Procedure 91501-C, "Recovery".

4. Complete and transmit termination messages for State/Local agencies and the NRC.

5. After the emergency condition has been terminated, proceed as follows:

   a. Determine if additional support is needed (Recovery Organization).

   b. Hold a final staff briefing.

   c. Complete logs and checklists and submit to the facility Support Coordinator.

6. Return the Emergency Response Facilities to a ready condition.

Recovery

1. Implement recovery actions per Procedure 91501-C, "Recovery".

Fire

1. Perform initial actions per Procedure 91001-C, "Emergency Classification And Implementing Instructions".

2. Reclassify the emergency if necessary.

Severe Accident Management Guidelines

1. Diagnose plant conditions and evaluate if a specific guideline entry is required.

2. Evaluate the positive and negative impacts of strategies presented in the guidelines.

3. Respond to severe challenges.

4. Interpret the response of plant parameters following strategy implementation.

5. Assess the effectiveness of implemented strategies and determine whether additional mitigation is needed.

Transfer of Responsibilities

1. Review with the ED:

   a. Logs
   b. Status boards (if applicable)
   c. Summary of events
   d. Plant status
   e. Equipment status
   f. Emergency classification
   g. Status of notifications of offsite authorities
   h. Protective and corrective actions
   i. Completed checklist items
   j. Status of facilities activation
   k. Any noted deficiencies
   l. Status of assembly and accountability, if initiated
   m. Outstanding orders
   n. Recovery plan of action, if known

NOTE

Assure that IMMEDIATE and FOLLOW-UP actions have been completed as necessary prior to proceeding with this section of the checklist.

2. Review facility readiness with facility managers.

3. Ensure that log keeper maintains a log of ED actions and records any transfer of responsibility.

4. Formally assume from the incumbent ED the position of ED, using the following message format:

   AT _____ (Time) ON _____ (Date) I AM ASSUMING THE EMERGENCY DIRECTOR POSITION AND HEREBY RELIEVE YOU OF ALL EMERGENCY DIRECTOR RESPONSIBILITIES.

   Previous ED Signature _____

   Relieving ED Signature _____

5. Following relief, make an announcement to the facility staff regarding the transfer of Emergency Director responsibility.

PRB REVIEW REQUIRED

ACTIVATION AND OPERATION OF THE OPERATIONS SUPPORT CENTER

PROCEDURE USAGE REQUIREMENTS-		SECTIONS
Continuous Use:	Procedure must be open and readily available at the work location. Follow procedure step by step unless otherwise directed.	
Reference Use:	Procedure or applicable section(s) available at the work location for ready reference by person performing steps.	• OSC Activation Checklist • Lab Foreman Checklist • Data Sheet 2
Information Use:	Available on plant site for reference as needed.	**Remainder of Procedure**

Information Use

1.0 PURPOSE

The purpose of this procedure is to provide instructions for the activation and operation of the Operations Support Center (OSC).

2.0 RESPONSIBILITIES

2.1 The first knowledgeable person from the Emergency Response Organization (ERO) arriving at the OSC shall be responsible for initiating preparations to physically activate the OSC.

2.2 The OSC Manager shall be responsible for declaring the OSC operational and coordinating Radiological Emergency Team (RET) formation and dispatch.

2.3 The OSC Status Loop Communicator shall be responsible for supporting the OSC Manager with communications between the OSC and other Emergency Response Facilities and RETs.

2.4 I&C Technicians, Electricians, Mechanics, Chemistry Technicians, Health Physics Technicians, oncoming shift personnel and off-shift operators shall be responsible for assisting in determining repair/damage control alternatives, corrective actions and serving as members of RETs.

2.5 The TSC Manager shall be responsible for ordering evacuation of the OSC based upon recommendations from the OSC Manager and/or the Health Physics Supervisor.

3.0 PREREQUISITES

3.1 An Alert, Site Area Emergency or General Emergency has been declared or the Emergency Director (ED) has ordered activation of the OSC.

3.2 For a Notification of Unusual Event, the ED may order partial activation of the OSC to provide manpower resources for assignment to RETs.

4.0 PRECAUTIONS

If the radiological conditions indicate that the OSC is uninhabitable, the TSC Manager should consider evacuation of the OSC and to reassemble at the TSC and/or the EOF.

5.0 PROCEDURE

5.1 ACTIVATION

5.1.1 The ED shall order activation of the OSC, which is located on the second floor of the Maintenance Building, and notifications of appropriate OSC staff will be made per Procedure 91002-C, "Emergency Notifications". The OSC will be operational (capable of being activated) within about an hour of initial notification.

NOTES

OSC personnel that are already in the field performing their emergency duties may be credited as minimum shift staffing for activation. (i.e. HP Technicians/FMT members/crafts).

5.1.1.1 To declare the facility activated the following minimum OSC staff must be present to perform the following functions:

POSITION	FUNCTION
• OSC Manager	OSC Management
• Health Physics Technicians (2) **(May be located at TSC or HPCP)**	Radiation Protection/First Aid
• Field Monitoring Personnel (2) **(Filled by on-shift personnel for first FMT)**	Offsite Surveys
• Electricians (2)	Electrical Maintenance
• Mechanics (2)	Mechanical Maintenance
• Instrument & Control Technicians (2)	Instrument & Control Maintenance

NOTE

The first letter of the Emergency Response Facility that the team is dispatched from should precede the team number. (i.e. "T-1" for the first team dispatched from the TSC or "O-1" for the first team dispatched from the OSC). Teams are to maintain the same name throughout the task assigned to them.

5.1.2 The following personnel who are members of the RETs, shall report to the OSC, obtain dosimetry and emergency identification badges, sign in on the "Emergency Response Facility Roster", Data Sheet 1, or similar form, set up work stations inclusive of status boards, and follow the directions of the OSC Manager:

5.1.2.1 Maintenance Team Leaders/Assistant Team Leaders not assigned to the TSC.

5.1.2.2 I&C Technicians

5.1.2.3 Mechanics

5.1.2.4 Electricians

5.1.2.5 Chemistry and Health Physics Technicians not assigned to TSC or control point.

5.1.2.6 Other Operators

5.1.2.7 OSC Support Staff Personnel

5.1.2.7.1 Nuclear Specialist

5.1.2.7.2 Work Planners

5.1.2.7.3 Quality Control Specialist

5.1.2.7.4 Performance Team Technical Staff

5.1.2.8 OSC Status Loop Communicator(s)

5.1.3 If other personnel have assumed their assigned position, stand by the OSC for second shift duty or other assignment in accordance with directions from the OSC Manager.

5.1.4 The OSC Manager shall report OSC readiness per the OSC Manager Checklist, Procedure 91104-C, "Duties Of The OSC Manager".

5.2 FUNCTIONS AND OPERATIONS

5.2.1 After activation, the following functions shall be performed at the OSC according to the organization shown in Figure 1:

5.2.1.1 Serve as the assembly and staging area for personnel pooled for emergency response.

5.2.1.2 Respond to requests from the ED and TSC concerning deployment of RETs.

5.2.1.3 Management of emergency equipment and supplies.

5.2.1.4 Coordination of movement of personnel in the plant and onsite, except for those assigned to the TSC and Control Room.

5.2.2 The OSC Manager shall coordinate the activities of the Search and Rescue, First Aid, Damage Assessment, Damage Control, and Repair and Modification Teams. This shall include ensuring that teams are properly briefed and equipped prior to dispatch and debriefed upon return to the OSC. He shall maintain a communications logbook and ensure that important information obtained by these teams is disseminated to the TSC and Control Room, as appropriate.

5.2.3 The OSC Manager shall issue vehicle and fuel pump keys to the offsite survey teams.

5.2.4 The OSC Status Loop Communicator(s) shall report directly to the OSC Manager and maintain communications logs and status boards.

5.2.5 The OSC support staff personnel shall conduct personnel accountability of OSC Staff, under the direction of the OSC Manager, per Procedure 91401-C, "Assembly and Accountability".

5.2.6 Technicians, Off-shift Operators and oncoming shift personnel shall assist the OSC Manager and serve as members of emergency teams. Team members shall be qualified as RET members. Each team shall include at least one health physics technician if radiological conditions warrant. The composition of teams, reporting requirements and appropriate procedures/checklists are as follows:

5.2.6.1 Search and Rescue Team

a. Designees and Qualifications:

At least two members that are familiar with the plant and ONE must be First Aid-trained, ONE being a Health Physics Technician if radiological conditions warrant. Team formed by OSC Manager or designee.

b. Reporting Requirements:

Team Leader (designated by OSC Manager) reports to the OSC Manager directly, or via OSC Foreman/Supervisor at least every one-half hour by hand-held radio, plant telephone, or page.

c. Procedure/Checklist:

Procedure 91306-C, "Contamination Monitoring and Decontamination".

NOTE

First Aid Team members that are paged by the Control Room on the 911 pagers receive their brief, concerning the specifics of the event, when they call back to the Control Room.

5.2.6.2 First Aid Team

a. Designees and Qualifications:

At least two members, who are First Aid-trained, ONE being a Health Physics Technician if the injured person is potentially contaminated.

b. Reporting Requirements:

Team Leader (designated by OSC Manager) reports to the OSC Manager directly or via OSC Foreman/Supervisor at least every one-half hour by hand-held radio, plant telephone or page.

c. Procedures/Checklists:

Procedure 91306-C, "Contamination Monitoring and Decontamination".

Procedure 91307-C, "Contaminated Injury".

5.2.6.3 Damage Assessment/Control Team

a. Designees and Qualifications:

At least two appropriately qualified OSC personnel. Formed by OSC Manager or designee.

b. Reporting Requirements:

Team Leader (designated by OSC Manager) reports to OSC Manager directly or via OSC Foreman/Supervisor at least every one-half hour by hand-held radio, plant telephone or page.

c. Procedure/Checklist:

Procedure 91306-C, "Contamination Monitoring and Decontamination", if Health Physics Technician accompanies team.

5.2.6.4 Repair and Modification Team

a. Designees and Qualifications:

At least two appropriately qualified OSC personnel. Formed by OSC Manager or designee.

b. Reporting Requirements:

Team Leader (designated by OSC Manager) reports to OSC Manager directly or via OSC Foreman/Supervisor at least every one-half hour by hand-held radio, plant telephone or page.

c. Procedures/Checklists:

Procedures 91306-C, "Contamination Monitoring and Decontamination", if Health Physics Technician accompanies team.

NOTE

In-plant monitoring teams are normally formed at the Health Physics Control Point.

5.2.6.5 In-Plant Monitoring Team

a. Designees and Qualifications:

At least two members, with at least one being a Health Physics Technician. Formed by OSC Manager or designee when dispatched from the OSC.

b. Reporting Requirements:

Team Leader (designated by OSC Manager when dispatched from the OSC) reports at least every one-half hour to Health Physics Supervisor or via Survey Team Communicator in the TSC by hand-held radio, plant telephone or page.

c. Procedure/Checklist:

Procedure 91302-C, "In-Plant Sampling and Surveys".

5.2.6.6 Back-up Fire Brigade

a. Designees and Qualifications:

Assigned Fire Brigade personnel. Formed by OSC Manager or designee.

b. Reporting Requirements:

Team Leader (designated by OSC Manager) reports to Fire Brigade Captain and OSC Manager when assigned task is completed.

c. Procedure/Checklist:

Procedure 92000-C, "Fire Protection Program".

5.2.6.7 Field Monitoring Team

a. Designees and Qualifications:

Assigned Field Monitoring Team (FMT) personnel. At least two members who are Field Monitoring Team trained.

b. Reporting Requirements:

Team Leader (designated by OSC Manager or designee) reports at least every one-half hour to the Dose Assessment Supervisor (or HP Supervisor if the EOF is not activated) via the Field Monitoring Team Communicator in TSC or EOF by mobile and/or hand held radio.

c. Procedures/Checklist

Procedure 91303-C, "Field Sampling and Surveys".

Procedure 91306-C, "Contamination Monitoring and Decontamination".

5.2.6.8 Site Dismissal Team

a. Designees and Qualifications:

At least two members with one being a Health Physics Tech or other qualified HP staff member and an assigned Relocation Center Leader (Nuclear Security Officer). Team formed by the OSC Manager or his designee.

b. Reporting Requirements:

Team leader provides periodic progress report to the OSC Manager directly or via OSC Foreman/Supervisor by radio or telephone.

c. Procedures/Checklists:

Procedure 91306-C, "Contamination Monitoring and Decontamination"

Procedure 91403-C, "Site Dismissal", Relocation Center Leader Checklist

5.2.7 Prior to activation of the OSC, the ED may dispatch Emergency Teams from assigned shift personnel. In this case, teams will be formed by and report to the ED, or his designee.

NOTES

a. Communications links available in the OSC are described in Procedure 91204-C, "Emergency Response Communications".

b. Emergency equipment and supplies stored at or near the OSC are detailed in Procedure 91702-C, "Emergency Equipment and Supplies" or 91705-C, "Inventory And Testing Of Emergency Preparedness Material/Equipment Which Are Not Part Of The Emergency Kits".

5.2.8 The OSC Manager will make provisions for a shift change within 12 to 16 hours of the initiation of the current shift.

5.3 OSC EVACUATION

5.3.1 Evacuation of the OSC should be considered if the facility is not functional or its radiological conditions reach or exceed either or both of the following values:

a. Dose Rate = 100 mRem/hr

b. Iodine Activity = 2.7E-7 µCi/cc

5.3.2 The TSC Manager may order evacuation of the OSC as recommended by the OSC Manager. He shall instruct the OSC Manager to relocate staff, equipment and supplies to the TSC and/or the EOF, as appropriate.

5.3.3 The OSC Manager shall determine the reassembly points for the OSC staff and direct the evacuation. Personnel who may be called on for immediate support will be relocated to the TSC.

5.3.4 The OSC Manager shall contact all RETs performing in-plant activities and inform them of OSC evacuation, interim communications methods and reassembly locations.

5.3.5 The OSC Manager shall keep the TSC Manager apprised of all phases of the evacuation and shall report completion of relocation.

6.0 REFERENCES

6.1 VEGP EMERGENCY PLAN

6.2 PROCEDURES

6.2.1 91002-C, "Emergency Notifications"

6.2.2 91104-C, "Duties of the OSC Manager"

6.2.3 91204-C, "Emergency Response Communications"

6.2.4 91302-C "In-Plant Sampling and Surveys"

6.2.5 91303-C, "Field Sampling And Surveys"

6.2.6 91306-C, "Contamination Monitoring and Decontamination"

6.2.7 91307-C, "Contaminated Injury"

6.2.8 91401-C, "Assembly and Accountability"

6.2.9 91702-C, "Emergency Equipment And Supplies"

6.2.10 91705-C, "Inventory And Testing Of Emergency Preparedness Material/Equipment Which Are Not Part Of The Emergency Kits

6.2.11 92000-C, "Fire Protection Program"

6.3 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"

6.4 NUREG-0696, "Functional Criteria for Emergency Response Facilities"

END OF PROCEDURE TEXT

OSC ORGANIZATION CHART

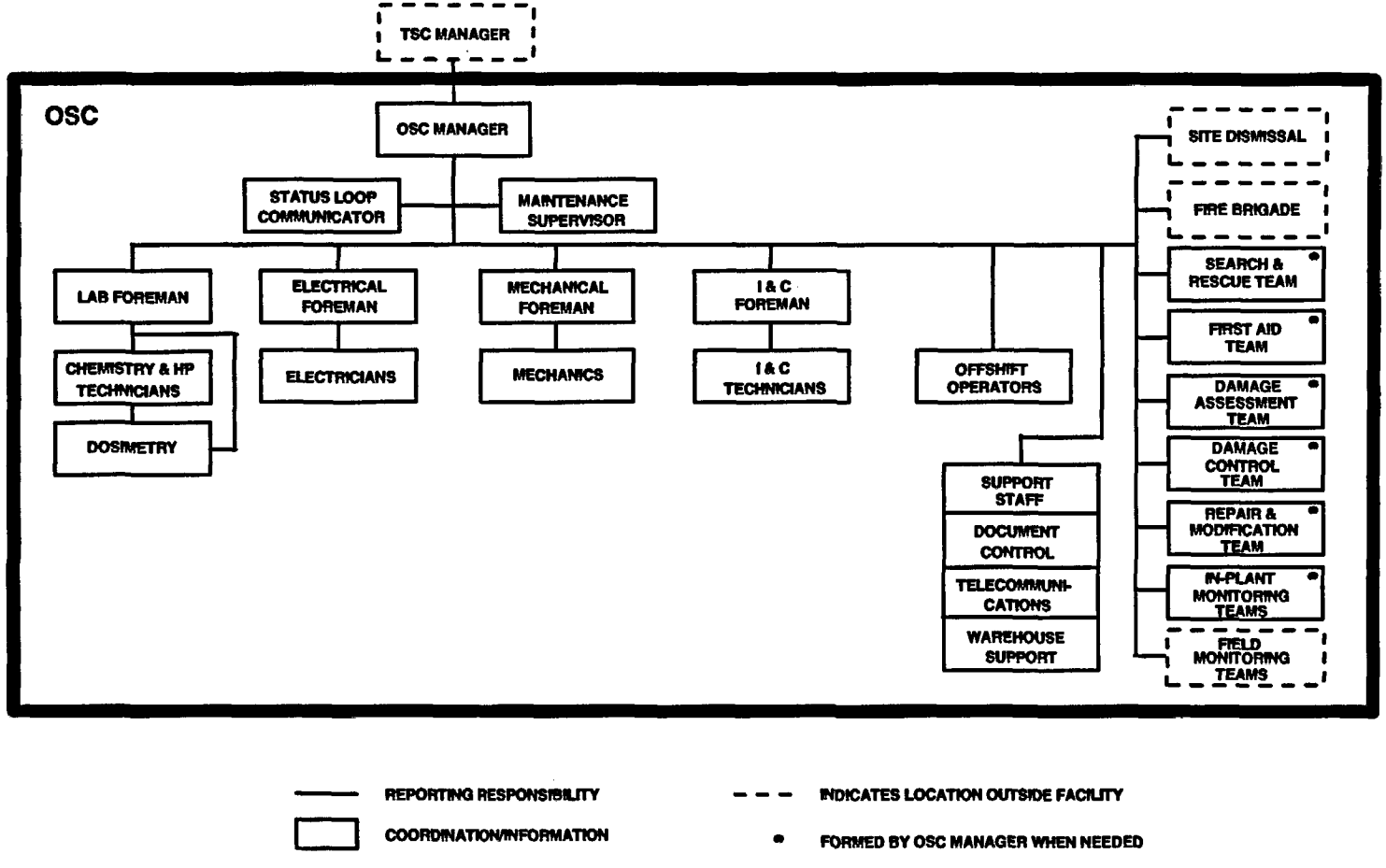

FIGURE 1

Sheet 1 of 1

DATA SHEET 1
EMERGENCY RESPONSE FACILITY ROSTER

Facility _____

Date _____

TIME		BADGE NO.	NAME	(FOR RECALLED PERSONNEL ONLY) Have you consumed any alcohol in the past 5 hours?	
IN	OUT	(NO, SG, SD)		NO	YES

PAGE ____ of ____

Reference Use

DATA SHEET 2

HABITABILITY SURVEY

OSC FACILITY **Date** _____

Time (once per hour minimum)							
Dose Rate (100 mRem/hr limit)							
Iodine Activity (2.7E-7 µCi/cc limit)							
Air Sample Activity							
Swipe Survey							
OSC Manager and HP Supervisor advised of the results							
Performed by initials							

Reference Use

OSC ACTIVATION CHECKLIST

RESPONSIBILITY:

All personnel reporting to the OSC shall prepare the OSC physically for use by the VEGP Emergency Response Organization.

INITIAL ACTIONS

1. Badge in on the OSC ACAT. ☐
2. Review the OSC Floor Plan per layout posted in OSC. ☐
3. Sign in on the Emergency Response Facility Roster and answer Fitness for Duty (FFD) question. (FFD question for recalled personnel only). ☐
4. Remove emergency response materials and equipment from storage areas and arrange physical facilities per layout posted in OSC. ☐
5. Remove telephones, emergency identification badges, status boards, copies of procedures, checklists, maps and other equipment/supplies from the OSC Emergency Kit and prepare the OSC for activation. ☐
6. Check operability of telephones by lifting receiver and listening for a dial tone. ☐
7. Perform radio check of hand held radios (Ops, HP, Mech, Elec/I&C and FMT/REX Channels). ☐

NOTES

OSC personnel that are already in the field performing their emergency duties may be credited as minimum shift staffing for activation. (i.e. HP Technicians/FMT members/crafts).

8. Ensure that the minimum OSC staff that is needed for activation is present per section 5.1.1.1 of this procedure. ☐
9. Report readiness to the OSC Manager. ☐
10. If the OSC Manager has not arrived, begin completing OSC Manager Checklist in Procedure 91104-C, "Duties Of The OSC Manager". ☐
11. Establish your workstation and await instructions from the OSC Manager or TSC Manager. ☐

Sheet 1 of 2

Reference Use

LAB FOREMAN CHECKLIST

POSITION FILLED BY: HP Personnel

INITIAL ACTIONS

1. Report to the OSC. ☐
2. Sign-in on the Emergency Response Facility Roster and badge in on OSC ACAT. ☐
3. Obtain work packets. (Packets located in the OSC document control cabinet.) ☐
4. Obtain briefings from OSC Manager, senior on-shift Health Physics Technician or HP Supervisor (from TSC) on status of plant and any releases. ☐
5. Advise OSC Manager when ready for operation and begin maintaining appropriate logs and checklists. ☐
6. Establish an unmanned personnel-monitoring station at the entrance to the OSC. ☐
7. Periodically monitor conditions in accordance with the Habitability Checklist and Data sheet 2 of this procedure. ☐

SUBSEQUENT ACTIONS

1. Request HP technicians, if more are needed, from the TSC/HPCP when teams are being sent to areas outside the power block. (i.e. Main Steam Valve Rooms, Turbine Building, and Diesel Generators etc.) ☐
2. Assign Health Physics Technicians to Radiological Emergency Teams (RETs) if radiological conditions warrant or are unknown in areas where teams will be working. (i.e., Plant Entry Security Building, Secondary Alarm Station, Supervisor Nuclear Security office). ☐

Sheet 2 of 2

LAB FOREMAN CHECKLIST

SUBSEQUENT ACTIONS CONTINUED

NOTE

a. Do not use a designated emergency response field-monitoring vehicle for transportation to the relocation center. Non-emergency department vehicle keys may be obtained from the maintenance tool room (Maintenance Building) and Human Resources department (Administrative Building).

b. Ensure that the offsite relocation team takes their procedure manual when dispatched from OSC.

3. Assign Health Physics personnel to report with the Relocation Center Leader (Nuclear Security Officer) to the offsite relocation center at an ALERT to set up for decontamination, should a Site Dismissal with monitoring be ordered. ☐

OFFSITE PERSONNEL MONITORING AND DECONTAMINATION (SITE DISMISSAL WITH MONITORING)

1. Upon instruction from the HP Supervisor, dispatch available HP Foreman or Health Physics personnel to the Plant Entry and Security Building Exit to monitor personnel as they evacuate the protected area. Exiting personnel should be frisked for contamination if they alarm the high sensitivity portal monitors. ☐
2. If exiting personnel are found to be contaminated, have any contaminated clothing removed and provide temporary coveralls and shoe covers. Direct individuals to the offsite relocation center or other appropriate location for decontamination. ☐
3. When required, request permission from the TSC to dispatch additional monitoring teams to the assigned relocation center. ☐
4. Remain in contact with the offsite relocation center (via radio channel FMT/REX or telephone) to review the progress of offsite monitoring and decontamination activities. ☐

OSC RADIOLOGICAL HABITABILITY CHECKLIST

1. *Periodically monitor radiological conditions in the area if a radiological release is suspected or occurring. ☐
2. *Log the time, dose rate (if appropriate), air sample results, iodine concentration and swipe survey results. (Use Data Sheet 2 or similar form) ☐
3. Report findings to the TSC HP Supervisor and OSC Manager. ☐

*Continuing Activity

PRB REVIEW REQUIRED

IN-PLANT SAMPLING AND SURVEYS

PROCEDURE USAGE REQUIREMENTS-		SECTIONS
Continuous Use:	Procedure must be open and readily available at the work location. Follow procedure step by step unless otherwise directed.	
Reference Use:	Procedure or applicable section(s) available at the work location for ready reference by person performing steps.	• In-Plant Monitoring Team Checklist
Information Use:	Available on plant site for reference as needed.	**Remainder of Procedure**

Information Use

1.0 PURPOSE

The purpose of this procedure is to provide instructions for performing sampling and surveys within the protected area during emergency conditions.

2.0 RESPONSIBILITIES

2.1 The Health Physics (HP) Supervisor (HP/Chem Shared Foreman after normal working hours until relieved by augmented personnel) shall have the following responsibilities:

2.1.1 Determining the need for In-Plant Monitoring Teams.

2.1.2 Evaluating survey results and reporting radiological information to the Emergency Director (ED) or Technical Support Center (TSC) Manager with recommendations.

2.2 The Operations Support Center (OSC) Manager (or HP Foreman if OSC is not activated) shall form, brief and dispatch In-Plant Monitoring Teams when the team is dispatched from the OSC.

2.2.1 If the team is dispatched from the HP Control Point, the HP Foreman with the permission of the HP Supervisor shall form, brief and dispatch the In-Plant Monitoring Teams.

2.3 The In-Plant Monitoring Teams shall conduct sampling and surveys as directed by the HP Supervisor.

3.0 PREREQUISITES

3.1 An emergency has been classified per Procedure 91001-C, "Emergency Classification And Implementing Instructions".

3.2 The HP Supervisor has directed that in-plant sampling and survey activity be initiated.

4.0 PRECAUTIONS

4.1 Emergency radiation exposures in excess of 10CFR20 limits shall be authorized by the ED in accordance with Procedure 91301-C, "Emergency Exposure Guidelines".

4.2 Normal precautions applicable to the handling of radioactive material involving the potential hazards from direct radiation exposure and the spread of loose contamination apply to air sample materials. Completed sample materials will be bagged for transport and retention. Iodine cartridges and air particulate filters shall be monitored for direct radiation.

NOTE

For the purposes of this procedure, in-plant areas shall be considered those areas that are within the radiologically - controlled areas and shall be the responsibility of the HP Supervisor. All other areas within the protected area may be surveyed by in-plant teams or field monitoring teams. Field monitoring is the responsibility of the Dose Assessment Supervisor in the Emergency Operations Facility (EOF) (once it is activated).

5.0 PROCEDURE

5.1 TEAM FORMATION

5.1.1 The OSC Manager (or HP Foreman, if OSC not activated or the HP Foreman at the HP Control Point) shall form teams consisting of at least two qualified Radiological Emergency Team (RET) members each. At least one member of the team shall be an HP Technician and shall be qualified to ANSI 18.1-1971. One of the team members shall be appointed Team Leader.

5.1.2 The team shall report to the HP Supervisor at the HP Control Point or OSC for a briefing.

5.1.3 Monitoring teams shall perform In-Plant Monitoring in accordance with Plant Health Physics Procedures. The In-Plant Monitoring Team Checklist may be used as a guide for these activities.

5.1.3.1 While performing sampling and survey activities, the Team Leader shall contact the HP or OSC Communicator at least every 30 minutes for transmittal of radiation data and personnel exposure. The TSC Communicator will monitor transmissions and report appropriate information to the HP Supervisor (TSC).

5.2 REPORTING SURVEY RESULTS

5.2.1 Personnel in the counting room shall analyze in-plant samples such as effluent and air samples using a gamma spectrometer whenever possible, document all results in accordance with standard laboratory procedures and provide results to HP supervision.

5.2.2 Results, which indicate abnormally high amounts of radioactivity, shall be communicated immediately to HP supervision before providing documented results, as time may be critical in these instances.

6.0 REFERENCES

6.1 VEGP EMERGENCY PLAN

6.2 PROCEDURES

6.2.1 91001-C, "Emergency Classification And Implementing Instructions"

6.2.2 91301-C, "Emergency Exposure Guidelines"

6.3 NUREG-0654, FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"

6.4 Title 10 Code of Federal Regulations Part 20, "Standards for Protection Against Radiation"

6.5 ANSI/ANS-18.1, "Standard For Selection and Training Personnel for Nuclear Power Plants"

END OF PROCEDURE TEXT

Reference Use

IN-PLANT MONITORING TEAM CHECKLIST

POSITION FILLED BY: At least one ANSI 18.1-1971 Health Physics Technician and one other RET member.

RESPONSIBILITY: Perform in-plant sampling and surveys.

NOTE

Time critical actions (i.e. actions that would contribute to the termination of a radiological release) must be given priority.

IMMEDIATE ACTIONS

1. Obtain briefing from HP supervision. ☐

   This briefing should include the following:

   NOTE

   a. The first letter of the Emergency Response Facility that the team is dispatched from should precede the team number. (i.e. "T-1" for the first team dispatched from the TSC or "O-1" for the first team dispatched from the OSC). Teams are to maintain the same name throughout the task assigned to them.

   b. All teams dispatched from the HPCP are to be considered dispatched from the TSC and will receive the next available team number from the TSC HP Supervisor.

   Team number. ☐

   Current radiation levels for areas of concern. ☐

   Results from any preliminary in-plant surveys. ☐

   Ongoing accident related conditions or events (e.g., unchecked leaks, steam leaks, or unusual sources of high radiation, if known). ☐

   Specific locations where sampling and monitoring is to be performed. ☐

2. Log onto proper Radiation Work Permit (RWP) and/or Emergency Radiation Work Permit (ERWP) (if appropriate) as time permits. ☐

Sheet 2 of 4

IN-PLANT MONITORING TEAM CHECKLIST

IMMEDIATE ACTIONS, CON'T.

3. Obtain emergency survey kit, radiation monitoring instruments and/or necessary equipment (i.e., keys, etc.). ☐
4. Prepare equipment and supplies. ☐
5. Perform visual inspection, check batteries and verify source check has been completed or perform source check tests on survey meters and operational checks on portable radios. ☐
6. Determine entry and exit routes if different from standard procedures. ☐
7. List survey points on survey map. ☐
8. Number all smears and include extra smears. ☐
9. Don necessary protective clothing and respiratory equipment. ☐
10. Obtain dosimetry including TLD and direct-reading dosimeter capable of monitoring the highest exposure expected. ☐

SUBSEQUENT ACTIONS

NOTE

If results from sample surveys (surface contamination and/or air samples) exceed 100 net cpm, label sample with a radioactive material sticker.

1. Conduct sampling and surveys as directed for the following in accordance with plant Health Physics Procedures:
   a. Radioiodine and air particulate samples ☐
   b. General area radiation surveys ☐
   c. Surface contamination surveys ☐
2. Check self-reading dosimeters every 15 to 30 minutes. ☐
3. The team leader shall maintain communications at least every 30 minutes with the HP or OSC Communicator to transmit radiation data, personnel exposure and other information via portable radio, telephone or plant page. ☐

IN-PLANT MONITORING TEAM CHECKLIST

SUBSEQUENT ACTIONS, CONT.

Air Sampling

1. Proceed to sampling locations as directed by the HP Supervisor. Use a portable survey meter to note exposure levels along routes. ☐
2. Ensure that Silver Zeolite (AgX) or charcoal cartridges are used with the air sampler as appropriate or per Health Physics Supervision. A standard particulate filter shall be placed upstream from the AgX or charcoal cartridge in order to remove particulates from the air. ☐
3. The HP Supervisor shall specify flow rate and sampling duration if different from standard procedures. ☐
4. Frisk samples and transport to the counting room for analysis. Inform HP Supervisor prior to transporting samples reading greater than 20 mRem/hr on contact. ☐

NOTE

Locked doors or flashing lights shall be utilized for samples that can produce a whole body dose rate of greater than or equal to 1000 mRem/hr. Area posting shall be in accordance with Health Physics procedures.

5. If the HP and Chemistry counting rooms are unusable, alternate facilities to be considered are:
   a. VEGP Training Center ☐
   b. Hatch Nuclear Plant ☐
   c. Savannah River Site ☐

General Area Radiation Surveys

CAUTION

Any unexpected in-plant readings of 10 rem/hr or greater shall be reported immediately to the HP Supervisor.

1. Proceed to sampling locations as directed by the HP Supervisor. ☐

Sheet 4 of 4

IN-PLANT MONITORING TEAM CHECKLIST

SUBSEQUENT ACTIONS, CONT.

2. While en-route to survey locations, keep the instrument on with the meter set to scale which permits an upscale reading. Change the scale up or down as necessary. ☐
3. Obtain radiation measurements at survey locations. Take beta readings, as directed by HP supervision, and document results on standard Health Physics Survey Forms. ☐
4. When surveys are complete, report back to HP supervision with the results. ☐

Surface Contamination Surveys

1. Proceed to sampling location as directed by HP supervision. Use a portable survey meter to note exposure levels along routes. ☐
2. Obtain smear samples as directed at survey locations. ☐
3. Count the smear samples in a low dose area and record results. ☐
4. When surveys are complete, report back to HP supervision. ☐

Reporting Survey Results

1. Include preliminary survey results in all briefings. ☐
2. Submit all records to HP Supervisor. ☐

Final Condition

1. Conduct contamination survey of all team members. ☐
2. Hold final team briefing with appropriate HP supervision prior to disbanding team. ☐

PRB REVIEW REQUIRED

FIELD SAMPLING AND SURVEYS

PROCEDURE USAGE REQUIREMENTS-		SECTIONS
Continuous Use:	Procedure must be open and readily available at the work location. Follow procedure step by step unless otherwise directed.	
Reference Use:	Procedure or applicable section(s) available at the work location for ready reference by person performing steps.	• Checklists 1 • Checklists 2 • Checklists 3 • Checklists 4 • Checklists 5 • Checklists 6
Information Use:	Available on plant site for reference as needed.	**Remainder of Procedure**

Information Use

1.0 PURPOSE

The purpose of this procedure is to provide direction for performing field monitoring.

2.0 RESPONSIBILITIES

2.1 The Dose Assessment Supervisor (or Health Physics (HP) Supervisor if the Emergency Operations Facility (EOF) is not activated) shall determine the need for offsite surveys and sampling.

2.2 The Dose Assessment Supervisor (or HP Supervisor if the EOF is not activated) is responsible for:

2.2.1 Briefing and dispatching the Field Monitoring Team(s) (FMT).

2.2.2 Directing the FMT's activities through the FMT Communicator.

2.2.3 Collecting all documentation, and directing disposition of samples at the completion of shift and prior to dismissal.

3.0 PREREQUISITES

NONE

4.0 PRECAUTIONS

4.1 FMT members shall not exceed their authorized dose limit. If the limit is approached, leave the plume and request guidance from the FMT Communicator.

4.2 Normal precautions applicable to the handling of radioactive material involving the potential hazards from direct radiation exposure and the spread of loose contamination apply to air sample materials. Completed sample materials will be bagged for transport and retention. Iodine cartridges and air particulate filters shall be monitored for direct radiation. Bagged sample material having contact Gamma readings greater than 2.5 mRem/h above background will be stored in the rear of the field survey vehicle and any shielding materials available shall be used.

4.3 When precipitation is predicted or occurring in the area of the plume, the potential for significantly increased rates of radioactivity deposition shall be considered and the scope of field monitoring increased, as required, in order to quantify the effects of this potentially increased deposition.

4.4 The FMT Communicator shall inform the FMT's of any changes in emergency classification, or of situations which may compromise their health and safety.

5.0 PROCEDURE

5.1 The Dose Assessment Supervisor (or HP Supervisor if the EOF is not activated) should request the formation of at least one team (three teams maximum) of two persons each, and provide a briefing to them prior to their dispatch. (Checklist 2, Field Monitoring Team, Initial Briefing Checklist, should be used.)

5.2 The FMT(s) shall implement the actions of Field Monitoring Team Checklist, Checklist 1.

5.3 The Field Team Communicators may use Data Sheets 2, 3, 4 or 5 and Checklists 3, 4, 5 or 6 when communicating with FMT(s).

5.4 Prior to team dispatch, the Field Team Communicator should prepare the KI Distribution Checklist (Data Sheet 1) in Procedure 91305-C, "Protective Action Guidelines".

5.5 The Field Team Communicator should contact Health Physics personnel when FMT kits need restocked.

6.0 REFERENCES

6.1 VEGP EMERGENCY PLAN

6.2 PROCEDURES

6.2.1 91305-C, "Protective Action Guidelines"

END OF PROCEDURE TEXT

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR F		
F21	1-1/2 miles	Dirt road intersection, SE of Plant Wilson
F22	2 miles	Dirt road intersection, dirt road starts from River Road south of Training Center
F41	3-1/2 miles	Unimproved dirt lane, sharp right turn junction, west of Griffins Landing
F42	4 miles	Griffins Landing boat ramp
F51	4-1/4 miles	Griffins Landing Road, Y-junction with unimproved dirt road
F81	7-1/4 miles	Brigham Landing boat ramp
F91	8-1/4 miles	River Road, intersection with unimproved dirt road by concrete marker
F101	9-1/2 miles	River Road T-junction with unimproved dirt road by concrete marker, by Sweetwater Creek

SECTOR G		
G21	2 miles	River Road, T-junction with GPC boat landing road
G22	1-3/4 miles	River Road, junction with Training Center road
G23	1-1/2 miles	River Road, Y-junction with Plant Wilson road
G24	1-1/2 miles	River Road, T-junction with Plant Vogtle exit road
G31	2-1/4 miles	River Road, at end of paved section
G41	3-1/2 miles	River Road, V-junction with unimproved dirt road
G51	4-1/4 miles	River Road, at Cochran Grove Church
G52	5 miles	River Road, at T-junction with unimproved dirt road at residence
G53	4-1/2 miles	Griffins Landing Road, Y-junction with Dixon Road
G61	5-1/2 miles	River Road, SE Beaver dam Creek at residence
G62	5-3/4 miles	End of unimproved dirt road, County Road 20 at residence
G71	6-1/2 miles	Intersection of River Road and Brigham Landing Road
G72	6-1/2 miles	Brigham Landing Road, T-junction with County Road 81
G73	6-1/2 miles	Brigham Landing Road, end of paved section, T-junction with County Road 80
G81	7-1/2 miles	River Road, T-junction with unimproved dirt road
G82	7-1/2 miles	County Road 78, by Holy Trinity Church
G101	9-3/4 miles	Royal Road, T-junction with unimproved dirt road

Sheet 2 of 10

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR H

H21	1-1/4 miles	River Road, by Environmental Monitoring Station Number 8
H51	4-3/4 miles	Chance Road, sharp left turn by stream
H61	5-1/4 miles	Junction of Griffins Landing Road and Chance Road
H62	5-1/2 miles	Dixon Road, by grain bin
H63	5-3/4 miles	Griffins Landing Road, by Microwave Tower
H71	6-1/4 miles	Dixon Road, Y-intersection
H72	6-1/2 miles	Griffins Landing Road, by Bethany Church Cemetery
H81	7-1/2 miles	Georgia Route 23 in Girard by stop sign and junction of Stoney Bluff Road
H82	7-1/4 miles	Georgia Route 23, junction with Brigham Landing Road
H83	7-1/4 miles	End of dirt lane off Brigham Landing Road
H91	8-1/2 miles	Stoney Bluff Road, T-junction with Long Road
H92	8-3/4 miles	Givens Church Road by Church of God
H101	9-1/2 miles	Stoney Bluff Road, at Thankful Church Road

SECTOR J

J21	1-1/4 miles	River Road, by Environmental Monitoring Station 9, T-intersection with unimproved dirt road
J22	1-1/2 miles	Y-intersection of unimproved dirt road
J23	1-3/4 miles	End of unimproved dirt road
J41	3-3/4 miles	Junction of unimproved dirt roads
J51	4-3/4 miles	Intersection of Cypress Pond Road and Georgia Route 23
J52	4-1/2 miles	Chance Road, curve at residence
J61	5-1/2 miles	Georgia Route 23, T-junction with Glisson Road
J62	5-1/2 miles	Georgia Route 23 and Chance Road
J63	5-3/4 miles	Dead end of improved dirt road off of Buck Lane
J64	5-1/2 miles	Unimproved dirt road off Buck Lane by windmill at Hickman Cemetery
J71	7 miles	Glisson Road at residence
J72	6-1/2 miles	Intersection of Claxton Road and Glisson Road
J73	6-1/2 miles	Intersection of Brier Creek Road and Buck Lane by Wimberly Cemetery
J81	7-1/4 miles	T-junction of Brier Creek Road and Claxton Road at siren B33
J82	7-3/4 miles	T-junction of Brier Creek Road and Glisson Road
J91	8-1/2 miles	T-junction of Brier Creek Road and Georgia Route 23
J101	9-1/2 miles	Y-intersection of Georgia Route 23 and County Road 138 at siren B44
J102	9-1/2 miles	Tom Bargeron Road at intersection of unimproved dirt road
J103	9-1/2 miles	Tom Bargeron Road at intersection of Benjamin Road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR K		
K24	1-1/4 miles	River Road at Y-intersection with unimproved dirt road
K31	2-1/2 miles	Ebenezer Church Road at intersection with unimproved dirt road prior to sharp right turn south
K41	3-1/2 miles	Ebenezer Church Road at Y-intersection with unimproved dirt road
K51	4-1/2 miles	Intersection of Ebenezer Church Road and Georgia Route 23
K52	4-1/2 miles	T-intersection of Georgia Route 23 and unimproved dirt road
K53	4-1/2 miles	Ebenezer Church Road at sharp right curve by unimproved dirt road
K61	5-1/2 miles	Intersection of Thompson Bridge Road and Brier Creek Road
K62	5-1/4 miles	Thompson Bridge Road at T-junction with Heath Road
K63	5-3/4 miles	Approximately 3/4 - mile South of K62
K64	5-1/2 miles	Fork of Buck Lane at an unimproved dirt road
K71	6-1/2 miles	Brier Creek Road by sharp curve at residence with out building
K72	6-1/2 miles	Y-junction on unimproved dirt road, County Road 92
K73	6-1/4 miles	County Road 92 at Lambert Cemetery
K81X	7-1/4 miles	Dead end of unimproved dirt road, off Roberts Road, at creek
K91	8-3/4 miles	T-intersection of unimproved dirt roads off Mobley-Brown Road
K92	8-3/4 miles	Mobley-Brown Road at triangular intersection of dirt road
K93	8-1/4 miles	Mobley-Brown Road at sharp curve
K94	8-3/4 miles	Unimproved dirt road off Roberts Road
K101	10 miles	Intersection of Tom Bargeron Road and Gordon Road
K102	9-1/2 miles	Gordon Road at intersection with Mobley-Brown Road
K103	9-1/4 miles	Gordon Road at intersection with unimproved dirt road
K104	9-1/4 miles	Gordon Road at T-intersection with unimproved dirt lane
K105	9-1/4 miles	Gordon Road at T-intersection with Mobley-Brown Road
K106	9-3/4 miles	Intersection of Gordon Road and Quaker Road
K107	9-3/4 miles	Intersection of Quaker Road and Hatchers Mill Road
K108	9-1/2 miles	Hatchers Mill Road at Springfield Church
K109	10 miles	Quaker Road at T-intersection with unimproved dirt road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR L		
L11	1 mile	Intersection of Plant Vogtle access roads
L21	1-1/4 miles	Intersection of Plant Vogtle Gate 1 access road and River Road
L22	1-1/2 miles	Ebenezer Church Road at Ebenezer Church
L23	2 miles	Jack Delaigle Road at T-intersection with unimproved road
L31	2-1/2 miles	Ebenezer Church Road at sharp curve after recreation area
L32	2-1/4 miles	Jack Delaigle Road at Y-intersection of unimproved road
L33	2-3/4 miles	Jack Delaigle Road at Triangular intersection with Son Delaigle Road
L34	2-3/4 miles	Y-intersection of unimproved dirt roads off of Ebenezer Church Road
L41	3-1/4 miles	Jack Delaigle Road at cluster of residences and out buildings
L42	3-3/4 miles	Unimproved dirt road off Jack Delaigle Road
L43	3-1/4 miles	Intersection of unimproved dirt roads
L44	3-1/4 miles	T-intersection of unimproved dirt roads
L51	4-1/2 miles	Jack Delaigle Road at T-intersection with County Road 391
L52	5 miles	Intersection of Jack Delaigle Road and Georgia Route 23
L53	4-1/2 miles	Fork of improved dirt roads off Jack Delaigle Road and County Road 391
L54	4-3/4 miles	Georgia Route 23 at unimproved road
L61	5-1/2 miles	Thompson Bridge Road intersection with Boll Weevil Road
L71	6-1/2 miles	Thompson Bridge Road at Cox Place Road
L72	6-1/4 miles	Thompson Bridge Road at Jobs Spring Church
L81	8 miles	Thompson Bridge Road at intersection with Seven Oaks Road
L82	7-1/2 miles	Dead End of dirt lane off Seven Oaks Road
L91	8-1/2 miles	Intersection of unimproved roads off Roberts Road
L92	8-1/4 miles	Thompson Bridge Road at Thompson Bridge
L93	8-3/4 miles	Intersection of Hatchers Mill Road and Chance Hatcher Road
L101	9-3/4 miles	County Road 393 at dead end off Quaker Road
L102	9-1/2 miles	Housing subdivision off Roberts Road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR M		
M31	2-1/2 miles	Son Delaigle Road under transmission lines
M41	3-1/2 miles	Triangular intersection of dirt roads near 230 kV transmission lines
M42	3-3/4 miles	Intersection of dirt roads north of 230 kV transmission liens
M43	3-3/4 miles	Jack Delaigle Road at intersection
M51	4-1/2 miles	Hancock Landing Road under 230 kV transmission lines
M52	4-1/2 miles	Thomas Road at T-intersection
M53	4-1/4 miles	Intersection of Thomas Road and Jack Delaigle Road
M61	5 miles	Intersection of Hancock Landing Road and Thomas Road
M62	5-1/2 miles	Intersection of Georgia Route 23 and Hancock Landing Road
M63	5-3/4 miles	Botsford Church Road by cemetery and dirt road with out buildings
M71	6-3/4 miles	McNorril Road and Cemetery Road Y-intersection
M72	6-1/4 miles	Intersection of Botsford Church Road and Cox Place Road
M73	6-1/2 miles	At Y-intersection of unimproved dirt lanes off McNorril Road
M81	7-3/4 miles	Intersection on Utley Road and Lawson Road
M82	7-1/2 miles	Intersection of Sevens Oaks Road and Botsford Church Road at Botsford Church
M83	7-1/2 miles	Seven Oaks Road at intersection with Lawson Hall Road
M84	7-1/2 miles	Seven Oaks Road at intersection with improved dirt road
M85	7-1/4 miles	Botsford Church Road at Botsford Church Cemetery
M86	7-1/2 miles	Seven Oaks Road at T-intersection with Griffin Road
M87	7-3/4 miles	Intersection of Sevens Oaks Road and dirt lane
M91	8 miles	Griffin Road and 230 kV transmission lines
M92	8-1/4 miles	Griffin Road and 108 intersection
M93	8-3/4 miles	End of Griffin Road
M101	9-1/2 miles	Intersection of Bates Road and unimproved dirt road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR N		
N21	1-1/2 miles	Y-intersection of unimproved dirt roads west of River Road
N22	1-1/2 miles	T-intersection of unimproved dirt roads west of River Road
N23	1-3/4 miles	Out buildings on unimproved dirt road and County Road 99
N31	2-1/4 miles	End of unimproved dirt road near Red Branch
N32	2-1/4 miles	Residence of unimproved dirt road off Hancock Landing Road
N33	2-3/4 miles	Dead end of Claxton-Lively Road
N41	3-3/4 miles	Intersection of Hancock Landing Road and Nathaniel Howard Road
N42	3-1/2 miles	Son Delaigle Road at railroad crossing
N43	3-1/2 miles	Intersection of Claxton Lively Road and Son Delaigle Road
N51	4 miles	Railroad crossing at Hancock Landing Road
N52	4-1/4 miles	Intersection of Claxton-Lively Road and Hancock Landing Road
N53	4-1/2 miles	Pond at end of unimproved dirt road off Hancock Landing Road
N61	5-3/4 miles	Claxton-Lively Road at Y-intersection with unimproved dirt road
N71	6-1/2 miles	Georgia Route 23 at trailer park
N72	6-1/2 miles	Claxton-Lively Road at T-intersection with unimproved dirt road
N73	6-3/4 miles	Claxton-Lively Road at Y-intersection with improved dirt road
N74	6-1/2 miles	Ben Hatcher Road at Y-intersection with improved dirt road
N75	7 miles	Ben Hatcher Road at Y-intersection with improved dirt road
N81	7-1/2 miles	Intersection of Seven Oaks Road and Sam Mead Road
N82	7-3/4 miles	Seven Oaks Road at railroad crossing
N83	7-3/4 miles	Dead end of improved dirt road off of Seven Oaks Road
N84	8 miles	Intersection of Georgia Route 23 and 80 at siren B8
N85	7-1/2 miles	Intersection of Georgia Route 23 and Ben Hatcher Road
N86	7-1/4 miles	Railroad crossing on Georgia Route 23
N91	8-1/2 miles	Pond off of improved dirt road off Sam Mead Road
N92	8-1/2 miles	Sam Mead Road at grain bin
N93	8-1/2 miles	Junction of Cates-Mead and Sam Mead Road at siren B16
N94	8-1/2 miles	Residence on improved dirt road off of Cates-Mead Road
N95	9 miles	Sharp turn on Georgia Route 80 east of Sam Mead Road
N101	9-1/2 miles	Sharp turn on unimproved dirt road between Sam Mead Road and Cates-Mead Road
N102	9 miles	T-intersection of Daybreak Road and Cates-Mead Road
N103	9 miles	Grain bins at the end or Daybreak Road
N104	9-1/2 miles	Dead end of unimproved dirt road off of Sam Mead Road
N105	9 miles	Junction of Sam Mead Road and unimproved dirt road
N106	10 miles	One mile East of N102 on Cates-Mead Road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR P		
P21	1-1/2 miles	River Road at railroad crossing
P22	2 miles	Trailer park on dirt road off of Hancock Landing Road
P23	1-3/4 miles	Railroad crossing and improved dirt road
P24	2 miles	Intersection of Hancock Landing Road and River Road
P25	1-3/4 miles	Intersection of unimproved dirt road 1/3 mile off of River Road
P31	2 miles	Radio tower on Hancock Landing Road
P32	2-1/4 miles	River Road at trailer park
P33	2-1/2 miles	River Road at intersection with unimproved dirt road
P41	3-1/4 miles	Dead end of improved dirt road off of River Road
P42	3-1/2 miles	Intersection of improved dirt road and River Road
P43	4 miles	River Road at intersection with unimproved dirt road
P51	4-1/4 miles	River Road at Gobbie Grove Church
P61	5 miles	Nathaniel Howard Road at Newberry Creek
P62	5-1/2 miles	Ben Hatcher Road at Fair Field Church
P63	5-1/4 miles	Ben Hatcher Road at Newberry Creek
P64	5-3/4 miles	Junction of Ben Hatcher and Nathaniel Howard Road
P71	6-1/2 miles	Dead end of unimproved dirt road off of Georgia Route 80 by Mineral Spring Branch
P81	7-1/2 miles	Georgia Route 80 at intersection of Godbee Road
P82	7-1/4 miles	Georgia Route 80 at intersection of unimproved dirt road
P83	7-1/2 miles	Georgia Route 80 at cluster of residences and out buildings
P84	7 miles	Junction of Georgia Route 80 and Anderson Road
P91	8-3/4 miles	Georgia Route 23 at Mount Zion Church
P92	8-3/4 miles	End or unimproved road off of Godbee Road
P93	8-1/4 miles	Dead end of Godbee Road
P101	9-1/2 miles	Intersection of Georgia Route 23 and Spring Branch Church Road
P102	9-3/4 miles	T-intersection of unimproved dirt road and Spring Branch Church Road

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

SECTOR Q		
Q31	2-3/4 miles	Fork at unimproved road off of River Road
Q51	4-1/2 miles	Trailer park on River Road
Q52	4-1/2 miles	Intersection of County Road 58 and unimproved dirt road at siren B10
Q53	4-1/2 miles	Dead end of Allen Chapel Road
Q54	4-1/2 miles	T-intersection of unimproved dirt road off of Allen Chapel Road
Q61	5 miles	River Road and Allen Chapel Road T-intersection by trailer park
Q62	5-3/4 miles	Dead end of unimproved dirt road off of River Road
Q71	6 miles	River Road at sharp curve
Q72	6-1/2 miles	Unimproved dirt road off of Georgia Route 80
Q73	6-3/4 miles	Junction of River Road and Shell Bluff Landing Road and Georgia Route 80
Q74	6-1/2 miles	Improved dirt road off of Shell Bluff Landing Road
Q75	6-3/4 miles	Intersection of improved dirt road and Shell Bluff Landing Road
Q76	6-1/2 miles	Shell Bluff Landing Road and Y-intersection with improved dirt road
Q77	6-3/4 miles	Georgia Route 80 at Y-intersection with cluster of residences
Q78	6-3/4 miles	Georgia Route 80 by 230 kV transmission lines
Q81	7-1/2 miles	Intersection of River Road and unimproved road
Q82	7-1/2 miles	Intersection of Anderson Road and unimproved road
Q91	8 miles	River Road and McKinney Branch Church
Q92	8-1/2 miles	End of Miller Pond Road
Q93	8-3/4 miles	Junction of River Road and Miller Pond Road at siren B1

SECTOR R		
R71	6-3/4 miles	End of Shell Bluff Landing Road at Shell Bluff Landing

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

LOCATION NUMBER	DESCRIPTIVE LOCATION	DIRECTION	DISTANCE (MILES)	SAMPLE TYPE (1)
1	Hancock Landing Road	N	1.1	D
2	River Bank	NNE	0.8	D
3	River Bank	NE	0.7	D
4	River Bank	ENE	0.8	D
5	River Bank	E	1.2	D
6	Plant Wilson	ESE	1.1	D
7	Simulator Building	SE	1.7	D,V,A
8	River Road	SSE	1.1	D
9	River Road	S	1.1	D
10	Met Tower River Road	SSW	0.9	A
11	River Road	SW	1.2	D
12	River Road	WSW	1.1	D
13	River Road	W	1.3	D
14	River Road	WNW	1.8	D
15	Hancock Landing Road	NW	1.5	D,V
16	Hancock Landing Road	NNW	1.4	D,A
17	Savannah River Site River Road	N	5.4	D
18	Savannah River Site D Area	NNE	5.0	D
19	Savannah River Site A.13	NE	4.6	D
20	Savannah River Site A.13.1	ENE	4.8	D
21	Savannah River Site A.17	E	5.3	D
22	River Bank Downstream of Buxton Landing	ESE	5.2	D
23	River Road	SE	4.7	D
24	Chance Road	SSE	4.9	D
25	Chance Road and Highway 23	S	5.2	D
26	Highway 23, mile 15.5	SSW	4.6	D
27	Highway 23, mile 17	SW	4.8	D
28	Thomas Road	WSW	5.0	D
29	Claxton-Lively Rod	W	5.0	D
30	Ben Hatcher Road	WNW	4.7	D
31	River Road at Allen's Church Fork	NW	5.0	D
32	River Bank	NNW	4.8	D
33	Nearby Residence	SE	3.3	D

DATA SHEET 1

FIELD MONITORING LOCATIONS AND ENVIRONMENTAL MONITORING POINTS

LOCATION NUMBER	DESCRIPTIVE LOCATION	DIRECTION	DISTANCE (MILES)	SAMPLE TYPE (1)
34	Girard Elementary School	SSE	6.3	D
35	Girard	SSE	6.6	D,A
36	Waynesboro	WSW	15.0	D,A
37	Substation (Waynesboro) North Side of Road	WSW	17.5	D
38	Substation (Waynesboro) South Side of Road	WSW	17.5	D
43	Employees Recreation Area	SW	2.2	D
44	Plant Wilson (West Gate)	ESE	1.1	D
45	VEGP Visitors Center	SSE	0.3	D
80	North Augusta Water Treatment Plant	Upstream	51	W
81	Savannah River (mile 153.1)	Upstream	2.2	R,S
82	Savannah River (mile 151.2)	Upstream	0.2	R,S(2)
83	Savannah River (mile 150.4)	Downstream	0.6	R
84	Savannah River (mile 149.5)	Downstream	1.5	R,S(2)
85	Savannah River (mile 146.7)	Downstream	4.3	R
87	Beaufort-Jasper Water Treatment Plant; Beaufort, S.C.	Downstream	112	W
88	Cherokee Hill Water Treatment Plant; Port Wentworth, Ga.	Downstream	122	W
98	W. C. Dixon Dairy	SE	9.8	M

TABLE NOTATION:

(1) Sample Types

A - Airborne Radioactivity
D - Direct Radiation
M- Milk
R - River Water
S - River Shoreline Sediment
V- Vegetation
W - Drinking Water (at water treatment plant)

(2) These are approximate locations for sediment sampling. High water may sometimes cause an otherwise suitable location for sediment sampling to be unavailable.

Sheet 1 of 1

Reference Use

DATA SHEET 2

FIELD MONITORING SURVEY FORM

Date _____ Team Members _____ _____

LOCATION and TIME		Dose Rate Meter* WAIST-LEVEL			Dose Rate Meter* 2-INCHES FROM GROUND			WAIST LEVEL	2" FROM GROUND	SAMPLE NUMBER	SAMPLE SURVEY
Survey point or miles and direction from given sample point.	Time	CLOSED (mRem/h)	OPEN (mRem/h)	OPEN/ CLOSED RATIO	CLOSED (mRem/h)	OPEN (mRem/h)	OPEN/ CLOSED RATIO	(ncpm)	(ncpm)	1.	2. (mRem/hr) or ncpm)

NOTES:

1.

TYPE OF SAMPLE CODE

SN - SNOW SAMPLE
I - ICE SAMPLE
V - VEGETATION (GRASS)
W - WATER SAMPLE
S - SURFACE SAMPLE
GA -GENERAL AREA RADIATION SURVEY

2.

If results from sample survey exceed 100 net cpm, label sample with a radioactive material sticker.

INSTRUMENT TYPES _____ _____
SERIAL NUMBERS _____ _____
CALIBRATION DUE _____ _____

*Dose Rate Meter (RO2 or equivalent)
Count Rate Meter (ASP1 w/GM probe or equivalent)

EXAMPLES OF SAMPLE NUMBERS TO BE GIVEN BY FMT COMMUNICATORS:

Air Sample #1 on the 10 Mile EPZ Map at Location Mike 31 – (AS1M31) Second Air Sample at that location - (AS2M31)
Air Sample #1 on the Site Map at Grid Coordinate Juliet 18 - (AS1J18) – Second Air Sample at that location – (AS2J18)
Same Nomenclature to be used for other samples using "Type Of Sample" code above – (V1M31) or (V1J18) for Vegetation, (W1M31) or (W1J18) for Water

AIR SAMPLE DATA

Sampler Model No. _____ Serial No. _____ Calibration Due _____

Sample Location	Sample Time	Sample Duration (Minutes) A	Flow Rate (LPM) Start / End	Avg. Flow Rate (LPM) B	Total Flow (Liters) A X B	Sample No.	Sample Activity Particulate (ncpm)	Sample Activity Silver Zeolite (ncpm)
			_____					
			_____					

Sheet 1 of 1

Reference Use

DATA SHEET 3

IN TRANSIT RADIATION SURVEY FORM

Traverse path from _____ to _____

Survey Point (Description or Number)	Dose Rate (mRem/hr)	Count Rate (ncpm)	Time	Mileage

INSTRUMENT TYPES		
	SERIAL NUMBER	CALIBRATION DUE
COUNT RATE METER		
DOSE RATE METER		

TEAM MEMBERS	

DATE _____

Reference Use

DATA SHEET 4
FIELD MONITORING TEAM DATA

THYROID DOSE RATE ($\dot{D}$) FROM FIELD MONITORING DATA

Sample No. _____ Time of Sample _____ Date _____ Location _____

A. FIELD DATA

REMARKS:

1. Total volume of air sampled: (V) _____liters

2. Net cpm (Iodine) above background (N): _____cpm
   Data Sheet 2 of Procedure 91303-C)

B. Thyroid dose rate ($\dot{D}$): _____mRem/h
(Use appropriate expression below to calculate)

NOTE

T is time since reactor shutdown until release occurred.

FOR **T** $\leq$ 24 hr: $\dot{D} = \frac{N(12)}{V}$ FOR **T** >24 hr: $\dot{D} = \frac{N(65)}{V}$

Reference Use

DATA SHEET 5

FIELD MONITORING TEAM STATUS UP-DATE

EMERGENCY CLASSIFICATION _____

WIND DIRECTION: FROM _____° TO _____° WIND SPEED _____ MPH

AFFECTED SECTORS: _____ _____ _____

PROJECTED RADIOLOGICAL CONDITIONS:

DISTANCE (miles)	TEDE (mRem)	THYROID CDE (mRem)
0.6	_____	_____
2	_____	_____
5	_____	_____
_____	_____	_____
_____	_____	_____

MESSAGE _____

_____

_____

_____

_____

_____

Reference Use

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

POSITION FILLED BY: Qualified members of Radiological Emergency Team.

RESPONSIBILITY: Field sampling and surveys.

INITIAL ACTIONS

NOTE

The first FMT consists of those on-shift personnel whose names appear on Data Sheet 1 of procedure 00012-C, "Shift Manning Requirements" in the FMT position.

FIRST FMT

1. Report to the Technical Support Center (TSC) ☐
2. Receive an Initial Briefing from the HP/Chem Shared Foreman or designee. ☐
3. The Initial Briefings will be given per Checklist 2, Field Monitoring Team, Initial Briefing Checklist. ☐

NOTE

a. If there are no emergency vehicles present in the designated parking spaces at the plant, then take the equipment in step 5 below, drive over and obtain a designated training center emergency vehicle via any company vehicle.

b. Keys to company vehicles can be obtained from the Maintenance tool room and Human Resources in the Administrative building. A personnel vehicle may also be used for this purpose.

4. Obtain Emergency Vehicles. Emergency vehicles are located in designated spaces in the employee parking lot and in the Training Center parking lot. ☐
5. Pick-up the field monitoring kit, vehicle key rings, 5-watt hand held radio, Southern LINC bag phone, field survey handbook and emergency dosimetry (TLD and EDRD) at the vehicle barrier security control point in the employee parking lot and go directly into the field for sampling and surveys. ☐
6. Go to the "Instrument and Equipment Checks" section in the Initial Actions section of this checklist. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS(Cont'd.)

SECOND AND THIRD FMT

1. Report to the Operations Support Center (OSC). ☐
2. Form teams under the direction of the OSC Manager and Lab Foreman in the OSC. If the OSC Manager or Lab foremen are not available in the OSC, call the TSC and receive direction from the HP Supervisor. ☐
3. Obtain Emergency Vehicle Key Rings at the OSC. ☐

NOTE

If there are no emergency vehicles present in the designated parking spaces at the plant, then drive over and obtain a designated training center emergency vehicle via any company vehicle. Keys to company vehicles can be obtained from the Maintenance tool room and Human Resources in the Administrative building. A personnel vehicle may also be used for this purpose.

4. Obtain Emergency Vehicles. Emergency vehicles are located in designated spaces in the employee parking lot and in the Training Center parking lot. ☐
5. Report to the EOF, obtain field monitoring kit, Southern LINC bag phone, 5-watt hand held radio, field survey handbook and emergency dosimetry (TLD & EDRD) if not already obtained. ☐
6. Receive an Initial Briefing from the Dose Assessment Supervisor or designee (or HP Supervisor if the EOF is not activated). ☐
7. The Initial Briefings will be given per Checklist 2, Field Monitoring Team, Initial Briefing Checklist. ☐
8. Go to the "Instrument and Equipment Checks" section in the Initial Actions section of this checklist. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

INSTRUMENT AND EQUIPMENT CHECKS

NOTE

The gas pump key-card is located within the vehicle, usually on the sun visor or in the glove compartment. Each FMT member has been issued a user ID number for gas pump operation by Georgia Power Fleet Operations.

1. Check vehicle for adequate fuel ($\frac{1}{2}$ tank or greater), refuel if necessary. The gas pump is operated by a key-card and the users ID number must be used when prompted for a PIN number. ☐

NOTE

Inventory of FMT Kit is required ONLY if seal is found broken. If seal is broken, inventory kit per Procedure 91702-C, "Emergency Equipment And Supplies", Data Sheet 2. If the First Teams FMT Kit has a seal broken, they have the option of proceeding to the EOF to obtain a spare FMT kit and leaving the unsealed kit at the EOF to be inventoried at a later time.

2. Check operation of selected Field Monitoring Kit's equipment as follows:

   a. Perform radio check on vehicle and 5-watt hand held radio. ☐

   b. Perform operational check on Southern LINC bag phone as follows: ☐

      (1) Inspect bag phone power cord and antenna to ensure that they are properly attached to the back of the unit. ☐

      (2) Insert the phone power cord into the cigarette lighter. ☐

NOTE

If the radio was left on after previous use then it will automatically boot up.

      (3) Turn power on by pressing the knob (green circle on face) in the upper left-hand corner of radio and wait for boot up (~ 30 seconds). ☐

      (4) Perform a radio check once "T1" is displayed in the display window. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

INSTRUMENT AND EQUIPMENT CHECKS (Cont'd.)

c. Perform instrument checks on radiological survey instruments to include:

(1) Calibration up-to-date. ☐

(2) Battery check ☐

(3) Response check ☐

d. Perform operational check of air sampler as follows: ☐

(1) Calibration up-to-date. ☐

(2) Install sample head with particulate filter or orifice plate. ☐

CAUTION

Ensure power cables and handles will remain clear of vehicle hood before lowering the hood.

(3) Connect air sampler cables to the grill mounted quick disconnect battery cable or to vehicle battery and lower the hood if quick disconnect is not installed. ☐

(4) Start vehicle engine if engine is not already running. ☐

(5) Start air sampler, ensure flow is greater than 25 LPM. ☐

(6) Disconnect air sampler and return it to the kit. ☐

e. Check for satisfactory operation of the Stopwatch. (A personal watch with second timing capabilities is acceptable in lieu of a stopwatch) ☐

3. Obtain replacement for any defective equipment. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

INSTRUMENT AND EQUIPMENT CHECKS (Cont'd.)

4. Ensure 2 spare air sample heads are loaded and bagged for rapid use. The Silver Zeolite cartridge should have the flow arrow pointing toward the air sampler body and the particulate filter should be installed with the rough side out, away from the sampler body. ☐

5. Install a pre loaded air sample head in sampler and cover the inlet with a bag or glove. ☐

6. Place the following in vehicle for easy access: ☐

   a. ASP-1 or equivalent and R0-2 or equivalent ☐

   b. Field monitoring hand book (Begin filling out Data Sheets 2 & 3 as time permits) ☐

   c. Clip board ☐

   d. Log Book ☐

   e. EPZ and site area maps ☐

7. Place kit in vehicle. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

MONITORING and SURVEY ACTIONS

NOTE

The CEDE component of the TEDE dose cannot be directly determined by field measurements, therefore a correction factor of (2) should be applied to convert the DDE to the TEDE dose. This is accomplished by multiplying the Direct Reading Dosimeter (DRD) reading by 2 to get the TEDE dose. When actual source term data becomes available a more accurate correction factor may be obtained using the offsite dose assessment computer.

1. Wear a direct-reading dosimeter and TLD. Record initial readings in Logbook and record remaining allowable dose for each team member. ☐
2. When dispatched, report departure and carry out the instruction of the Dose Assessment Supervisor via the FMT Communicator. ☐

NOTE

Use phonetic alphabet and individual numbers as appropriate (e.g., if Team designation is ST17, report as Sierra Tango One Seven).

3. Turn on survey instrument(s) (ASP-1 and RO-2) and speaker when so equipped. Make frequent observations of meter readings while in transit to sampling location or while traversing plume. Record these observations on Data Sheet 3 or in the Logbook. ☐
4. Check dosimetry at least every 30 minutes and each time the plume is crossed. Record corrected dose (DRD reading multiplied by 2) in Logbook and report readings to the FMT Communicator. ☐
5. If routine communications are not being made on a frequent basis, check in with FMT Communicator every 30 minutes. MAINTAIN RADIO CONTACT. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

MONITORING and SURVEY ACTIONS (Cont'd.)

WARNING

a. DO NOT EXCEED A READING OF 100 MREM/HR WITHOUT APPROVAL OF THE DOSE ASSESSMENT SUPERVISOR OR HP SUPERVISOR AS APPROPRIATE.

b. ALL ITEMS ENTERING THE PLUME ARE TO BE CONSIDERED POTENTIALLY CONTAMINATED.

c. KI WILL BE TAKEN PER EMERGENCY DIRECTOR (ED) DIRECTIVE VIA THE FMT COMMUNICATOR. PROTECTIVE CLOTHING WILL BE DONNED WHEN DIRECTED BY THE DOSE ASSESSMENT SUPERVISOR OR DESIGNEE.

6. Vehicle speed should not exceed 30 mph while traversing the plume. Flashers should be used while traversing and sampling. ☐

7. Report when entering the plume and the location of the highest in transit dose rate. ☐

8. When approximate plume centerline is detected (i.e., highest reading on any traverse), note location and continue traversing plume in an attempt to find the trailing edge of the plume. ☐

9. Report results to FMT Communicator including location of edges and centerline count rate or dose rate. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

MONITORING and SURVEY ACTIONS (Cont'd.)

NOTE

a. If open window reading is less than 2.5 mRem/hr then use ASP-1 for survey.

b. RO-2 should have beta window closed at all times except when taking an open window reading.

10. Return to centerline and perform radiation surveys as directed by FMT communicator. ☐

    a. Take open and closed window readings at waist and 2-inches. ☐

    b. Record data from log book on Data Sheet 2. ☐

NOTE

A representative air sample should be taken near the edge of the plume where dose rates are low. Dose Assessment personnel can estimate activity concentration at the plume centerline by correlating the air activity using the ratio of dose rates between the sample point and the plume centerline

11. If the waist-level open window reading is at least twice the closed window reading, or if directed, obtain an air sample, per instructions on Checklist 3. ☐

12. If directed to obtain a surface deposition sample, see Checklist 4, report acquisition and await further instructions. ☐

13. If directed to obtain a vegetation sample, see Checklist 5, report acquisition and await further instructions. ☐

14. If directed to obtain a water sample, see Checklist 6, report acquisition and await further instructions. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

INITIAL ACTIONS (Cont'd.)

RETURN TO BASE/SHIFT TERMINATION

WARNING

THE VEHICLE AIR CLEANER COULD BE A POTENTIAL SOURCE OF RADIATION DEPENDING ON THE ISOTOPIC MIX OF THE PLUME.

1. On final exit from the plume, or prior to return to base, survey yourself and the vehicle, and document results. ☐
2. If contamination is found, report to FMT Communicator and proceed as directed. ☐
3. Submit all survey and sample records documentation except LOGBOOK to the Dose Assessment Supervisor (or HP Supervisor if the EOF is not activated). Keep LOGBOOK with you for debriefing. ☐
4. Return sample(s) and rad waste on direction of the Dose Assessment Supervisor (or HP Supervisor if EOF is not activated). ☐
5. Debrief with Dose Assessment Supervisor or HP Supervisor, including as a minimum:
   a. Radiation exposure from dosimeter readings ☐
   b. Subsequent duty schedule (if return is anticipated, obtain name and phone for verification) ☐
   c. Unusual circumstances or route conditions ☐
   d. Final location for emergency field monitoring kit ☐
6. Ensure emergency field monitoring kit supplies are replenished as necessary by notifying the FMT communicator. The FMT communicator will notify Health Physics personnel of the items that need to be restocked. ☐

CHECKLIST 1

FIELD MONITORING TEAM CHECKLIST

RETURN TO BASE/SHIFT TERMINATION (Cont'd.)

7. Sign out in LOGBOOK including:
   - a. Debrief time ☐
   - b. Kit discrepancies ☐
   - c. Final radiation exposure of the dosimeter from each team member ☐
   - d. Unusual circumstances or route conditions ☐
8. Return LOGBOOK to emergency field monitoring kit. ☐
9. Place emergency field monitoring kit in location specified by Dose Assessment Supervisor (or HP Supervisor). ☐

Reference Use

CHECKLIST 2

FIELD MONITORING TEAM INITIAL BRIEFING CHECKLIST

NOTES

a. Prior to team dispatch, the Field Team Communicator should prepare the KI Distribution Checklist (Data Sheet 1) in Procedure 91305-C, "Protective Action Guidelines".

b. The first letter of the Emergency Response Facility that the team is dispatched from should precede the team number. (i.e. "T-1" for the first team dispatched from the TSC or "O-1" for the first team dispatched from the OSC). Teams are to maintain the same name throughout the task assigned to them.

1.0 TEAM AUTHORIZATIONS

TEAM NAME _____

	KI ISSUED	DOSIMETRY	RESP. QUAL.	EXP. MARGIN
_____ (Leader)	☐	☐	☐	_____
_____	☐	☐	☐	_____

2.0 EMERGENCY SPECIFICS

☐ EMERGENCY CLASSIFICATION _____

☐ METEOROLOGICAL CONDITIONS

WIND SPEED _____ WIND DIRECTION FROM _____ TO _____

☐ AFFECTED ZONES _____

☐ PLANT CONDITIONS

_____

_____

☐ ANTICIPATED RADIOLOGICAL CONDITIONS

_____

_____

TEAM BRIEFED BY _____

CHECKLIST 2

FIELD MONITORING TEAM INITIAL BRIEFING CHECKLIST

3.0 EXPOSURE GUIDANCE/LIMITATIONS

- ☐ Do not exceed a reading of 100 mRem/hr. without the approval of the Dose Assessment Supervisor or TSC HP Supervisor as appropriate.
- ☐ All items entering the plume are to be considered potentially contaminated.
- ☐ Do not exceed your exposure margin.
- ☐ Don PC's when directed by the Dose Assessment Supervisor or his designee.
- ☐ Take KI as directed by Emergency Director.
- ☐ Your self-reading dosimeter reading will initially be multiplied by two (2) to account for CEDE and reported as corrected dose until a more accurate correction factor is computed.

4.0 COMMUNICATE THE FOLLOWING INFORMATION

- ☐ Notify FMT Communicator when you encounter edge of plume reading (2x BKG) and plume centerline (Highest dose rate encountered when traversing plume). The plume centerline should follow the wind direction. If waist level window open (W.O.) readings are 2x's window closed (W.C.) readings then representative air samples should be taken near the edge of the plume, where dose rates are low.
- ☐ You will be updated of changes in meteorological, radiological, and other pertinent information every 15-30 minutes or as conditions change.
- ☐ Initial sample locations, suggested routes. (See Data Sheet 3 or use logbook to complete traverse path information.)
- ☐ Phone number to call if radios fail. (See VEGP Emergency Telephone Directory in FMT Handbook)
- ☐ If approached by members of the public and/or press, the field monitoring team leader must contact the EOF for appropriate instructions/directions to give those persons.
- ☐ Ensure you log all required information on the appropriate data sheet or in your logbook.

COMMENTS:

_____

_____

_____

Reference Use

CHECKLIST 3

AIR SAMPLING

EQUIPMENT:

a. 12V DC Air Sampler.
b. Preloaded sample head.
c. Plastic bags.
d. Marking pen.
e. Forceps.
f. Stop watch.
g. Disposable surgeon's gloves.
h. Calculator (optional).
i. ASP-1 with HP-260 probe or equivalent.

ACTIONS:

1. Monitor radiation levels at all times. Avoid spreading contamination by using disposable surgeon's gloves as a minimum. ☐
2. Obtain Data Sheet 2 and record initial data. ☐

CAUTION

Be careful when connecting air sampler cables to battery terminals. Ensure the vehicle hood does not contact exposed cables or cable handles when the hood is lowered.

3. Connect air sampler cables to the grill mounted quick disconnect battery cable or to vehicle battery and lower the hood if quick disconnect is not installed. ☐
4. Start vehicle engine if engine is not already running. ☐
5. Remove cover from sample head inlet. ☐
6. Simultaneously start sampler and timing device. ☐
7. Record start time and start flow rate. Ensure rotometer flow is greater than 25 LPM. ☐
8. Remain in vehicle during sampling to minimize exposure. ☐
9. Obtain sample number from FMT Communicator and record on Data Sheet 2. ☐
10. Label two plastic bags with the sample number. ☐

CHECKLIST 3

AIR SAMPLING

ACTIONS: (CONT'D)

11. Run sample for 10 minutes unless otherwise specified by the FMT Communicator. ☐
12. When sampling is complete, note stop flow rate and turn off sampler. Record stop flow rate on Data Sheet 2 and cover sample head with a plastic bag or glove. ☐
13. Disconnect air sampler from vehicle battery. ☐

NOTE

Normal precautions applicable to the handling of radioactive material involving the potential hazards from direct radiation exposure and the spread of loose contamination apply to air sample materials. Completed sample materials will be bagged for transport and retention. Iodine cartridges and air particulate filters shall be monitored for direct radiation. Bagged sample material having contact Gamma readings greater than 2½ mrem/h above background will be stored in the rear of the field survey vehicle and any shielding materials available shall be used.

14. Proceed out of the plume to a low background area of less than or equal to 300 cpm to count the samples. ☐
15. Purge Silver Zeolite (AgX) or charcoal cartridges by running sample for about 15 seconds. ☐
16. Put on disposable surgeon's gloves. ☐
17. Remove head from sampler, separate particulate filter and cartridge. ☐
18. Count the filter and cartridge and record data (net cpm) on Data Sheet 2. ☐
19. Place the separated particulate filter and cartridge in separate bags. ☐
20. Report sample data to FMT Communicator. ☐

Reference Use

CHECKLIST 4

SURFACE SAMPLING

EQUIPMENT:

a. Soil Scoop
b. Polybag
c. Marking pen
d. Tape
e. Tape measure (optional)
f. Paper towel or wipe
g. Disposable surgeon's gloves
h. ASP-1 with HP-260 probe or equivalent

NOTE

a. When precipitation is predicted or occurring in the area of the plume, the potential for significantly increased rates of radioactivity deposition shall be considered.

b. Potentially contaminated ice and snow samples should be collected similar to surface samples and analyzed similar to water samples except the ice and/or snow may have to be broken up in order to fill the bag.

ACTIONS

1. Monitor radiation levels at all times. Avoid spreading contamination by using disposable surgeon's gloves as a minimum. ☐
2. Locate an area of exposed soil with minimal or no overhead cover (should not be dirt road). ☐
3. Obtain sample number from FMT Communicator and label the bag with the sample number. ☐
4. Using the trowel, dig soil to a depth of approximately 1/4 inch, and place the soil and whatever lies on the soil into the plastic bag. This sample should represent an area of approximately 10 square feet. ☐
5. Twist the unused portion of the bag to the top and double the top over before taping. ☐
6. Tape the bag such that opening is not exposed. ☐
7. Frisk bag (in low background area, if practical) and label with RADIOACTIVE MATERIAL sticker if net cpm exceeds 100. ☐
8. Record sample data on Data Sheet 2. ☐
9. Record sample number, location, date and time of sample in the LOGBOOKS. ☐

Reference Use

CHECKLIST 5

VEGETATION SAMPLING

EQUIPMENT:

a. Razor knife, scissors or grass clippers
b. Polybag
c. Marking pen
d. Tape
e. Tape measure (optional)
f. Paper towel or wipe
g. Disposable surgeons gloves
h. ASP-1 with HP-260 probe or equivalent

NOTE

When precipitation is predicted or occurring in the area of the plume, the potential for significantly increased rates of radioactivity deposition shall be considered.

ACTIONS:

1. Monitor radiation levels at all times. Avoid spreading contamination by using disposable surgeons gloves as a minimum. ☐
2. Locate an area of exposed growing grasses or low lying vegetation with minimal or no overhead cover. ☐
3. Obtain sample number from FMT Communicator and label the bag toward the bottom with the sample number. ☐
4. Cut the grass or vegetation from a 10 ft^2 area about (2 ft x 5 ft) and place in bag. Cut sufficient grass to fill the bag approximately $\frac{1}{2}$ full. Grass should be cut to about $\frac{1}{2}$ to 1 inch from the ground. ☐
5. Twist the unused portion of the bag to the top and double the top over before taping. ☐
6. Tape the bag such that opening is not exposed. ☐
7. Frisk bag (in low background area, if practical) and label with RADIOACTIVE MATERIAL sticker if net cpm exceeds 100. ☐
8. Record sample data on Data Sheet 2. ☐
9. Record sample number, location, date and time of sample in the LOGBOOKS. ☐

Reference Use

CHECKLIST 6

WATER SAMPLING

EQUIPMENT:

a. Poly bottle (approximately 1 liter)
b. Marking pen
c. Paper towel or wipe
d. Disposable surgeons gloves.
e. ASP-1 with HP-260 probe or equivalent

ACTIONS:

1. Monitor radiation levels at all times. Avoid spreading contamination by using disposable surgeons gloves as a minimum. ☐
2. Locate an area of non-flowing water with minimal or no overhead cover. If water is flowing, seek clarification from FMT Communicator. ☐
3. Obtain sample number from FMT Communicator and label bottle with the sample number. ☐
4. Fill bottle slowly with surface water by partial submersion of the bottle. ☐
5. Wipe bottle and place in bag. ☐
6. Frisk bag (in low background area, if practical) and label with RADIOACTIVE MATERIAL sticker if net cpm exceeds 100. ☐
7. Record sample data on Data Sheet 2. ☐
8. Record sample number, location, date and time of sample in LOGBOOKS. ☐