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PRC|NC.EP-EP.ZZ-0302|000	1	A	1	H	44893
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A045

NUCLEAR BUSINESS UNIT
ONSITE IMPLEMENTING PROCEDURES
March 29, 2000

PSE&G CONTROL COPY # EPIP059

CHANGE PAGES FOR REVISION #01

The Table of Contents forms a general guide to the current revision of each section of the Onsite EPIPs. The changes that are made in this TOC Revision #01 are shown below. Please check that your revision packet is complete and remove the outdated material listed below:

ADD			REMOVE		
Page	Description	Rev.	Page	Description	Rev.
ALL	TOC	01	ALL	TOC	00
ALL	EPEP 102	01	ALL	EPEP 102	00
ALL	HC.EP-EP.ZZ-301	01	ALL	HC.EP-EP.ZZ-301	00
ALL	EPEP 302	01	ALL	EPEP 302	00
ALL	EPEP 310	01	ALL	EPEP 310	00
ALL	EPEP 312	01	ALL	EPEP 312	00

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PSEG NUCLEAR EMERGENCY PLAN
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STATION PROCEDURES

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PSEG NUCLEAR

NC.EP-EP.ZZ-0102(Q) Rev. 01

EMERGENCY COORDINATOR RESPONSE

USE CATEGORY: II

REVISION SUMMARY:

EDITORIAL CHANGES ONLY

- Updated EPEP 902 references from section 3 to section 5.
- Step 5.2.5 to state 'CM-1 to receive the NRC data sheet".
- Added "NOTE:" to Attachment 9, step 2.8.

PSE&G CONTROL COPY # EPIP059

IMPLEMENTATION REQUIREMENTS

Issued for use.

APPROVED: _____ Manager – EP & IT — 3/22/00 Date

APPROVED: N/A Vice President - Operations — _____ Date

EMERGENCY COORDINATOR RESPONSE

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides emergency response instructions to the Emergency Coordinator (EC) after emergency classification.

2.0 PREREQUISITES

2.1 Prerequisites to be Followed Prior to Implementation:

2.1.1 ECG Attachment 1, 2, 3, 4 or 24 was completed.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precautions and Limitations to be Followed Prior to Implementation:

3.1.1 Initials should be used in place of keeping sign-offs, instead of checkmarks.

3.1.2 Activation of the Emergency Response Organization (ERO) during an Unusual Event is implemented at the discretion of the Emergency Coordinator (EC). If additional support personnel are needed during an Unusual Event, then limited or full staffing of the TSC may be initiated at the discretion of the EC. Limited staffing may be initiated by contacting selected support personnel on an individual basis in lieu of activating the full ERO.

4.0 EQUIPMENT REQUIRED

As provided in the Control Room, TSC and EOF.

NOTE

Should the EDO/ERM be unable to fulfill the duties of Emergency Coordinator (EC) for any reason (e.g., sudden illness, accident, etc.) the Technical Support Supervisor (TSS) or Site Support Manager (SSM) may assume the duties and responsibilities of EC until another qualified EDO/ERM arrives at the facility.

5.0 **PROCEDURE:**

5.1 **Initial Actions:**

Note: Initial each block as applicable.

UE	A	SAE	GE
Optional Att 8	**ATT 8**	**ATT 8**	**ATT 8**
Optional Att 9	Optional Att 9	**ATT 9**	**ATT 9**

EDO 5.1.1. **ACTIVATE** the TSC.

ERM 5.1.2. **ACTIVATE** the EOF.

NOTE

Since the Rad Alert alarm is located in the Control Room, the OS directs all emergency status announcements. However, when the EDO or ERM has the Emergency Coordinator duties, he/she ensures that the OS is notified to direct the emergency announcements.

5.2 **Emergency Conditions:**

Note: Initial each block as applicable.

UE	A	SAE	GE
ATT 7	**ATT 6**	**ATT 5**	**ATT 4**
Optional (Except bomb search)			
Optional Att 3	Optional Att 3	**ATT 3**	**ATT 3**
EPEP 101 **Unusual Event Att 5**	EPEP 101 **ASSEM BLY Att 4**	EPEP 101 **ASSEM BLY Att 4**	EPEP 101 **ASSEM BLY Att 4**
ECG ATT 5	**ECG ATT 5**	**ECG ATT 5**	**ECG ATT 5**

EC 5.2.1. **DIRECT** the OS to generate the announcement of the emergency status and Assembly IAW:

OS 5.2.2 IF not performed previously, THEN **DIRECT** the OSC Coordinator to Activate the OSC IAW EPEP 202, OSC Activation and Operations.

EC 5.2.3. **IF** desired or WHEN required, **DIRECT** implementation of Accountability IAW:

OS 5.2.4 IF not performed previously, THEN **DIRECT** the other station OS to Implement EPEP-101, Actions Required at Unaffected Station:

EC 5.2.5 **ENSURE** the NRC Data Sheet is completed and CM-1 notifies NRC as soon as possible, but not to exceed one hour from emergency classification IAW:

Note: Initial each block as applicable

UE	A	SAE	GE
ECG ATT 5	ECG ATT 5	ECG ATT 5	ECG ATT 5

5.3 Subsequent Actions

OS 5.3.1 **COORDINATE** and **PRIORITIZE** OSC tasks in conjunction with accident mitigation efforts.

EC 5.3.2 **RECOMMEND** to the States of New Jersey and Delaware that the ingestion pathway be monitored, should the radionuclide concentrations be in excess of 10CFR20 Appendix B limits *or* could potentially exist offsite.

OS/ EDO 5.3.3 **IF** needed, **CONTACT** unaffected station OS to identify and request available support personnel.

EC 5.3.4 **ENSURE** the NRC is notified of significant changes in emergency plant status, and implementation of 10CFR50.54x IAW:

Note: Initial each block as applicable.

UE	A	SAE	GE
optional ATT 2	ATT 2	ATT 2	ATT 2

5.4 EC Duties Turnover

EC

IF relief is required,
THEN PROVIDE turnover to the EDO/ERM:

Note: Initial each block as applicable.

UE	A	SAE	GE
OS /EDO	EDO /ERM	EDO /ERM	EDO /ERM

5.5 Termination/Reduction/Recovery

EC

IMPLEMENT NC.EP-EP.ZZ-0405 (Q), Emergency Termination / Reduction/Recovery, as appropriate.

Note: Initial each block as applicable.

UE	A	SAE	GE
ATT 1	ATT 1	ATT 1	ATT 1

5.6 Reporting

EC

WHEN the event is terminated, THEN **ENSURE** appropriate reports are made and paperwork is forwarded to EP.

6.0 RECORDS

Forward all completed ECG Attachments / EPEPs / attachments / forms to Manager – CA, EP, & IT.

7.0 REFERENCES

7.1 REFERENCES

7.1.1. Nuclear Business Unit Emergency Plan

7.1.2. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants

7.1.3. PSE&G Nuclear Business Unit, NC.NA-AP.ZZ-0001(Q), Nuclear Procedure System

7.1.4. PSE&G Nuclear Business Unit, NC.NA-WG.ZZ-0001(Z), Procedure Writer's Guide,

7.2 CROSS REFERENCES

7.2.1 NC.EP-EP.ZZ-0405(Q), Emergency Termination/Reduction/Recovery

7.2.2 Hope Creek/Salem Event Classification Guide (ECG)

8.0 COMMITMENT DOCUMENTS

Commitment No. EP96-003, (Item #: LR-N96062)

ATTACHMENT 1
Page 1 of 1
REPORTING CHECKLIST

	Initials
1. **ENSURE** a Notification is created. #_____	____ OS
2. **FORWARD** all completed ECG Attachments, EPEPs, attachments, forms, NRC Data Sheet and any supporting documentation to the Manager – CA, EP, & IT.	____ OS
3. **REVIEW** this Attachment, the notification and any other relevant information for correct classification of event and corrective actions taken.	____ EP
4. **FORWARD** Copies of the documentation to the LER Coordinator (LERC).	____ EP
5. **FORWARD** this documentation to the Central Technical Document Room (CTDR) for microfilming.	____ LERC

ATTACHMENT 2
Page 1 of 2
EC EMERGENCY STATUS BRIEFING FORM

NOTE

Completion of this Attachment is optional. However, the information listed is useful for providing a thorough turnover to the EC.

1. EAL that is the basis for the emergency classification:

		Unusual Event	Alert	Site Area Emergency	General Emergency
a.	EAL(s)#	_____	_____	_____	_____
			_____	_____	_____
				_____	_____
b.	Time declared	_____	_____	_____	_____
c.	PAR based on 10 points?	_____ Yes _____ NO	Wind dir. (from)	_____	
d.	Accountability? Results:	_____ Yes _____ NO	Time	_____	

_____

_____

2. Status of important safety systems:

_____

_____

_____

3. Status of fuel cladding, reactor coolant system, and containment integrity:

_____

_____

_____

4. Unusual radiological conditions currently existing:

_____

_____

_____

ATTACHMENT 2 (cont.)
Page 2 of 2

5. OSC activated? (___YES ___NO) Time Activated_____
In-Plant emergency actions underway (OSC priorities):

6. Identification of "out-of-service" equipment that needs repair: (not on priority list)

7. Offsite emergency actions underway (Did a release occur? Have field-monitoring teams been dispatched? State's PADs, etc.)

8. Prognosis for the situation to improve or worsen:

9. Adequacy of current Control Room staffing (Is an additional person needed to assist with communications?)

10. Emergency Operating Procedures (EOPs) being implemented.

11. Other:

ATTACHMENT 3
Page 1 of 2
ACCOUNTABILITY ACTIONS AND RESULTS

Initials/Time

+0 Min

DIRECT

- SECURITY (X2222) TO IMPLEMENT EPEP 902, SECTIONS 5.2, Automated Accountability and 5.3, Accountability Report Generation.

____/____
EDO/OS

SOUND

RAD ALERT ALARM

AND

ANNOUNCE TWICE

"ATTENTION, ATTENTION, ALL ACCOUNTABILITY STATIONS, IMPLEMENT ACCOUNTABILITY.

DIRECT

- Other station's OS TO IMPLEMENT ACCOUNTABILITY IAW NC.EP-EP.ZZ-0101.

  Hope Creek (NETS X5221) Salem (NETS X5122)

____/____
Announcer

+20 Min after above announcement was made.

ANNOUNCE TWICE

"ATTENTION, ATTENTION. ALL ACCOUNTABILITY STATIONS, COMPLETE ACCOUNTABILITY.

____/____
Announcer

ATTACHMENT 3 (cont.)
Page 2 of 2

Initials

+30 min after implement accountability announcement was made:

1. OBTAIN from Security a list of unaccounted personnel. IF Security has not supplied results of the accountability within 30 minutes of the first accountability announcement, then contact the TSC Security Liaison and request accountability results.

   _____
   EDO/OS

Hope Creek	Salem
NETS X5214	NETS X5117

2. DESIGNATE an individual to attempt to locate unaccounted personnel as follows:

   A. Page individuals over the plant page.
   B. Obtain feedback from unaccounted person's co-workers/supervisors on last known location/job assignment.
   C. Call individual's home to verify work schedule.
   D. Request Security's assistance in locating unaccounted personnel.

   _____
   EDO/OS

3. UPDATE Security as missing personnel are located.

   _____
   EDO/OS

4. INITIATE search and rescue operations in accordance with EPEP 202, OSC Activation and Operations, as appropriate.

   _____
   EDO/OS

5. As the situation dictates and/or as radiological conditions permit:
   IF all onsite Emergency Response Facilities are completely staffed,
   THEN release/evacuate extra personnel who reported to the OSC, TSC, CP or Maintenance Shop for accountability.

   _____
   EDO/OS

ATTACHMENT 4
Page 1 of 1
GENERAL EMERGENCY MESSAGE

Initials

SOUND

RAD ALERT ALARM

AND

ANNOUNCE TWICE

"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.
(**HOPE CREEK – SALEM**) IS IN A **General Emergency**
Circle one – cross out the others

DUE TO:

_____

_____

ALL PSE&G PERSONNEL REPORT TO YOUR ASSIGNED ASSEMBLY AREA. ALL CONTRACTORS LEAVE THE SITE IMMEDIATELY.

_____
Announcer

RADIO

REPEAT EMERGENCY ANNOUCEMENT MESSAGE

_____
Announcer

IF NOT PERFORMED PREVIOUSLY,
DIRECT Security (x2222)

- IMPLEMENT both EPEP 901, Onsite Security Response, and EPEP 903, Opening of Emergency Operations Facility (EOF).
- IMPLEMENT EPEP 0902, section 5.1 Assembly, DUE TO:
  (read "Due TO:" from above)_____

_____
Announcer

ATTACHMENT 5
Page 1 of 1
SITE AREA EMERGENCY MESSAGE

Initials

SOUND

RAD ALERT ALARM

AND

ANNOUNCE TWICE

"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.
(**HOPE CREEK – SALEM**) IS IN A **Site Area Emergency**
Circle one – cross out the others

DUE TO:

_____

_____

ALL PSE&G PERSONNEL REPORT TO YOUR ASSIGNED ASSEMBLY AREA. ALL CONTRACTORS LEAVE THE SITE IMMEDIATELY.

_____
Announcer

RADIO

REPEAT EMERGENCY ANNOUCEMENT MESSAGE

_____
Announcer

IF NOT PERFORMED PREVIOUSLY,
DIRECT Security (x2222)

- IMPLEMENT both EPEP 901, Onsite Security Response, and EPEP 903, Opening of Emergency Operations Facility (EOF).
- IMPLEMENT EPEP 0902, section 5.1 Assembly, DUE TO:
  (read "DUE TO:" from above)_____

_____
Announcer

ATTACHMENT 6
Page 1 of 1
ALERT MESSAGE

Initials

SOUND

RAD ALERT ALARM

AND

ANNOUNCE TWICE

"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.
(**HOPE CREEK – SALEM**) IS IN AN **Alert**
Circle one – cross out the others

DUE TO:

_____

_____

ALL PSE&G PERSONNEL REPORT TO YOUR ASSIGNED ASSEMBLY AREA. ALL CONTRACTORS LEAVE THE SITE IMMEDIATELY.

_____
Announcer

RADIO

REPEAT EMERGENCY ANNOUCEMENT MESSAGE

_____
Announcer

IF NOT PERFORMED PREVIOUSLY,
DIRECT Security (x2222)

- IMPLEMENT both EPEP 901, Onsite Security Response, and EPEP 903, Opening of Emergency Operations Facility (EOF).
- IMPLEMENT EPEP 0902, section 5.1 Assembly, DUE TO:
  (read "DUE TO:" from above)_____

_____
Announcer

ATTACHMENT 7
Page 1 of 1
UNUSUAL EVENT MESSAGE

Initials

SOUND

RAD ALERT ALARM

AND

ANNOUNCE TWICE

"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.
(**HOPE CREEK – SALEM**) IS IN AN UNUSUAL EVENT DUE TO:
Circle one – cross out the other

_____

_____."

_____
Announcer

RADIO

REPEAT UNUSUAL EVENT ANNOUCEMENT MESSAGE

_____
Announcer

ATTACHMENT 8
Page 1 of 2
ACTIVATION of the TSC

1.0 Prior To TSC Activation (i.e., Before Assuming Emergency Coordinator Duties):

1.1 ESTABLISH and MAINTAIN a chronological log of activity and events. _____

1.2 OBTAIN a briefing on the status of the emergency from the Operations Superintendent (OS). Refer to Attachment 2, EC Emergency Status Briefing Form for turnover points of discussion. _____

1.3 ENSURE that TSC section leads are making preparations to assume emergency response functions while ensuring adequate staffing: _____

- Radiological Assessment Coordinator (RAC)
- Technical Support Supervisor (TSS)
- Administrative Support supervisor
- EPA or CM-1
- Security

1.4 PERFORM initial briefing to the TSC staff on emergency conditions and the following issues: _____

- Plant conditions
- Introduce section leads
- Noise control
- Administrative services
- Synchronize all TSC clock and personnel watches with SPDS time.

1.5 PREPARE to activate the TSC and ASSUME the duties and responsibilities of the Emergency Coordinator as follows: _____

- ENSURE each functional group at the TSC has received a detailed briefing from their counterpart in the Control Room and are ready to support TSC activation. (i.e., EDO/OS, TSS/STA, RAC/SRPT). _____

- ENSURE TSC communicators are ready to assume communications and notification responsibilities from the TSC. This includes coordination of requirement for the "Station Status Checklist", and NRC Updates. _____

- VERIFY which EPEP is currently being implemented by the OS, which steps are completed and which steps will be turned over for completion. _____

ATTACHMENT 8
Page 2 of 2
Activation of TSC (cont.)

1.6 ACTIVATE the TSC by contacting the OS, and with his concurrence, assume the EC's function. _____

- Ensure TSC Communicators assume communications and notification responsibilities coincident with the EC turnover.

2.0 Upon Assuming Emergency Coordinator Duties, the EDO Should:

2.1 ANNOUNCE to the staff that the TSC is activated, the effective time and that you are the Emergency Coordinator. _____

2.2 NOTIFY ERM of TSC activation and provide a brief status update. _____

2.3 REVIEW the ECG for conditions that may require Event Classification escalation. _____

2.4 ENSURE the Station Status Checklist is reviewed and approved for transmission to the states every 30 minutes. _____

2.5 IMPLEMENT NC.EP-EP.ZZ-0404(Q), Protective Action Recommendations Upgrades, after an initial PAR for a General Emergency has been made. _____

2.6 GIVE a status briefing and coordinate the integration of NRC team members within functional areas of the TSC upon arrival of an NRC emergency response team. _____

2.7 PROVIDE periodic status briefing to the unaffected station's OS and EDO. _____

ATTACHMENT 9
Page 1 of 3
ACTIVATION of the EOF

1.0 Prior To EOF Activation (i.e,, Before Assuming Emergency Coordinator Duties):

1.1 THEN ESTABLISH and MAINTAIN a chronological log of activity and events. _____

1.2 IF the EPC is available:
DIRECT Emergency Preparedness Coordinator (EPC) to implement EPEP 401, EPC Response. _____

1.3 OBTAIN a briefing on the status of the emergency from the Emergency Duty Officer (EDO). Refer to Attachment 2, Emergency Status Briefing Form for turnover points of discussion. _____

1.4 ENSURE that EOF section leads are making preparations to assume emergency response functions while ensuring adequate staffing: _____

A. Radiological Support Manager (RSM)

B. Site Support Manager (SSM)

C. Technical Support Manager (TSM)

D. Administrative Support Manager (ASM)

1.5 ENSURE the Public Information Liaison (PIL) is provided with plant and emergency status information. _____

1.6 PERFORM initial briefing to the EOF staff on emergency conditions and the following issues: _____

- Plant conditions
- Introduce section leads
- Noise control
- ASM provides administrative services
- Synchronize all EOF clock and personnel watches with SPDS time.

1.7 PERFORM periodic EOF leads briefings to exchange information as outlined IAW, "EOF Briefing Checklist." _____

1.8 PERFORM briefings for the entire EOF staff regarding current emergency events/status changes. _____

ATTACHMENT 9
Page 2 of 3
Activation of EOF (cont.)

1.9 GIVE a status briefing and coordinate the integration of NRC team members within functional areas of the EOF upon arrival of an NRC emergency response team. _____

1.10 GIVE and OBTAIN status updates from the EDO to include the status of unaffected units/station, Onsite Protective actions implemented, and Corrective Actions in progress and their priorities. _____

1.11 DIRECT ASM to request assistance from federal, state, local, and private support agencies as required. _____

1.12 DIRECT ASM to assure continuity of personnel and resources for 24-hour operation of all emergency response facilities. _____

1.13 PREPARE to activate the EOF and ASSUME the duties and responsibilities of the Emergency Coordinator as follows: _____

A. ENSURE each functional group at the EOF has received a detailed briefing from their counterpart in the TSC and are ready to support EOF activation. (i.e., ERM/EDO, SSM/TSS, RSM/ RAC, TSM/TSTL, ASM/AS-SUP, EPA EOF/EPA TSC). _____

B. ENSURE EOF communicators are ready to assume communications and notification responsibilities from the TSC. This includes coordination of requirement for the "Station Status Checklist", NRC Updates, and Offsite Dose Assessment. _____

1.14 ACTIVATE the EOF by contacting the EDO, and with his concurrence, assume the Emergency Coordinator's function. _____

- Ensure EOF Communicators assume communications and notification responsibilities coincident with the EC turnover.

ATTACHMENT 9
Page 3 of 3
Activation of EOF (cont.)

2.0 Upon Assuming Emergency Coordinator Duties, the ERM Should:

2.1 ANNOUNCE to the staff that the EOF is activated, the effective time and that you are the Emergency Coordinator. _____

2.2 NOTIFY State Directors of EOF activation and provide a brief status update. (NJ Director – NETS x5410; DE Director – NETS x5412) _____

2.3 REVIEW the ECG for conditions that may require Event Classification escalation. _____

2.4 ENSURE the Station Status Checklist is reviewed and approved for transmission to the states every 30 minutes. _____

2.5 IMPLEMENT NC.EP-EP.ZZ-0404(Q), Protective Action Recommendations Upgrades, after an initial PAR for a General Emergency has been made. _____

2.6 NOTIFY corporate management periodically regarding emergency status. _____

2.7 NOTIFY both State Directors regularly to provide status updates, ensure data flow is satisfactory, obtain information concerning any Protective Actions implemented by the States. (NJ Director – NETS x5410; DE Director – NETS x5412) _____

NOTE:

New Jersey has responsibility for notification and communications with the contiguous (ingestion pathway) States of Pennsylvania and Maryland.

2.8 OBTAIN Ingestion Pathway Actions implemented by all four States from both State Directors. (NJ Director – NETS x5410; DE Director – NETS x5412)

PSE&G NUCLEAR BUSINESS UNIT

HC.EP-EP.ZZ-0301 (Q) - REV. 1

SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE

USE CATEGORY: II

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Corrected typographical error in Attachment 1 step 1.1.19.

PSE&G CONTROL COPY # EPIP059

IMPLEMENTATION REQUIREMENTS:

This procedure is effective for use upon issue.

APPROVED: _____ Manager – EP & IT Date: 3/22/00

APPROVED: _____ Vice President - Operations Date: N/A

SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE

TABLE OF CONTENTS

FIGURES

1.0 PURPOSE

To outline and describe the Shift Radiation Protection Technician's (SRPT) duties during a declared emergency

2.0 PREREQUISITES

2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

Implement this procedure at:

- The discretion of the Operations Superintendent (OS) or Radiation Protection Supervision.
- Upon a declaration of an Unusual Event or greater emergency classification.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

3.1.1 It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks, if more than one person may implement this procedure.

3.1.2 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

3.1.3 Steps listed in this procedure may be performed in the order deemed appropriate for the emergency situations. Only steps applicable to the specific emergency need be performed.

4.0 EQUIPMENT REQUIRED

As provided at the Control Point and Control Room.

5.0 PROCEDURE

NOTE

The OS may change any priority for the SRPT, as deemed necessary.

5.1 The SRPT Should:

5.1.1 START completing Attachment 1, Shift Radiation Protection Technician Checklist. _____

5.2 When the TSC is Activated Perform the Following:

5.2.1 COMPLETE the turnover of Dose Assessment/Station Status Checklist duties to the Radiation Protection Supervisor – Offsite or the Radiological Assessment Coordinator (RAC). _____

5.2.2 IF RMS data is not available from the RM-11 or the VAX LA120, THEN perform the following steps every 15 minutes: _____

A. DOCUMENT radiation monitors that are in Alarm on Attachment 2, Hope Creek RMS Status Sheet, from the Control Room by referring to the 10C604 Panel. _____

B. DOCUMENT other radiation monitor values as instructed by the OS or Radiation Protection Supervision on Attachment 2. _____

C. FAX the completed Attachment 2 to the TSC and EOF using the Group "C" key _____

D. PROVIDE a completed copy of Attachment 2 to the Radiation Protection Supervisor - Exposure Control (RPS-EXP) located in the OSC, every 15 to 20 minutes, or in the opinion of the SRPT, conditions warrant it. _____

5.2.3 IMPLEMENT NC.EP-EP.ZZ-0303(Q), Control Point – Radiation Protection Response. _____

6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent by the SRPT, to the Manager – EP & IT.

7.0 REFERENCES

7.1 References

Nuclear Business Unit Emergency Plan

7.2 Cross References

7.2.1 NC.EP-EP.ZZ-0302, Radiological Coordinator Response

7.2.2 NC.EP-EP.ZZ-0303(Q), Control Point Radiation Protection Response

ATTACHMENT 1
Page 1 of 5

SHIFT RADIATION PROTECTION TECHNICIAN CHECKLIST

1.0 SRPT INITIAL ACTIONS

NOTE

- Refer to NC.EP-EP.ZZ-0303(Q), for Assembly/Accountability directions at the Control Point, if implemented.
- Refer to HC.EP-EP.ZZ-0309(Q), Dose Assessment, for VAX LA120 operation instructions.
- Refer to HC.RP-TI.ZZ-0004(Q), Gaseous Effluent Surveliance, for sampling instructions, as needed.

1.1 Perform the Following:

1.1.1 REPORT to the CR when an emergency is declared to receive a briefing from the OS. _____

1.1.2 REQUEST that the SRPT, or his designee, located at the Control Point, be notified if FRVS is placed in service. _____

1.1.3 OBTAIN the identity of Communicator 2 _____. _____
(Name)

1.1.4 REQUEST the status of the MET Tower's operability. _____

- IF the MET Tower is not operational,
  THEN refer to step 1.1.8.

1.1.5 PROVIDE a briefing to the OS, which should include the following Information:

- Habitability of the Control Point and Control Room. _____
- Any unusual dose rates, Plant Conditions, or Alarms observed on the way to the CR. _____

NOTE

- On a back shift, during a non-outage situation, there should be two Rad Pro Techs and one Chemistry Tech available at all times at Salem.
- The Salem Control Point may be contacted at extension 2635, 2644, or 2608 (Radiation Protection Supervisor's phone).

- The staffing of the Salem Radiation Protection and Chemistry personnel. _____

NOTE

- The SRPT should be generating page two of the Station Status Checklist (SSCL) for Hope Creek, during Common Site Events. The Salem SRPT will be generating a SSCL for Salem Units 1 and 2 during Common Site Events.
- A blank SSCL, page 2, may be obtained from Communicator Number 2, if necessary.

1.1.6 IMPLEMENT NC.EP-EP.ZZ-0309(Q), Dose Assessment, to perform dose assessment and generate a completed SSCL pg. 2 every 30 minutes _____

1.1.7 PERFORM the following steps, if automatic data acquisition MIDAS and/or the MET Computer is not operational:

- REFER to Attachment 2, Hope Creek RMS Status Sheet. _____
- COMPLETE Vent Process Monitors and the MET Data section every 15 minutes. _____

ATTACHMENT 1
Page 3 of 5

1.1.8 OBTAIN the MET data from the following sources, if the MET Computer is not operational:

- Salem Unit One Control Room (NETS X5120, DID X5111) _____
- National Weather Service at 609-261-6604 or 609- 261- 6603. _____

1.1.9 IMPLEMENT NC.EP-EP.ZZ-0309(Q), Dose Assessment, for instructions on performing dose assessment in the manual mode. _____

1.1.10 INPUT the appropriate effluent monitor and MET values manually into MIDAS to perform dose assessment in the manual mode. _____

NOTE

Contact an Emergency Preparedness representative at x1571 or 1157, concerning any MIDAS problems.

1.1.11 IF the MIDAS computer located at the CP is not operational, THEN use one of the MIDAS computers listed below:

- Hope Creek TSC _____
- Salem Control Room _____
- Salem TSC _____

1.1.12 DETERMINE appropriate PAR, if any, utilizing the most current SSCL and Attachment 3, Radiologically Based Protective Action Recommendation Worksheet Worksheet. _____

1.1.13 REVIEW the SSCL and the Radiological Based PAR with the OS utilizing Attachment 3 to explain the PAR you are providing, if needed. _____

ATTACHMENT 1
Page 4 of 5

1.1.15 PROVIDE the signed SSCL to Communicator Number 2, or leave it with the OS, if he requests to keep it. _____

1.1.16 ASSIST the OS with completion of Page 2 of the NRC Data Sheet, if asked to. _____

1.1.17 PERFORM habitability checks at the CP, CR, and the OSC if activated, every thirty minutes and record results on Form – 1, Habitability Log, unless told otherwise by the OS, Radiation protection – Exposure Control (RPS – EXP), or the Radiological Assessment Coordinator (RAC). _____

1.1.18 MAKE appropriate Onsite PARs to the OS or RAC for Onsite locations using Attachment 4, Onsite Protective Action Guidelines. _____

1.1.19 ESTABLISH Contamination Controls (no eating, no drinking, no smoking, proper postings, setting up step off pads and friskers) IAW NC.EP-EP.ZZ-0303(Q), Figures 1-1 through 1-4 , when any of the following have occurred: _____

NOTE

Noble Gas (NG) Technical Specification Limits are 1.20E+04 uCi/second. for Hope Creek.

- A radiological release ≥ NG technical specification limits is in progress. _____
- The potential of a radiological release ≥ NG technical specification limits is thought to be high. _____
- Normal RCA boundaries have been breached. _____
- At the RAC's discretion. _____

ATTACHMENT 1
Page 5 of 5

1.1.20 NOTIFY the RAC and RPS-EXP of changing radiological conditions as determined from step 1.1.19 _____

NOTE

DAPA monitor readings fluctuate due to Drywell temperature. Consult Attachment 5, DAPA Correction Calculations, to perform the required calculations to obtain the correct DAPA monitor readings, if necessary.

1.1.21 TREND RMS data utilizing the RM-11 or the VAX LA120. _____

1.1.22 REFER to Attachment 7, RMS Quick Reference, for information concerning some of the RMS monitors. _____

1.1.23 REFER to HC.RP-AR.SP-0001(Q), Radiation Monitoring System Alarm Response for more complete information concerning RMS. _____

1.1.24 IMPLEMENT Section 5.2 of this procedure, and follow appropriate steps, when the TSC is activated. _____

TURNOVER
Given By: _____ Date/Time:___ - ___ - ___/_____ : _____

TURNOVER
Received By: _____ Date/Time:___ - ___ - ___/_____ : _____

ATTACHMENT 2
Page 1 of 2
HOPE CREEK RMS STATUS SHEET

DATE: ____/____/____ TIME: ____:____

TITLE	CURRENT READING	UNITS	RANGE (LOW)	RANGE (HIGH)
FRVS		cfm	2.00E+02	9.00E+03
NPV		cfm	0.00E+00	4.19E+04
SPV		cfm	0.00E+00	4.48E+05
HTV		cfm	0.00E+00	2.50E+04

NOTE: CONTACT THE NATIONAL WEATHER SERVICE AT (609) 261-6604 OR (609) 261-6602.

METEOROLOGICAL DATA

WND SPD 33 FT.		MPH	N/A	N/A
WND SPD 150 FT.		MPH	N/A	N/A
WND SPD 300 FT.		MPH	N/A	N/A
WND DIR 33 FT		DEG FROM	N/A	N/A
WND DIR 150 FT		DEG FROM	N/A	N/A
WND DIR 300 FT		DEG FROM	N/A	N/A
DELTA T (150-33)		DEG C	N/A	N/A
DELTA T (300-33)		DEG C	N/A	N/A
STAB. CLASS		A - G	N/A	N/A

VENT PROCESS MONITORS

FRVS LOW RANGE		uCi/cc	1.00E-08	1.00E-01
FRVS MID RANGE		uCi/cc	1.00E-03	1.00E+02
FRVS HIGH RANGE		uCi/cc	1.00E-01	1.00E+05
FRVS EFFLUENT		uCI/sec	0.00E+00	1.00E+12
NPV PARTICULATE		uCi/cc	5.00E-12	1.00E-06
NPV IODINE		uCi/cc	1.10E-11	1.10E-05
NPV LOW RANGE		uCi/cc	1.00E-08	1.00E-01
NPV MID RANGE		uCi/cc	1.00E-03	1.00E+02
NPV HIGH RANGE		uCi/cc	1.00E-01	1.00E+05
NPV EFFLUENT		uCi/cc	5.00E-12	1.00E-06
SPV PARTICULATE		uCi/cc	5.00E-12	1.00E-06
SPV IODINE		uCi/cc	1.10E-11	1.10E-05
SPV LOW RANGE		uCi/cc	1.00E-08	1.00E-01
SPV MID RANGE		uCi/cc	1.00E-03	1.00E+02
SPV HIGH RANGE		uCi/cc	1.00E-01	1.00E+05
SPV EFFLUENT		uCi/cc	5.00E-12	1.00E-06
HTV LOW RANGE		uCi/cc	1.00E-04	1.00E+02
HTV MID RANGE		uCi/cc	5.00E+00	5.00E+05
HTV EFFLUENT		uCi/sec	5.00E-03	2.60E+07

DRYWELL MONITORS

DAPA A		R/hr	1.00E+00	1.00E+08
DAPA B		R/hr	1.00E+00	1.00E+08
DW LEAK DETECT.		uCi/cc	1.00E-06	1.00E-01
MSL A		mR/hr	1.00E+00	1.00E+06
MSL B		mR/hr	1.00E+00	1.00E+06
MSL C		mR/hr	1.00E+00	1.00E+06
MSL D		mR/hr	1.00E+00	1.00E+06

ATTACHMENT 2
Page 2 of 2

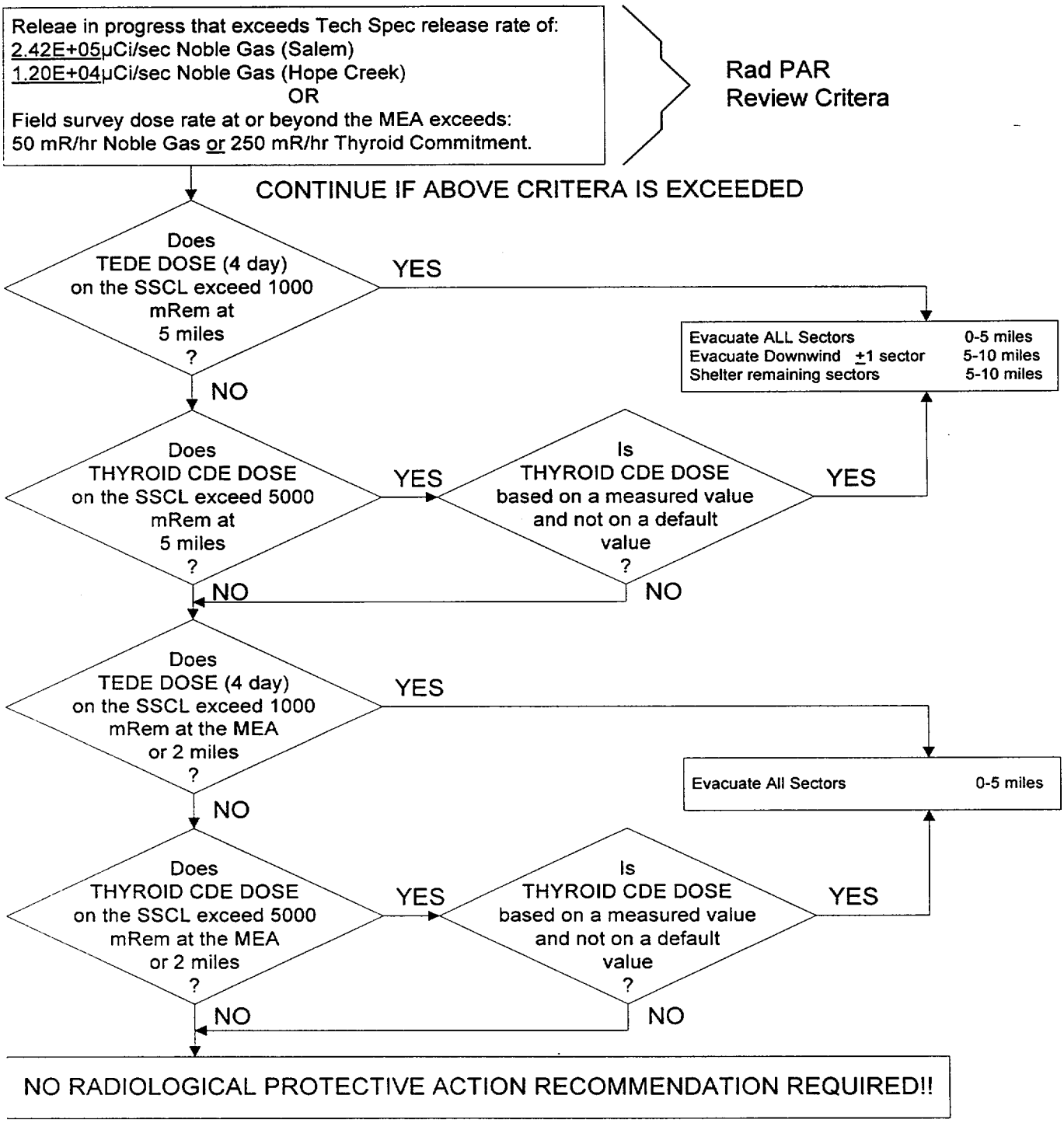
TITLE	CURRENT READING	UNITS	RANGE (LOW)	RANGE (HIGH)
MAIN CR		mR/hr	1.00E-01	1.00E+04
TSC VESTIBULE		mR/hr	1.00E-01	1.00E+04
CHEM LAB SAM RM		mR/hr	1.00E-01	1.00E+04
RAD WASTE CR		mR/hr	1.00E-01	1.00E+04
OFFGAS TREAT CR		mR/hr	1.00E-01	1.00E+04
OFFGAS VIAL SS		mR/hr	1.00E-01	1.00E+04
RADWASTE SS		mR/hr	1.00E-01	1.00E+04
RX BLDG SS		mR/hr	1.00E-01	1.00E+04
OUTSIDE RX BLDG SS		mR/hr	1.00E-01	1.00E+04
FRVSV SKID		mR/hr	1.00E-01	1.00E+04
FRVSV LRP		mR/hr	1.00E-01	1.00E+04
PERSONNEL AIRLOCK		mR/hr	1.00E-01	1.00E+04
EQUIPMENT AIRLOCK		mR/hr	1.00E-01	1.00E+04
MOTOR EQUIP AIRLOCK		mR/hr	1.00E-01	1.00E+04
OPEN EQUIP HATCH		mR/hr	1.00E-01	1.00E+04
SPENT FP DEMIN EQUIP		mR/hr	1.00E-01	1.00E+04
AUX HATCHWAY		mR/hr	1.00E-01	1.00E+04
REST MACH SHOP A		mR/hr	1.00E-01	1.00E+04
REST MACH SHOP B		mR/hr	1.00E-01	1.00E+04
SPENT FUEL POOL		mR/hr	1.00E-01	1.00E+04
NEW FUEL A		mR/hr	1.00E-01	1.00E+04
NEW FUEL B		mR/hr	1.00E-01	1.00E+04
PROCESS MONITORS				
REFUELING FLR EXH A		uCi/cc	1.00E-06	1.00E-02
REFUELING FLR EXH B		uCi/cc	1.00E-06	1.00E-02
REFUELING FLR EXH C		uCi/cc	1.00E-06	1.00E-02
REACTOR BLDG EXH A		uCi/cc	1.00E-06	1.00E-02
REACTOR BLDG EXH B		uCi/cc	1.00E-06	1.00E-02
REACTOR BLDG EXH C		uCi/cc	1.00E-06	1.00E-02
CR VENTILATION C		uCi/cc	1.00E-06	1.00E-02
CR VENTILATION C1		uCi/cc	1.00E-06	1.00E-02
CR VENTILATION D		uCi/cc	1.00E-06	1.00E-02
CR VENTILATION D1		uCi/cc	1.00E-06	1.00E-02
COOLING TOWER BLDN		uCi/cc	1.00E-06	1.00E-02
LIQUID RAD WASTE		uCi/cc	1.00E-06	1.00E-02
OFFGAS A		mR/hr	1.00E+00	1.00E+06
OFFGAS B		mR/hr	1.00E+00	1.00E+06
OFFGAS TREAT SYS A		cpm	1.00E+01	1.00E+06
OFFGAS TREAT SYS B		cpm	1.00E+01	1.00E+06
RX BLDG VENT SYS EXH		uCi/cc	1.00E-06	1.00E-02
TB BLDG EXH		uCi/cc	1.00E-06	1.00E-02
TB BLDG COMPART EXH		uCi/cc	1.00E-06	1.00E-02
RADWASTE EXH SYS		uCi/cc	1.00E-06	1.00E-02
RADWASTE AREA EXH		uCi/cc	1.00E-06	1.00E-02
GAS R/W AREA EXH		uCi/cc	1.00E-06	1.00E-02

ATTACHMENT 3

Page 1 OF 1

RADIOLOGICALLY BASED PROTECTIVE ACTION RECOMMENDATION FLOWCHART

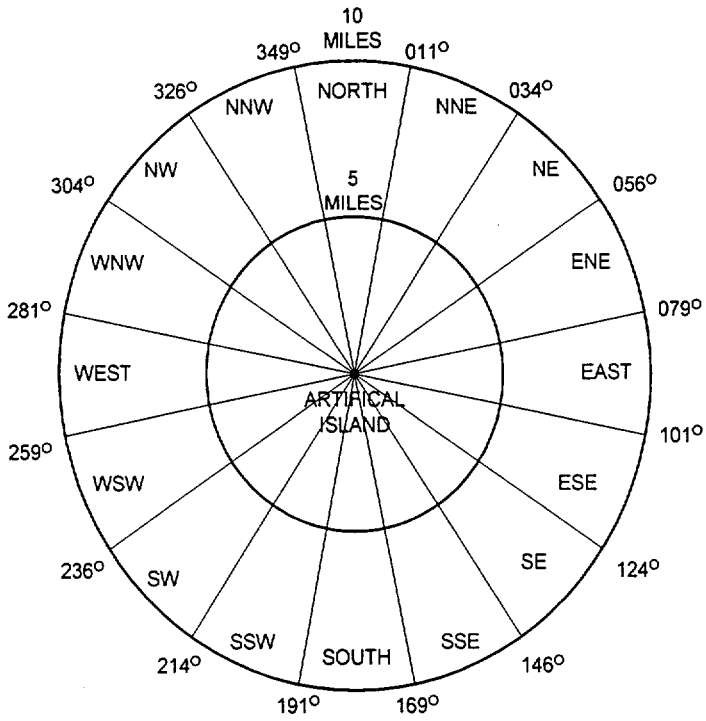
Initial Conditions: If Rad PAR review criteria is not exceeded, Rad PAR is not required.



ATTACHMENT 3
Page 2 of 2
PROTECTIVE ACTION RECOMMENDATIONS WORKSHEET

WIND DIRECTION FROM DEGREES	COMPASS		PAR AFFECTED SECTORS DOWNWIND ±1 SECTORS
349 - 011	N	⇒	SSE - S - SSW
011 - 034	NNE	⇒	S - SSW - SW
034 - 056	NE	⇒	SSW - SW - WSW
056 - 079	ENE	⇒	SW - WSW - W
079 - 101	E	⇒	WSW - W - WNW
101 - 124	ESE	⇒	W - WNW - NW
124 - 146	SE	⇒	WNW - NW - NNW
146 - 169	SSE	⇒	NW - NNW - N
169 - 191	S	⇒	NNW - N - NNE
191 - 214	SSW	⇒	N - NNE - NE
214 - 236	SW	⇒	NNE - NE - ENE
236 - 259	WSW	⇒	NE - ENE - E
259 - 281	W	⇒	ENE - E - ESE
281 - 304	WNW	⇒	E - ESE - SE
304 - 326	NW	⇒	ESE - SE - SSE
326 - 349	NNW	⇒	SE - SSE - S

NOTE: CONSIDER ADDING A SECTOR TO THE PAR IF THE WIND DIRECTION (FROM) IS WITHIN ± 3° OF A SECTOR DIVIDING LINE.



ATTACHMENT 4
Page 1 of 1

ONSITE PROTECTIVE ACTION GUIDELINES

1.0 RADIATION LEVELS

Dose Rate (mR/hr)	Location	Action
≥ 100	Onsite	Evacuation of all nonessential personnel. Consider evacuation of other personnel.

Dose Rate (mR/hr)	Location	Action
≥ 100	Control Room OSC TSC Control Point	Consider evacuation within one hour, and/or relocation as appropriate.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Onsite	Evacuation of all nonessential personnel Consider immediate evacuation of remaining personnel.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Control Room OSC TSC Control Point	Consider immediate evacuation, and/or relocation upwind of the plume.

2.0 RADIOIODINE

If the Iodine-131 equivalent is calculated or measured in concentrations greater than or equal to 5.0E-7 uCi/cc, consider the use of Potassium Iodide for thyroid blocking. This section is to be applied to areas, in which personnel are working or are planning to work. Refer to Emergency Procedure NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, for additional information.

ATTACHMENT 5
Page 1 of 1

DAPA CORRECTION CALCULATIONS

NOTE

DAPA temperature is located on the VAX LA120, Operation Status Board (EOF Menu Selection "2").

1.0 DAPA CORRECTION CALCULATIONS

1.1 To Correct For DAPA High Temperature, Perfrom The Following

1.1.1 REFER to Figure 1-1. _____

1.1.2 IF the uncorrected DAPA reading lies below the curve, THEN the DAPA Monitor reading is unreliable and should not be used. _____

1.1.3 PROCEED to step 1.4, if the uncorrected DAPA reading lies above the curve. _____

1.1.4 REFER to Figure 1-2. _____

1.1.5 DETERMINE a BIAS value to add to the uncorrected DAPA reading by finding the value on the curve that corresponds to the associated average Drywell Air Temperature. _____

_____	+	_____	=	_____
DAPA Monitor Reading (R/hr)		Bias Value Reading (R/hr)		Corrected DAPA Reading (R/hr)

ATTACHMENT 7

Page 1 of 2

RMS QUICK REFERENCE

Hope Creek

NOTE

All ARM's in the Reactor Building have maximum ranges of 1.00E+04 mR/hr, except for the Inner Tip Room Monitor (9RX699). The Inner Tip Room Monitor's maximum range is 1.00E+07 mR/hr.

DAPA A and DAPA B (9RX635 and 9RX636) are high range ARMs in the Drywell. DAPA A is approximately twice as high as DAPA B under normal operating conditions. During a LOCA in the Drywell the two monitors should start to trend closer together due to the atmospheric conditions in the Drywell affecting both monitors equally. Increases on both of these monitors while DAPA A's reading stays about twice of what DAPA B is reading, would be an indication of fuel damage.
Ranges: 1.00E+00 to 1.00E+08 R/hr.

Tip Room Inner ARM (9RX699) is located on 102' elevation of the Reactor Building inside the Tip Room. This monitor has the highest range of any ARM in the Reactor Building and could give an idea of what the dose rates in the Reactor Building are after the other ARMs peg out high.
Ranges: 1.00E+00 to 1.00E+07 mR/hr

Main Steam Line A - D monitors (9RX509-512) are four ARMs located in the ceiling of the Main Steam Tunnel. Increases in these monitors would be an indication of fuel damage. These monitors could increase due to shine from the Reactor Building, after a radiological release.
Ranges: 1.00E+00 to 1.00E+06 mR/hr

Safeguard Instrument Room Monitor (9RX704) is an ARM located on 77' elevation of the Reactor Building. An increase on this monitor when the reactor SCRAMs with fuel damage could be due to shine from the Torus.
Ranges: 1.00E-01 to 1.00E+04 mR/hr

ATTACHMENT 7

FRVS Effluent monitor (9RX680) monitors what is going out the FRVS Plant Vent. Under normal operating conditions Reactor Building ventilation would vent through the South Plant Vent. Under accident conditions or when manually initiated, Reactor Building Ventilation isolates and the Reactor Building will vent through the FRVS. FRVS is always a ground release. Values $\geq$ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec

North Plant Vent Effluent (NPV) monitor (9RX590) monitors Offgas and the chemistry lab fume hoods. SPV could be a ground or elevated release depending on the time of year and wind speed. Values $\geq$ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec

South Plant Vent Effluent (SPV) monitor (9RX580) monitors Service Radwaste Building, Turbine Building and the Reactor Building (if FRVS hasn't been initiated). Values $\geq$ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec

Hardened Torus Vent Effluent (HTV) monitor (9RX518) would be used to vent the Drywell to relieve pressure. The path it would take would be through the Torus and take advantage of the scrubbing properties of the Torus water. Control Room operators would have to open a valve to use this release path. Sampling from the PASS Torus Gas Space should be performed to provide information as to what is being released. Values $\geq$ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 0.00E+00 to 2.09E+12 uCi/Sec

FORM - 1
Page 1 of 1

HABITABILITY LOG
(FORM - 1)

DATE: _____

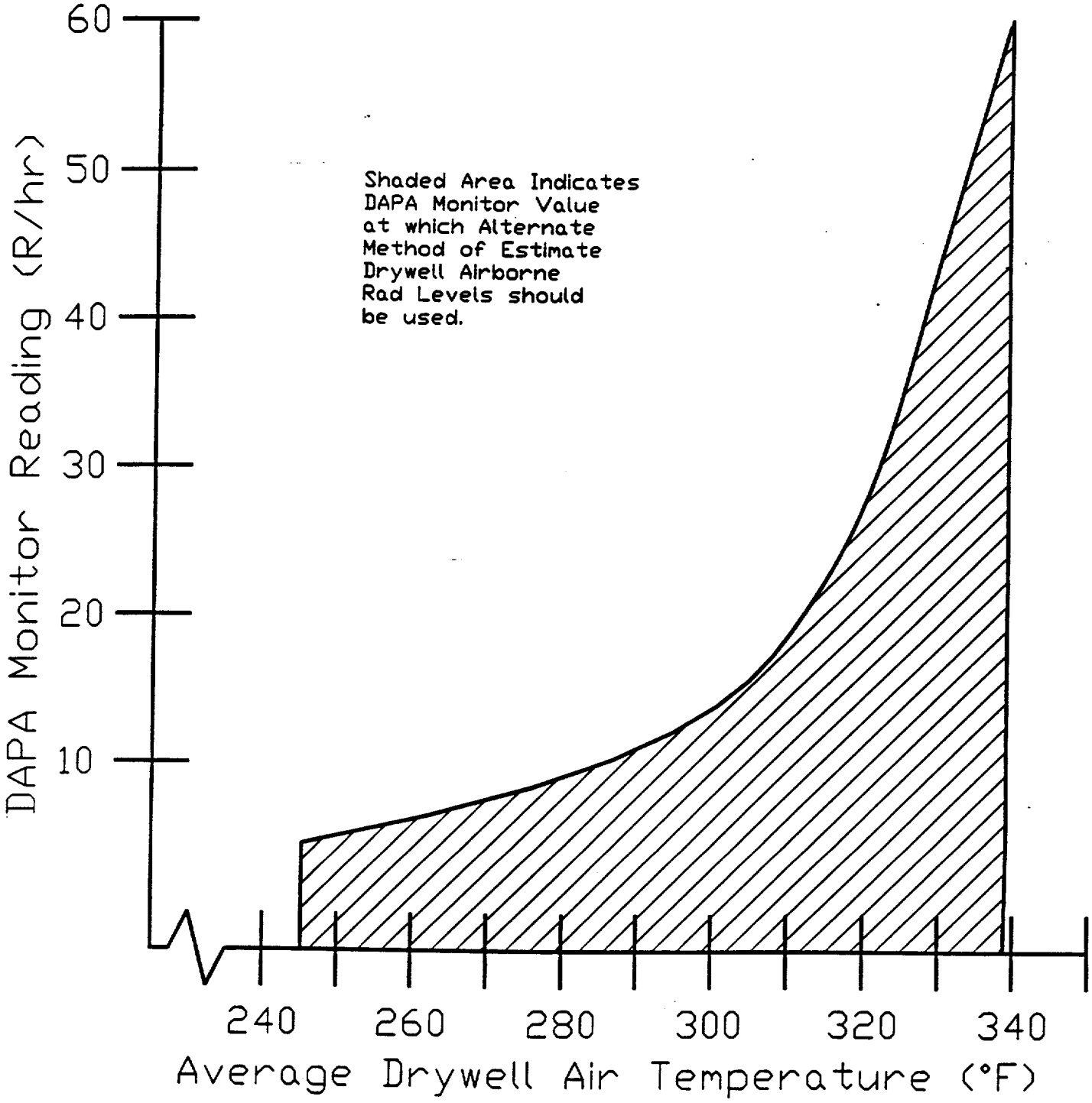
TIME PERFORMED/LOCATION	DOSE RATE (mR/hr)	CONTAMINATION (CPM)	INITIALS

IF other means are used to ensure habitability, THEN list: _____

_____

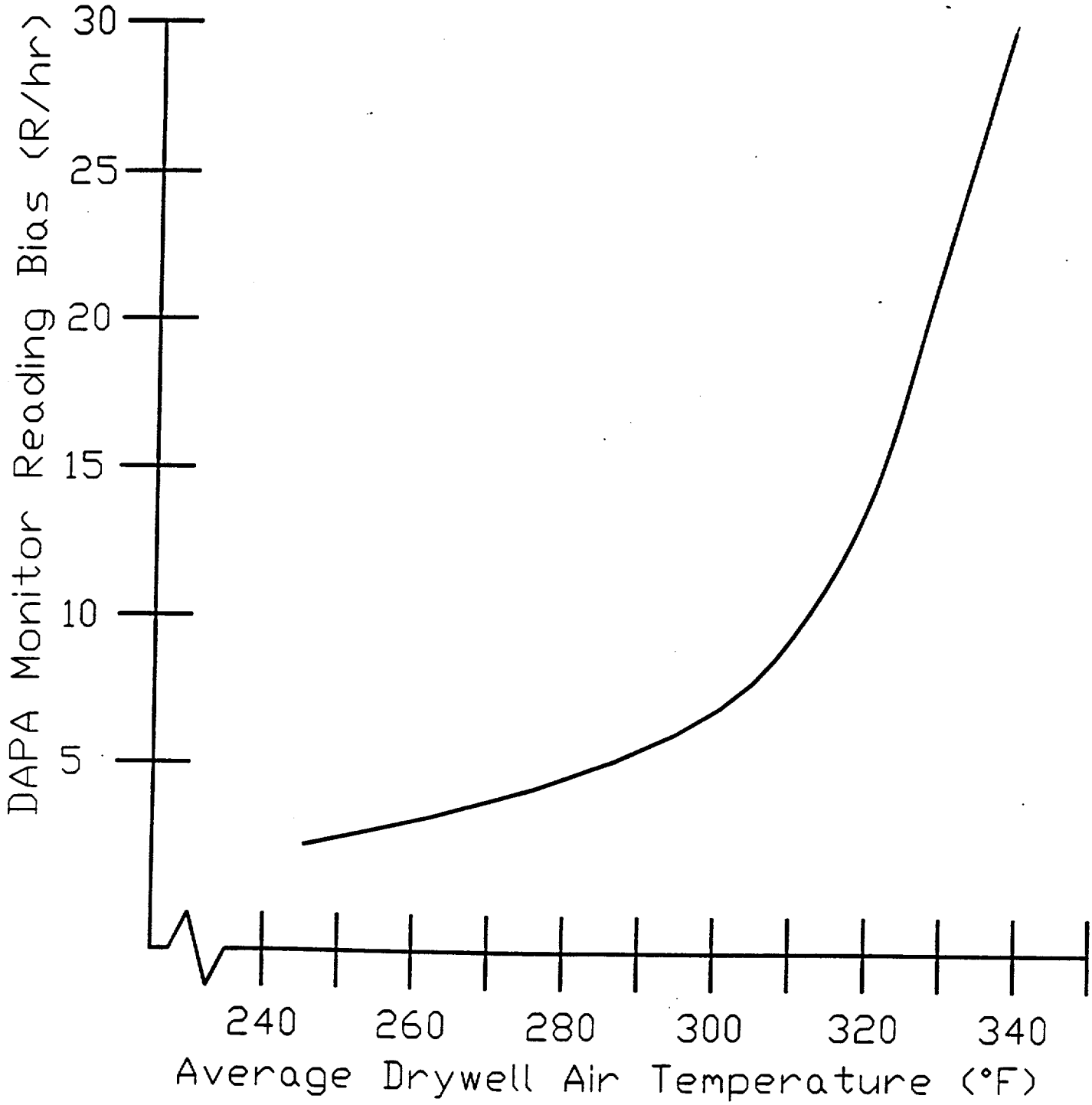
_____

FIGURE 1-1
DAPA CORRECTION FIGURE
Page 1 of 2



NOTE:
No Correction to the DAPA Monitor is Required below 245°

FIGURE 1-2
Page 2 of 2



NOTE:
No Correction to the DAPA Monitor is Required below 245°

PSEG NUCLEAR

NC.EP-EP.ZZ-0302 (Q) - REV. 1

RADIOLOGICAL ASSESSMENT COORDINATOR RESPONSE

USE CATEGORY: II

PSE&G CONTROL COPY # EPIP059

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Attachment 1; added a note after step 1.1.8 to clarify when the official SSCL page 2 should be generated.
3. Attachment 2; added two additional bullets to the note after step 1.1.9 that were inadvertently deleted during the previous revision.
4. Attachment 5; corrected a typographical error where NPV was called SPV.

IMPLEMENTATION REQUIREMENTS

This procedure is effective for use upon issue.

APPROVED: _____ Manager – EP & IT — 3/22/00 Date

APPROVED: N/A Vice President - Operations — N/A Date

RADIOLOGICAL ASSESSMENT COORDINATOR RESPONSE

TABLE OF CONTENTS

1.0 PURPOSE

To outline and describe the Radiological Assessment Coordinator's (RAC) duties.

2.0 PREREQUISITES

2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

Implement this procedure at:

- The discretion of the OS
- The discretion of the EDO.
- Upon the manning of the TSC.

3.0 PRECAUTIONS AND LIMITATIONS

4.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

4.1.1 Steps listed in this procedure may be performed in the order deemed appropriate for the emergency situations. Only steps applicable to the specific emergency need be performed.

4.1.2 Approval of the OS is required prior to the issuance of Potassium Iodide (KI) until a qualified RAC assumes his duties. The authority to designate when and who should receive KI shifts from the OS to the RAC for all Onsite Personnel at this time IAW NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking. The duty of authorizing KI cannot be delegated or assumed by any other position.

4.1.3 The Radiation Protection – Offsite (RPS-Offsite) should assume the RAC's duties until relieved by a qualified RAC. Duties the RPS-Offsite **CANNOT PERFORM** have asterisks next to them.

4.1.4 Medical care takes priority over any radiological conditions, unless the radiological conditions are life threatening.

4.1.5 It is recommended that initials be used in the step performance check offs/sign-offs, instead of checkmarks, if more than one person may implement this procedure.

4.1.6 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

4.0 EQUIPMENT REQUIRED

As provided at the Control Point, Control Room, and TSC.

5.0 PROCEDURE

5.1 The RAC/RPS-Offsite Should Perform the Following:

5.1.1 IF the TSC is not yet activated, THEN IMPLEMENT Attachment 1, TSC Pre - Activation Checklist. _____

5.1.2 IF the TSC is activated, THEN IMPLEMENT Attachment 2, RAC Checklist. _____

5.1.3 IF Onsite Protective Actions are necessary, THEN IMPLEMENT Attachment 3, Onsite Protective Action Guidelines. _____

5.1.4 IF the TSC needs to be evacuated, THEN IMPLEMENT Attachment 4, TSC Evacuation Checklist. _____

5.1.5 IF information is needed concerning the Hope Creek or Salem Radiological monitoring System, THEN refer to Attachment 5, RMS Quick Reference. _____

6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent by the dose assessor, to the Manager – EP & IT.

7.0 REFERENCES

7.1 References

7.1.1 Roger E. Linnemann, M.D., President of Radiation Management Consultants, Clinical Associate Professor of Radiation Oncology at the University of Pennsylvania School of Medicine.

7.1.2 Nuclear Business Unit Emergency Plan

7.2 Cross References

7.2.1 Nuclear Business Unit Emergency Plan

7.2.2 NC.EP-EP.ZZ-0404(Q) Protective Action Recommendations (PARS) Upgrades.

7.2.3 NC.EP-EP.ZZ-0304(Q), OSC – Radiation Protection Response.

7.2.4 NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking.

7.2.5 NC.EP-EP.ZZ-0309(Q), Dose Assessment.

7.2.6 NC.EP-EP.ZZ-0310(Q), Radiation Protection Supervisor – Offsite and Field Monitoring Team Response.

ATTACHMENT 1
Page 1 of 2

TSC PRE - ACTIVATION CHECKLIST

DATE: ___/___/___ **TIME: ____:____**

1.0 RAC's INITIAL ACTIONS

1.1 Perform the Following:

1.1.1 PERFORM or ASSIGN a Radiation Protection Technician (RPT) to check the dose rates in the TSC. _____

1.1.2 COMPARE the dose rates with the habitability criteria found in Attachment 3, Onsite Protective Action Guidelines. _____

1.1.3 IF the evacuation limits found in Attachment 3 are exceeded, THEN refer to Attachment 4, TSC Evacuation, and suggest an alternate TSC location to the EDO. _____

1.1.4 OBTAIN a briefing from the SRPT concerning the Plant's radiological conditions. _____

1.1.5 OBTAIN a briefing from the EDO concerning the Plant's Operational condition. _____

1.1.6 DIRECT the RPS-Offsite to implement NC.EP-EP.ZZ-0310, RPS-Offsite and Field Monitor Team Response _____

1.1.7 IF the RPS-Offsite has **NOT** arrived at the TSC, THEN IMPLEMENT Attachment 1, TSC Pre-activation Checklist, of NC.EP-EP.ZZ-0310, RPS-Offsite and Field Monitor Team Response, until the RPS – Offsite arrives. _____

ATTACHMENT 1

Page 2 of 2

1.1.8 ENSURE the following tasks are being performed by the RSP-Offsite or Radiation Protection Technicians (RPTs). _____

> **NOTE**
>
> The TSC radiological assessment should not be generating the official Page 2 of the Station Status Checklist (SSCL) until the TSC is activated and the SRPT is informed the TSC is activated and the TSC radiological assessment personnel will be taking over the generation of the SSCL, Page2.

- Page 2 of the Station Status checklist (SSCL) is being generated. _____
- A continuous air monitor sampler (AMS III) is set up outside the TSC entrance. _____
- That Radiation Protection Emergency Equipment is available and operational in the TSC. _____
- ALL persons in the TSC have a TLD, or issue them one. _____
- Habitability checks are performed every 30 minutes. _____

1.1.9 IMPLEMENT Attachment 2, RAC Checklist, upon completion of this Attachment or when the TSC is activated. _____

- TSC PRE-ACTIVATION CHECKLIST COMPLETED: ____:____ (TIME)

- TSC ACTIVATED: ____/____ (TIME)

ATTACHMENT 2
Page 1 of 5
RAC CHECKLIST

DATE: ___/___/___ **TIME: ____:____**

1.0 RAC's DUTIES

1.1 Perform the Following:

1.1.1 ENSURE dose rates in the TSC are being check every 30 minutes. _____

1.1.2 COMPARE the dose rates with the habitability criteria found in Attachment 3, Onsite Protective Action Guidelines. _____

1.1.3 IF the evacuation limits found in Attachment 3 are exceeded, THEN REFER to Attachment 4, TSC Evacuation, and suggest an alternate TSC location to the EDO. _____

1.1.4 ADVISE the EDO on all Station, Onsite, and Offsite radiological conditions, when thought appropriate. _____

1.1.5 DIRECT the RPS-Offsite to continue to implement NC.EP-EP.ZZ-0310, RPS-Offsite and Field Monitor Team Response _____

NOTE

Technical Specification Noble Gas Release Rate Limits are:

Hope Creek: 1.2E+04 uCi/Sec.

Salem: 2.42E+05 uCi/Sec.

1.1.6 IF fuel damage has occurred, or thought to have occurred, THEN request Chemistry to put PASS into recirculation and ask that PASS is taken when the Fuels Engineer and Chemistry Supervisor believe it is appropriate. _____

ATTACHMENT 2
Page 2 of 5

1.1.7 IF the potential is thought to be high that a Radiological Release above technical specifications, a Chemical Release, or a Gaseous Release may occur, or an actual Radiological Release above technical specifications, Chemical Release, or Gaseous Release is in progress
THEN:

- NOTIFY the EDO. _____

- **ONLY IF A RADIOLOGICAL RELEASE ABOVE TECHNICAL SPECIFICATIONS IS IN PROGRESS**
  REQUEST the EDO to ask the Control Room to make a page announcement saying, "A Radiological Release Is in Progress." _____

- **ONLY IF THE POTENTIAL OF A RADIOLOGICAL RELEASE IS THOUGHT TO BE HIGH**
  A. REQUEST the EDO to NOTIFY the Control Room of this. _____
  B. NOTIFY the Control Point, OSC, and EOF of the potential for a Radiological Release is thought to be high. _____

- NOTIFY the TSS at **HOPE CREEK and SALEM** to:
  A. Place the TSC Emergency Filter Unit in service in the Pressurization Mode for radiological releases. _____
  B. Place the TSC Emergency Filter Unit in service in the Recirculation Mode for chemical or other gaseous releases. _____

- COORDINATE with the Radiological Support Manager (RSM) the moving of any equipment thought essential from the Security Center and the Process Center,if thought the equipment could be in the path of the Plume. _____

NOTE

All Personnel or vehicles leaving or entering the Owner Controlled Area (OCA) should be coordinated with the Security Liaison and the Radiological Support Manager (RSM), if the EOF is manned or activated.

- RECOMMEND travel routes

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NOTE

Any Steps with an asterisk (*) next to them may not be delegated to anyone but another qualified RAC.

1.1.8 * REVIEW the appropriate ECG sections and provide the EDO with Event Classification Recommendations, as necessary. _____

1.1.9 * IMPLEMENT NC.EP-EP.ZZ-404, Protective Action Recommendations (PARS) Upgrades, and provide the EDO with appropriate Radiological PARs, as thought necessary. _____

NOTE

Contamination controls consist of the following:
- No eating, drinking, or smoking.
- Setting up Step Off Pads (SOP).
- Placing Friskers next to SOPs.
- Establish proper postings.
- Preparing electronic dosimetry and/or SRDs for use in the TSC.
- Preparing SRDs for use by people leaving the TSC.

1.1.10 IMPLEMENT Contamination Controls for all onsite Emergency Response Facilities, including the unaffected Plants, if:

- A radiological release greater than the Noble Gas technical specifications release rate limits is in progress. _____
- The potential of a radiological release greater than the Noble Gas technical specifications release rate limits to occur is thought high. _____
- Normal RCA boundaries have been breached. _____
- At the discretion of the RAC. _____

ATTACHMENT 2
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1.1.11 IF Contamination Controls are Implemented,
THEN:

- NOTIFY the EDO Contamination Controls have been implemented. _____
- REQUEST the EDO to ask the Control Room to make a page announcement saying, "Contamination Controls are being implemented." _____
- NOTIFY the Control Room, Control Point, OSC, and EOF Contamination Controls should be implemented. _____

1.1.12 * AUTHORIZE issuing KI IAW NC.EP-EP.ZZ-0305(Q) Potassium Iodine Administration. _____

NOTE

A RPT may be sent to the hospital "after the fact," if waiting for the RPT will delay the departure of the ambulance.

1.1.13 COORDINATE with the Operational Support Center Coordinator (OSCC) the evacuation of injured person(s). _____

1.1.14 DIRECT a RPT to accompany an injured person if:

- The person is contaminated. _____
- The person is potentially contaminated. _____
- A Radiological Release greater than technical specifications limits are in progress. _____
- The potential that a Radiological Release greater than technical specifications limits is thought to be high. _____

1.1.15 INFORM the RSM that an injured person is leaving the Site. _____

1.1.16 COORDINATE with the OSCC the evacuation of any person(s) receiving an exposure of 5 rem External Dose Equivalent (EDE) or greater to an appropriate medical facility, as soon as practical. _____

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1.1.17 INTERFACE directly with the NRC on specific radiological issues, as the need arises. _____

1.1.18 ARRANGE with the Administrative Support Supervisor for relief shifts of RPTs and Chemistry Technicians. _____

1.1.19 RECOMMEND expenditures for additional radiological support equipment/staff, as necessary. _____

1.1.20 REFER to Step 1.1 of this Attachment and follow appropriate Steps until relieved from your duties by a qualified RAC. _____

ATTACHMENT 3
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ONSITE PROTECTIVE ACTION GUIDELINES

1.0 RADIATION LEVELS

Dose Rate (mR/hr)	Location	Action
≥ 100	Onsite	Evacuation of all nonessential personnel. Consider evacuation of other personnel.

Dose Rate (mR/hr)	Location	Action
≥ 100	Control Room OSC TSC Control Point	Consider evacuation within one hour, and/or relocation as appropriate.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Onsite	Evacuation of all nonessential personnel Consider immediate evacuation of remaining personnel.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Control Room OSC TSC Control Point	Consider immediate evacuation, and/or relocation upwind of the plume.

2.0 RADIOIODINE

If the Iodine-131 equivalent is calculated or measured in concentrations greater than or equal to 5.0E-7 uCi/cc, consider the use of Potassium Iodide for thyroid blocking. This section is to be applied to areas, in which personnel are working or are planning to work. Refer to Emergency Procedure NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, for additional information.

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TSC EVACUATION CHECKLIST

Date/Time: __ - __ - __ / __ : __

1.0 TSC EVACUATION CHECKLIST

1.1 Evacuate the TSC in the Following Manner:

> **NOTE**
>
> Consideration should be given to dose rates in alternate TSC prior to evacuation. Multiple evacuations are to be avoided.

1.1.1 CONSIDER where to relocate the TSC using the locations below:

- Hope Creek TSC for Salem _____
- Salem TSC for Hope Creek _____
- EOF (TSC Technical Staff only) _____
- Operations Support Center _____
- Security Center _____
- Administration Building _____

1.1.2 RECOMMEND the EDO of your selection. _____

1.1.3 Notify the RPS-EXP and the Shift Radiation Protection Technician of the evacuation of the TSC and the location of the new TSC. _____

ATTACHMENT 4

1.1.4 DIRECT the following items be relocated to the new TSC, if thought appropriate:

- Log books _____
- Calculators _____
- Maps _____
- Portable computer software _____
- Portable radios _____
- Radiation instruments, dosimetry, stanchions, etc. _____
- Emergency Plan Implementing Procedures
  - ♦ Controlled Copy Books _____
  - ♦ Working Copy Files _____
- Event Classification Guidelines
  - ♦ Controlled Copy Books _____
  - ♦ Working Copy Files _____
- Station Procedures _____

1.1.5 DIRECT the use of protective clothing, if radiological conditions are unknown enroute to the new location. _____

1.1.6 DIRECT the use of dose rate instruments during the relocation of the TSC. _____

1.1.7 DIRECT personnel to be surveyed for contamination prior to admittance to the new TSC, if practical. _____

1.1.8 INFORM Security, the Control Room, Control Point, OSC, and EOF (if manned or activated) of the new location and phone numbers. _____

ATTACHMENT 4
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1.1.9 NOTIFY the Administrative Support Supervisor, if any additional resources or personnel are required due to the evacuation. _____

1.1.10 IMPLEMENT Attachment 1, TSC Activation Checklist, and ensure the new TSC is ready to assume its responsibilities. _____

Completed by: _____/_____
(PRINT/SIGNATURE)

ATTACHMENT 5

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RMS QUICK REFERENCE

1.0 HOPE CREEK

NOTE

All ARM's in the Reactor Building have maximum ranges of 1.00E+04 mR/hr, except for the Inner Tip Room Monitor (9RX699). The Inner Tip Room Monitor's maximum range is 1.00E+07 mR/hr.

DAPA A and DAPA B (9RX635 and 9RX636) are high range ARMs in the Drywell. DAPA " A" is approximately twice as high as DAPA B under normal operating conditions. During a LOCA in the Drywell the two monitors should start to trend closer together due to the atmospheric conditions in the Drywell affecting both monitors equally. Increases on both of these monitors while DAPA A's reading stays about twice of what DAPA B is reading, would be an indication of fuel damage.
Ranges: 1.00E+00 to 1.00E+08 R/hr.

Tip Room Inner ARM (9RX699) is located on 102' elevation of the Reactor Building inside the Tip Room. This monitor has the highest range of any ARM in the Reactor Building and could give an idea of what the dose rates in the Reactor Building are after the other ARMs peg out high.
Ranges: 1.00E+00 to 1.00E+07 mR/hr

Main Steam Line A - D monitors (9RX509-512) are four ARMs located in the ceiling of the Main Steam Tunnel. Increases in these monitors would be an indication of fuel damage. These monitors could increase due to shine from the Reactor Building, after a radiological release.
Ranges: 1.00E+00 to 1.00E+06 mR/hr

Safeguard Instrument Room Monitor (9RX704) is an ARM located on 77' elevation of the Reactor Building. An increase on this monitor when the reactor SCRAMs with fuel damage could be due to shine from the Torus.
Ranges: 1.00E-01 to 1.00E+04 mR/hr

FRVS Effluent monitor (9RX680) monitors what is going out the FRVS Plant Vent. Under normal operating conditions Reactor Building ventilation would vent through the South Plant Vent. Under accident conditions or when manually initiated, Reactor Building Ventilation isolates and the Reactor Building will vent through the FRVS. FRVS is always a ground release. Values ≥ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec **(THIS IS A GROUND RELEASE AT ALL TIMES).**

North Plant Vent Effluent (NPV) monitor (9RX590) monitors Offgas and the chemistry lab fume hoods. NPV could be a ground or elevated release depending on the time of year and wind speed. Values ≥ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec **(THIS COULD BE A GROUND, ELEVATED, OR SPLIT WAKE RELEASE. A SPLIT WAKE RELEASE IS NOT A TRUE GROUND OR ELEVATED RELEASE).**

South Plant Vent Effluent (SPV) monitor (9RX580) monitors Service Radwaste Building, Turbine Building and the Reactor Building (if FRVS hasn't been initiated). Values ≥ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 1.00E+00 to 1.00E+12 uCi/Sec **(THIS COULD BE A GROUND, ELEVATED, OR SPLIT WAKE RELEASE. A SPLIT WAKE RELEASE IS NOT A TRUE GROUND OR ELEVATED RELEASE).**

Hardened Torus Vent Effluent (HTV) monitor (9RX518) would be used to vent the Drywell to relieve pressure. The path it would take would be through the Torus and take advantage of the scrubbing properties of the Torus water. Control Room operators would have to open a valve to use this release path. Sampling from the PASS Torus Gas Space should be performed to provide information as to what is being released. Values ≥ 1.20E+04 uCi/Sec would be an indication that a radiological release is in progress.
Ranges: 0.00E+00 to 2.09E+12 uCi/Sec **(THIS IS A GROUND RELEASE AT ALL TIMES).**

2.0 SALEM RMS (UNIT 1 AND 2)

R2 is an Area Radiation Monitor (ARM) located in Containment on the 130' elevation.
Ranges: 1E-01 to 1E+04 mR/hr.

R7 is an ARM located in Containment on the 100' elevation, adjacent to the Seal Table Room.
Ranges: 1E-01 to 1E+04 mR/hr.

R10A is an ARM located in Containment on the 100' elevation next to the personnel airlock.
Ranges: 1E-01 to 1E+04 mR/hr.

ATTACHMENT 5

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R10B is an (ARM) located in Containment on the 130' elevation next to the personnel airlock.
Ranges: 1E-01 to 1E+04 mR/hr.

R16 Plant Vent Stack is located in the Plant Vent duct at 194' elevation and monitors what is going out the Plant Vent stack.
Ranges: 1E+01 to 1E+06 CPM

R34 is an ARM located in the Mechanical Penetration across from the 100' elevation Containment personnel Airlock.
Ranges: 1E-01 to 1E+06 mR/hr.

R44A is a High Range or Accident Area Radiation Monitor (HARM) located in Containment on the 130' elevation close to the personnel airlock.
Ranges: 1E+00 to 1E+07 R/hr.

R44B is a (HARM) located in Containment on the 100' elevation between the R10A and R7 ARMs.
Ranges: 1E+00 to 1E+07 R/hr.

R47 is an ARM located in the 78' Electrical Penetration. The PASS lines are located in the overhead. The skid and PASS lines may be the source of any increase in this area. This Penetration has its own ventilation flow path and will vent directly into the atmosphere. There is a potential for an unmonitored release from this Penetration.
Ranges: 1E-01 to 1E+07 mR/hr

NOTE

- All emergency Grab Samples (Noble Gas, Iodine and Particulate) should be taken from the R45 Skid located in the R45 Shed.
- Only one of the following Effluent Monitors (R41A, R41B, R41C, R45B or R45C) readings should be used in MIDAS Manual Mode.

R41A is the Low Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.
Ranges: 1E-07 to 1E-01 uCi/cc **(THIS IS A GROUND RELEASE AT ALL TIMES).**

ATTACHMENT 5

R41B is the Mid Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.
Ranges: 1E-04 to 1E-02 uCi/cc**(THIS IS A GROUND RELEASE AT ALL TIMES).**

R41C is the High Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.
Ranges: 1E-01 to 1E+05 uCi/cc **(THIS IS A GROUND RELEASE AT ALL TIMES).**

R41D is the Effluent Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.
Ranges: 0E+00 to 1E+13 uCi/Sec
(The R41D values should not be used in MIDAS to perform manual dose assessment calculations) **(THIS IS A GROUND RELEASE AT ALL TIMES).**

R45B is the "Backup" Mid Range Noble Gas Monitor and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.
Ranges: 1E-03 uCi/cc to 1E+01 uCi/cc **(THIS IS A GROUND RELEASE AT ALL TIMES).**

R45C is the "Backup" High Range Noble Gas Monitors and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.
Ranges: 1E-01 uCi/cc to 1E+05 uCi/cc **(THIS IS A GROUND RELEASE AT ALL TIMES).**

PSEG NUCLEAR

NC.EP-EP.ZZ-0310 (Q) Rev. 1

RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE

USE CATEGORY: II

PSE&G CONTROL COPY # EPIP059

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Attachment 1; fixed typographical error in step 1.1.3.
3. Attachment 1; added a note after step 1.1.7 to clarify when the official SSCL page 2 should be generated.
4. Attachment 2; added step 1.1.5 that was inadvertently deleted during the previous revision.
5. Attachment 5; fixed typographical error in step 1.1.4.

IMPLEMENTATION REQUIREMENTS

Issued for use.

APPROVED: _____ Manager – EP & IT — Date 3/22/02

APPROVED: _____ Vice President - Operations — Date N/A

RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE

TABLE OF CONTENTS

FORMS

FIGURES

1.0 PURPOSE

To outline and describe the Radiation Protection Supervisor – Offsite (RPT – Offsite) duties.

2.0 PREREQUISITES

2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

Implement this procedure at:

- The discretion of the EDO
- The discretion of the RAC.
- Upon the manning of the TSC.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

3.1.1 The order of the steps listed in this procedure may be performed in the order deemed approriate by the Radiation Protection Supervisor – Offsite.

3.1.2 Approval of the OS is required prior to the issuance of Potassium Iodide (KI) until a qualified Radiological Assessment Coordinator (RAC) assumes his duties. The authority to designate when and who should receive KI shifts from the OS to the RAC for all Onsite Personnel IAW NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking. The duty of authorizing KI can not be delegated or assumed by any other position.

3.1.3 The RPS-Offsite should assume the RAC's duties until relieved by a qualified RAC by referring to NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response.

3.1.4 Medical care takes priority over any radiological conditions, unless the radiological conditions are life threatening.

3.1.5 It is recommended that initials be used in the step performance check offs/sign-offs, instead of checkmarks, if more than one person may implement this procedure.

3.1.6 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

4.0 EQUIPMENT REQUIRED

As provided in the Emergency Response Facility.

5.0 PROCEDURE

5.1 The RPS-Offsite Should:

5.1.1 IF the RAC has not arrived at the TSC, THEN ASSUME the RAC's duties until he/she arrives by implementing NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response.

NOTE

The RPS-Offsite reports directly to the RAC.

5.1.2 ASSUME his/her own duties when a qualified RAC assumes his/her own duties by implementing Attachment 1, TSC Pre-activation Checklist, of this procedure, unless directed otherwise by the RAC.

5.2 The Radiation Protection – Radio (RPT-Radio) Should:

Assume his/her duties IAW Attachment 5, Field Monitoring Team Log.

5.3 The Onsite Field Monitoring Team(s) Should:

Assume his/her duties IAW Attachment 9, Field Monitoring Team Responsibilities and Directions.

6.0 RECORDS

Return completed procedure and any information or data thought to be to the Manager – EP & IT.

7.0 REFERENCES

7.1 References

7.1.1 NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

7.1.2 NUREG/CR-0314, An Air Sampling System for Evaluating Thyroid Dose Commitment Due to Fission Products Released for Reactor Containments.

7.1.3 Radiological Health Handbook (Revised Edition January 1970)

7.1.4 Nuclear Business Unit Emergency Plan

7.2 Cross References

NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response

ATTACHMENT 1

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TSC PRE - ACTIVATION CHECKLIST

DATE: ___/___/___ **TIME: ____:____**

1.0 RPS - OFFSITE INITIAL ACTIONS

1.1 Perform the Following:

1.1.1 PERFORM or ASSIGN a Radiation Protection Technician (RPT) to check the dose rates in the TSC. _____

1.1.2 COMPARE the dose rates with the habitability criteria found in Attachment 10, Onsite Protective Action Guidelines. _____

1.1.3 IF the evacuation limits found in Attachment 10 are exceeded, THEN notify the RAC and refer him to Attachment 4, TSC Evacuation Checklist, found in NC.EP-EP.ZZ-0302(Q). _____

1.1.4 OBTAIN a briefing from the SRPT concerning the Plant's radiological conditions and when the next SSCL Page 2 is due. (TIME: _____:_____) _____

1.1.5 OBTAIN a briefing from the RAC (or the EDO if the RAC is not available) concerning the Plant's Operational condition. _____

> **NOTE**
>
> An inventory of the TSC Emergency Equipment Locker is not necessary if the security seal is intact.
>
> Refer to EP Administration Procedure 1006, Emergency Equipment Inventory Rad Pro Equipment Checklist, if an inventory is necessary.

1.1.6 ENSURE the TSC emergency equipment is available and In operational condition. _____

ATTACHMENT 1

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1.1.7 ENSURE the following tasks are being performed by Radiation Protection Technicians (RPTs) or perform yourself : _____

> **NOTE**
>
> The TSC radiological assessment should not be generating the official Page 2 of the Station Status Checklist (SSCL) until the TSC is activated and the SRPT is informed the TSC is activated and the TSC radiological assessment personnel will be taking over the generation of the SSCL, Page2.

- Page 2 of the SSCL is being generated in preperartion of taking this function over. _____
- A continuous air monitor sampler (AMS III) is set up outside the TSC entrance. _____
- That Radiation Protection Emergency Equipment is available and operational in the TSC. _____
- ALL persons in the TSC have a TLD, or issue them one IAW Form – 5, TLD Log. _____
- Habitability checks are performed every 30 minutes and log the results on Form - 6. _____

1.1.8 NOTIFY the RAC (or EDO if the RAC is not available) when this attachment is completed. _____

TSC PRE-ACTIVATION CHECKLIST COMPLETED: ____:____
(TIME)

TSC ACTIVATED: ____:____
(TIME)

ATTACHMENT 2
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RPS-OFFSITE CHECKLIST

NOTE
The order that these steps are to be performed is at the RPS-Offsite's discretion and may be delegated.

Name: _____ / _____ Date/Time: __ - __ - __ / __ : __
(Print/Sign)

1.0 **RPS-OFFSITE**

1.1 **Should Perform The Following:**

1.1.1 INITIATE a RPS-Offsite log book _____

1.1.2 INFORM the RAC of all changing radiological conditions. _____

NOTE
The keys for the Emergency Preparedness Van are located in the TSC lock box and at the Control Point key box.

1.1.3 CONTACT a Radiation Protection Technician at the Control Point and ask for the location of the Emergency Preparedness Van. _____

1.1.4 INSTRUCT a RPT to obtain current meteorological data utilizing Attachment 15, Operation of the VAX LA120 Terminal. _____

1.1.5 INSTRUCT an RPT to obtain the meteorological forecast by calling NOAA at (automative system – 609-261-6600; options 1 & than 2) (to speak to meteorologist at Mount Holly – 609-261-6604) or by using the internet. _____

1.1.6 INSTRUCT a RPT to obtain current RMS data utilizing **(HOPE CREEK ONLY)** Attachment 15, Operation of the VAX LA120 Terminal or **(SALEM ONLY)** Attachment 16 Instructions for SPDS _____

1.1.7 REQUEST the RAC to assign personnel for Onsite/Offsite Field Monitoring Team members as the need arises. _____

1.1.8 INSTRUCT the Onsite Field Monitoring Team members to implemented Attachment 4, Onsite Field Monitoring Equipment Checklist. _____

1.1.9 INSTRUCT the Offsite Field Monitoring Team members to implemented Attachment 3 of NC.EP-EP.ZZ-0603(Q). _____

ATTACHMENT 2

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1.1.10 DIRECT Onsite Field Team Members to replace missing or out of service items by asking an RPT or SRPT for necessary items to complete the Onsite Field Monitoring Team kit.

1.1.11 DIRECT Offsite Field Team Members to replace missing or out of service items by taking necessary items to complete the Offsite Field Monitoring Team kit from the spare supplies. _____

NOTE

Offsite Field Monitoring Team members may obtain a briefing via radio or telephone for early dispatching from the RPS-Offsite.

1.1.12 PROVIDE a briefing to the Onsite/Offsite Field Monitoring Team members IAW Form – 4, Field Monitoring Team Briefing Form, following the guidance found in Attachment 3, Field Monitoring Team Briefing Guidance. _____

1.1.13 ASSIGN a color code name for Onsite Field Monitoring Teams, such as Red Team, Blue Team, Green Team, etc. _____

1.1.14 ASSIGN a phonetic alphabet name for Offsite Teams, such as Alpha Team, Bravo Team, etc. _____

1.1.15 INSTRUCT the Onsite Field Monitoring Teams to read Attachment 14, Package Insert for Thyro-Block Tablets. _____

1.1.16 INSTRUCT the Onsite Field Monitoring Teams to signed on the appropriate location of Form – 3, KI Side Effects/Administrative Signoff Form. _____

1.1.17 INSTRUCT the Offsite Field Monitoring Teams to read Attachment 10, Package Insert for Thyro-Block Tablets . found in NC.EP-EP.ZZ-0603(Q). _____

1.1.18 INSTRUCT the Offsite Field Monitoring Teams to signed on the appropriate location of Form – 5, Side Effects/Administrative Signoff Form, found in NC.EP-EP.ZZ-0603(Q). _____

1.1.19 ENSURE the Onsite/Offsite Field Monitoring Teams have received a copy of the briefing forms. _____

1.1.20 INSTRUCT the Onsite Field Monitoring Teams to implement Attachment 9, Field Monitoring Team Responsibilities and Directions. _____

ATTACHMENT 2

1.1.21 INSTRUCT the Offsite Field Monitoring Teams have implemented Attachment 8, Field Monitoring Team Responsibilities and Directions found in NC.EP-EP.ZZ-0603(Q). _____

1.1.22 ASSIGN a RPT to be the RPT-Radio. _____

1.1.23 INSTRUCT the RPT-Radio to implement Attachment 5, Field Monitoring Team Log _____

1.1.24 INSTRUCT the Onsite Field Monitoring Team(s) use frequency 1. _____

1.1.25 INSTRUCT the Offsite Field Monitoring Team(s) use frequency 4. _____

1.1.26 INSTRUCT the RPT-Radio to perform a radio check with all appropriate Field Teams _____

1.1.27 DIRECT Field Monitoring Teams to take direction from the RPT-Radio concerning which monitoring locations to travel to and what samples to obtain. _____

1.1.28 PROVIDE the RPT – Radio instructions concerning where the Field Monitoring Teams should travel to and what type samples to take. _____

1.1.29 REVIEW RPT-Radio's paperwork for completeness and correctness of data being recorded. _____

NOTE

a. The **HOPE CREEK** Noble Gas (NG) Technical Specification limit is 1.20E+04 uCi/sec.
b. The **SALEM** Noble Gas (NG) Technical Specification limit is 2.42E+05 uCi/Sec.
c. Alnors or equivalent electronic dosimetry may be used in lieu of SRDs.

1.1.30 ENSURE preparation is ongoing to log and handout Self Reading Dosimeters (SRDs), or electronic equivalent dosimetry , to personnel using Form - 2, Dosimetry Log, if:

- Release greater than NG Technical Specification Limits is in progress. _____
- Potential of a release greater then NG Technical Specification Limits is thought to be high. _____
- Dose rates in the TSC are ≥ 2.5 mR/hr. _____
- At the discretion of the RAC. _____

ATTACHMENT 2

Page 4 of 4

1.1.31 ENSURE habitability is continuing to be performed every 30 minutes and record on Form - 6, Habitability Log. _____

1.1.32 PROVIDE guidance to the Onsite/Offsite Field Monitoring Teams concerning how to handle survey equipment that is contaminated with 50k ccpm. (Consideration should be given to changing out or bagging survey equipment). _____

1.1.33 DETERMINE if issuance of KI is necessary for Field Monitoring Team Members by referring to NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, and inform the RAC, as appropriate. _____

1.1.34 RECALL Onsite/Offsite Field Monitoring Teams, as necessary, and debrief. _____

1.1.35 ENSURE all completed forms are forwarded to the Manager – CA, EP, & IT. Attach any referenced EPEPs or Attachments. _____

ATTACHMENT 3
Page 1 of 1

FIELD MONITORING TEAM BRIEFING GUIDANCE

1.0 BRIEFING GUIDANCE FOR ONSITE AND OFFSITE FIELD TEAMS

NOTE

This briefing may take place over the radio or cellular phone.

1.1 **At A Minimum, The Following Items Should Be Included In The Briefing, and As Appropriate, Recorded On Form – 4, Field Monitoring Team Briefing Form**:

1.1.1 ENSURE radio protocol is conducted in the following manner:

- Repeat backs (Three Way Communications) _____
- Use of the proper phonetic alphabet, when appropriate. (A-Alpha, B-Bravo, etc.) _____

1.1.2 REVIEW Form – 3, KI Side Effects/Administration Sign Off Form, to ensure it is filled out properly and signed. _____

1.1.3 FOLLOW the provisions for gas, tolls, and meals listed below, as may be appropriate:

- Pay tolls out of the Field Teams own money and submitted for reimbursement through EOF Admin Support Staff. _____
- Pay, or Charge on Corporate American Express card, meals and gas and then submitted for reimbursement. _____

1.1.4 PROVIDE current meteorological conditions and forecast. _____

1.1.5 PROVIDE phone number to contact the TSC/EOF. This **can't** be a NETS phone. _____

1.1.6 USE Frequency 4 to contact the EOF for the Offsite Field Monitoring Team. _____

1.1.7 USE Frequency 1 to contact the TSC or the Onsite Field Monitoring Team. _____

ATTACHMENT 4
Page 1 of 2

ONSITE FIELD MONITORING EQUIPMENT CHECKLIST

NOTE

- An inventory of the Onsite Field Monitoring Team Kits is not necessary, if they are properly sealed.
- Emergency Preparedness Procedure 1006, Emergency Equipment Inventory (Radiation Protection) should be referred to, to perform an inventory of the Emergency Locker, if necessary.
- The Forms Kit is stored in the RPS-Offsite work area.
- Lead blankets are stored adjacent to kits.
- This checklist is to be used to help ensure needed items are not left behind while loading the emergency vehicle. It is not to be used instead of the Emergency Preparedness Procedure 1006.

1. Low Volume Air Samples: Radeco H809C with battery cable and two air sample heads, or a battery operated Radeco with two air sample heads _____
2. One Count Rate Meter: E140N with a HP210 probe or equivalent meter and probe. _____
3. One Ion Chamber Dose Rate Meter: RO-2 or RO-2A or equivalent meter. _____
4. One Teletector or equivalent meter. _____
5. One GM meter: E520 with a HP177C or 270 probe or equivalent meter and probe. _____
6. Hi Range Dosimeters (0-5 R or 0-10 R) or electronic equivalent. _____
7. Low Range Dosimeters (0-200 mR or 0-500mR) or electronic equivalent. _____
8. One Dosimeter Charger. _____
9. Absorbent Material. _____
10. One Ten Mile (EPZ) N.J. and Delaware Map. _____

NOTE

The Forms Kit contains the Onsite Map, NC.EP-EP ZZ-0310(Q), and additional attachments from NC.EP-EP ZZ-0310(Q).

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11. One Onsite Map. _____
12. One Pair of Tweezers. _____
13. One Button Check Source. _____
14. Silver Zeolite Cartridges. _____
15. Box of Air Sample Filters. _____
16. Box of Smear Papers. _____
17. Protective Clothing/Paper Coveralls. _____
18. Shoe Covers. _____
19. Gloves. _____
20. Small Envelopes for Particulate Air Sample Filters. _____
21. Roll of Masking Tape. _____
22. Small Plastic Bags. _____
23. Flashlight. _____
24. Spare Nine Volt Batteries _____
25. Spare D Cell Batteries. _____
26. One Bottle of KI Tablets. _____
27. One First Aid Kit. _____
28. Respirators. _____

ATTACHMENT 5
Page 1 of 4

FIELD MONITORING TEAM LOG

1.0 OPERATING INSTRUCTIONS FOR TSC RAD ASSESSMENT RADIO BASE STATION

1.1 **The RPT Radio operator Should Perform The Following:**

1.1.1 REQUEST Security Liaison to have Security Force Members to switch over to frequency F2. _____

1.1.2 TURN on the radio power switch. The power switch is located on the top of the radio. _____

1.1.3 DEPRESS the F1 button located on the top of the radio to communicate with the Onsite Field Monitoring Teams or F4 to communicate with the Offsite Field Monitoring Teams. _____

1.1.4 POSITION the toggle switch on the left side of the radio to the forward position (on) to use the speaker or to the back position (off) to use the headset. _____

1.1.5 DEPRESS the button on the headset cord to transmit, if headset is in use. _____

1.1.6 DEPRESS the transmit bar on microphone to transmit, if headset is not in use. _____

NOTE

Use this Attachment to assist in performing necessary calculations and document briefing updates.

- Onsite Field Monitoring Team's dose should be tracked on Form – 2, Dosimetry Log.

2.0 ONSITE DATA

2.1 **The RPT – Radio Operator OR Designee Should Record The Following, As Applicable:**

2.1.1 RPT - Radio: Name :_____ Date :_____

2.1.2 Team Color Code:_____ Time:_____

2.1.3 Location : _____

_____

ATTACHMENT 5
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2.1.4 Instrument Type/Serial Number: _____/_____ _____/_____

2.1.5 General Area Open Window Dose Rate : _____mR/hr

2.1.6 General Area Closed Window Dose Rate : _____mR/hr

2.1.7 Ground Open Window Dose Rate : _____mR/hr

2.1.8 Ground Closed Window Dose Rate : _____mR/hr

2.1.9 Time On For A/S : _____ Time Off For A/S : _____

2.1.10 Average Flow Rate : _____cfm

2.1.11 Particulate Background : _____cpm

2.1.12 Particulate Sample : _____cpm

2.1.13 Iodine Background : _____cpm

2.1.14 Iodine Sample : _____cpm

2.1.15 Refer to section 3.0 for offsite data that should be obtained.

2.1.16 Refer to section 5.0 for onsite data calculations.

NOTE

Offsite Field Monitoring Team's dose should be tracked on Form - 2, Dosimetry Log, as necessary. Turn over tracking of Offsite Field Monitoring Team's dose to Field Team Communicator upon EOF activation.

3.0 **OFFSITE DATA**

3.1 **The RPT – Radio Operator OR Designee Should Record The Following, If Applicable:**

3.1.1 Team Phonetic Alphabet Name:_____ Time:_____

3.1.2 Location : _____

_____

3.1.3 Instrument Type/Serial Number: _____/_____ _____/_____

3.1.4 General Area Open Window Dose Rate : _____mR/hr

3.1.5 General Area Closed Window Dose Rate : _____mR/hr

3.1.6 Ground Open Window Dose Rate : _____mR/hr

3.1.7 Ground Closed Window Dose Rate : _____mR/hr

3.1.8 Time On For A/S : _____ Time Off For A/S : _____

3.1.9 Average Flow Rate : _____cfm

3.1.10 Particulate Background : _____cpm

3.1.11 Particulate Sample : _____cpm

3.1.12 Iodine Background : _____cpm

3.1.13 Iodine Sample : _____cpm

3.1.14 Refer to section 6.0 for offsite data calculations.

4.0 BRIEFING UPDATE

4.1 The RPT – Radio Operator OR Designee Should Record The Following:

4.1.1 Time : _____ Event Classification : _____

4.1.2 Plant Conditions : _____

_____

_____

_____

4.1.3 Radiological Conditions : _____

_____

4.1.4 Additional Information Communicated to Offsite Team (Attach additional pages as necessary):

_____

_____

_____

_____

5.0 ONSITE CALCULATIONS

5.1 The RPT – Radio Operator OR Designee Should Record The Following:

5.1.1 Person Performing Calculations : _____/_____ Date: _____
(Print/Sign)

5.1.2 Go to Section 2.0 of Attachment 5 for data to perform calculations.

5.1.3 Subtract 2.1.6 _____ from 2.1.5 _____ and Multiply that value by the beta correction factor of __5___ for the mRad/hr : _____ mRad/hr. (Gen. Area)

5.1.4 Subtract 2.1.8. _____ from 2.1.7 _____ and multiply that value by the beta correction factor of __5__ for the mRad/Hr. : _____ mRad/hr. (Ground)

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5.1.5 Subtract 2.1.11 _____ from 2.1.12 _____ for the corrected counts per minute (ccpm) for particulate samples : _____ ccpm.

5.1.6 Calculate the particulate uCi/cc IAW Attachment 6, Air Activity vs. Count Rate Table, or IAW Attachment 7, Air Activity vs. Dose Rate Table, _____ uCi/cc.

5.1.7 Subtract 2.1.13 _____ from 2.1.14 _____ for the corrected counts per minute (ccpm) for iodine samples : _____ ccpm.

5.1.8 Calculate the iodine uCi/cc IAW Attachment 8, Direct Conversion Per Minute to uCi/cc for I-131 : _____ uCi/cc.

6.0 OFFSITE CALCULATIONS

6.1 The RPT – Radio Operator OR Designee Should Record The Following:

6.1.1 Person Performing Calculations : _____/_____ Date: _____
(Print/Sign)

6.1.2 Go to section 3.0 of Attachment 5 for data to perform calculations.

6.1.3 Subtract 3.1.5. _____ from 3.1.4 _____ and Multiply that value by the beta correction factor of __5__ for the mRad/hr : _____ mRad/hr. (Gen. Area)

6.1.4 Subtract 3.1.7 _____ from 3.1.6 _____ and multiply that value by the beta correction factor of __5__ for the mRad/hr. : _____ mRad/hr. (Ground)

6.1.5 Subtract 3.1.10 _____ from 3.1.11 _____ for the corrected counts per minute (ccpm) for particulate samples : _____ ccpm.

6.1.6 Calculate the particulate uCi/cc IAW Attachment 6, Air Activity vs. Count Rate Table, or IAW Attachment 7, Air Activity vs. Dose Rate Table, _____ uCi/cc.

6.1.7 Subtract 3.1.12 _____ from 3.1.13 _____ for the corrected counts per minute (ccpm) for iodine samples : _____ ccpm.

6.1.8 Calculate the iodine uCi/cc IAW Attachment 8, Direct Conversion Per Minute to uCi/cc for I-131 : _____ uCi/cc.

ATTACHMENT 6
Page 1 of 1

PARTICULATE AIR ACTIVITY VS. COUNT RATE TABLE

CORRECTED CPM	SAMPLE VOLUME 5 (CUBIC FT.)	SAMPLE VOLUME 10 (CUBIC FT.)	SAMPLE VOLUME 15 (CUBIC FT.)	SAMPLE VOLUME 20 (CUBIC FT.)	SAMPLE VOLUME 25 (CUBIC FT.)	SAMPLE VOLUME 30 (CUBIC FT.)
(ccpm)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)
5.00E+04	1.59E-06	7.95E-07	5.30E-07	3.97E-07	3.18E-07	2.65E-07
4.50E+04	1.43E-06	7.15E-07	4.77E-07	3.57E-07	2.86E-07	2.38E-07
4.00E+04	1.27E-06	6.35E-07	4.23E-07	3.17E-07	2.54E-07	2.12E-07
3.50E+04	1.11E-06	5.55E-07	3.70E-07	2.77E-07	2.22E-07	1.85E-07
3.00E+04	9.53E-07	4.76E-07	3.18E-07	2.38E-07	1.91E-07	1.59E-07
2.50E+04	7.94E-07	3.97E-07	2.65E-07	1.98E-07	1.59E-07	1.32E-07
2.00E+04	6.35E-07	3.17E-07	2.12E-07	1.59E-07	1.27E-07	1.06E-07
1.50E+04	4.77E-07	2.38E-07	1.59E-07	1.19E-07	9.54E-08	7.95E-08
1.00E+04	3.18E-07	1.59E-07	1.06E-07	7.95E-08	6.36E-08	5.30E-08
9.00E+03	2.86E-07	1.43E-07	9.53E-08	7.15E-08	5.72E-08	4.77E-08
8.00E+03	2.54E-07	1.27E-07	8.47E-08	6.35E-08	5.08E-08	4.23E-08
7.00E+03	2.22E-07	1.11E-07	7.40E-08	5.55E-08	4.44E-08	3.70E-08
6.00E+03	1.91E-07	9.55E-08	6.37E-08	4.77E-08	3.82E-08	3.18E-08
5.00E+03	1.59E-07	7.95E-08	5.30E-08	3.97E-08	3.18E-08	2.65E-08
4.00E+03	1.27E-07	6.35E-08	4.23E-08	3.17E-08	2.54E-08	2.12E-08
3.00E+03	9.53E-08	4.76E-08	3.18E-08	2.38E-08	1.91E-08	1.59E-08
2.00E+03	6.35E-08	3.17E-08	2.12E-08	1.59E-08	1.27E-08	1.06E-08
1.00E+03	3.18E-08	1.59E-08	1.06E-08	7.95E-09	6.39E-09	5.30E-09
9.00E+02	2.86E-08	1.43E-08	9.53E-09	7.15E-09	5.72E-09	4.77E-09
8.00E+02	2.54E-08	1.27E-08	8.47E-09	6.35E-09	5.08E-09	4.23E-09
7.00E+02	2.22E-08	1.11E-08	7.40E-09	5.55E-09	4.44E-09	3.70E-09
6.00E+02	1.91E-08	9.55E-09	6.37E-09	4.77E-09	3.82E-09	3.18E-09
5.00E+02	1.59E-08	7.95E-09	5.30E-09	3.97E-09	3.18E-09	2.65E-09
4.00E+02	1.27E-08	6.35E-09	4.23E-09	3.17E-09	2.54E-09	2.12E-09
3.00E+02	9.53E-09	4.76E-09	3.18E-09	2.38E-09	1.91E-09	1.59E-09
2.00E+02	6.35E-09	3.17E-09	2.12E-09	1.59E-09	1.27E-09	1.06E-09
1.00E+02	3.18E-09	1.59E-09	1.06E-09	7.95E-10	6.36E-10	5.30E-10

Calculation Based on: $uCi/cc = \frac{ccpm * 4.5E\text{-}07\ uCi/dpM}{VOL\ (FT^3) * 2.832E{+}4\ (CC/FT^3) * EFF\ (0.10)}$

ATTACHMENT 7
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PARTICULATE AIR ACTIVITY VS. DOSE RATE TABLE

	SAMPLE VOLUME 5 (CUBIC FT.)	SAMPLE VOLUME 10 (CUBIC FT.)	SAMPLE VOLUME 15 (CUBIC FT.)	SAMPLE VOLUME 20 (CUBIC FT.)	SAMPLE VOLUME 25 (CUBIC FT.)	SAMPLE VOLUME 30 (CUBIC FT.)
(mRad/hr)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)
1.00E+03	1.59E-06	7.95E-07	5.30E-07	3.97E-07	3.18E-07	2.65E-07
5.00E+02	1.43E-06	7.15E-07	4.77E-07	3.57E-07	2.86E-07	2.38E-07
1.00E+02	1.27E-06	6.35E-07	4.23E-07	3.17E-07	2.54E-07	2.12E-07
9.50E+01	1.11E-06	5.55E-07	3.70E-07	2.77E-07	2.22E-07	1.85E-07
9.00E+01	9.53E-07	4.76E-07	3.18E-07	2.38E-07	1.91E-07	1.59E-07
8.50E+01	7.94E-07	3.97E-07	2.65E-07	1.98E-07	1.59E-07	1.32E-07
8.00E+01	6.35E-07	3.17E-07	2.12E-07	1.59E-07	1.27E-07	1.06E-07
7.50E+01	4.77E-07	2.38E-07	1.59E-07	1.19E-07	9.54E-08	7.95E-08
7.00E+01	3.18E-07	1.59E-07	1.06E-07	7.95E-08	6.36E-08	5.30E-08
6.50E+01	2.86E-07	1.43E-07	9.53E-08	7.15E-08	5.72E-08	4.77E-08
6.00E+01	2.54E-07	1.27E-07	8.47E-08	6.35E-08	5.08E-08	4.23E-08
5.50E+01	2.22E-07	1.11E-07	7.40E-08	5.55E-08	4.44E-08	3.70E-08
5.00E+01	1.91E-07	9.55E-08	6.37E-08	4.77E-08	3.82E-08	3.18E-08
4.50E+01	1.59E-07	7.95E-08	5.30E-08	3.97E-08	3.18E-08	2.65E-08
4.00E+01	1.27E-07	6.35E-08	4.23E-08	3.17E-08	2.54E-08	2.12E-08
3.50E+01	9.53E-08	4.76E-08	3.18E-08	2.38E-08	1.91E-08	1.59E-08
3.00E+01	6.35E-08	3.17E-08	2.12E-08	1.59E-08	1.27E-08	1.06E-08
2.50E+01	3.18E-08	1.59E-08	1.06E-08	7.95E-09	6.39E-09	5.30E-09
2.00E+01	2.86E-08	1.43E-08	9.53E-09	7.15E-09	5.72E-09	4.77E-09
1.50E+01	2.54E-08	1.27E-08	8.47E-09	6.35E-09	5.08E-09	4.23E-09
1.00E+01	2.22E-08	1.11E-08	7.40E-09	5.55E-09	4.44E-09	3.70E-09
5.00E+00	1.91E-08	9.55E-09	6.37E-09	4.77E-09	3.82E-09	3.18E-09
1.00E+00	1.59E-08	7.95E-09	5.30E-09	3.97E-09	3.18E-09	2.65E-09

Calculation Based on:
(1 mRad/hr. = 5000 ccpm)

$$uCi/cc = \frac{ccpm * 4.5E\text{-}07\ uCi/dpm}{VOL\ (FT^3) * 2.832E{+}4\ (CC/FT^3) * EFF\ (0.10)}$$

ATTACHMENT 8
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DIRECT CONVERSION TABLE OF CORRECTED COUNTS PER MIN. TO uCI/CC I-131

ccpm	uCi/cc	THYROID COMMITTED DOSE EQUIVALENT (mRem/INHALATION hr)
1.13E+01	1.00E-08	1.30E+01
2.26E+01	2.00E-08	2.60E+01
5.65E+01	5.00E-08	6.50E+01
7.92E+01	7.00E-08	9.10E+01
1.13E+02	1.00E-07	1.30E+02
2.26E+02	2.00E-07	2.60E+02
5.65E+02	5.00E-07	6.50E+02
7.92E+02	7.00E-07	9.10E+02
1.13E+03	1.00E-06	1.30E+03
2.26E+03	2.00E-06	2.60E+03
5.65E+03	5.00E-06	6.50E+03
7.92E+03	7.00E-06	9.10E+03
1.13E+04	1.00E-05	1.30E+04
2.26E+04	2.00E-05	2.60E+04
3.40E+04	3.00E-05	3.90E+04
4.53+E04	4.00E-05	5.20E+04

EQUATIONS:

$$\frac{\text{corrected counts per minute (ccpm)}}{\text{(detector efficiency)(collection efficiency)(conversion factor - dpm to uci)(volume - cubic ft.)(conversion factor - cc to cubic ft.)}}$$

WHERE:

2.00E-03 ccpm/dpm	=	DETECTOR EFFICIENCY
90% (0.90)	=	COLLECTION EFFICIENCY
2.22E+06 dpm/uCi	=	CONVERSION FACTOR
10 Cubic Feet	=	VOLUME
2.832E+04 cc to Cubic Feet	=	CONVERSION FACTOR

uCi/cc * Dose Rate Conversion Factor (DRCF) = mRem/Inhalation hr.

WHERE:

1.30E+09 mRem/uCi/cc/hr = Dose Rate Conversion Factor (DRCF) from EPA 400

ATTACHMENT 9
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FIELD MONITORING TEAM RESPONSIBILITIES AND DIRECTIONS

1.0 RESPONSIBILITIES

1.1 The Field Monitoring Team Should Perform The Following:

1.1.1 RECEIVE a briefing from the RPS-Offsite _____

1.1.2 OBTAIN a copy of the completed Form - 4, Field Monitoring Team Briefing Form. _____

1.1.3 OBTAIN a Dimension (DID) or Centrex telephone number for the RPS-Offsite and a hand held radio located next to the Radio base station. _____

Phone #: _____

1.1.4 READ Attachment 14, Package Insert for Thryo-Block Tablets, and SIGN Form – 3, KI Side Effects/Administration Sign Off Form. _____

1.1.5 OBTAIN the Forms Kit briefcase from RPS-Offsite. _____

1.1.6 CHECK seals on Field Monitoring Kits. Perform an inventory of kits in accordance with Emergency Preparedness Procedure 1006, if seal is broken. _____

NOTE

A satisfactory response check would be an upscale response on the Count Rate or Dose Rate instrument, when the instrument is on the lowest scale.

1.1.7 PERFORM response checks on instruments and replace batteries or instrument, if necessary. _____

1.1.8 SIGN on to appropriate Radiation Work Permit and ensure SRDs, are zeroed, if used, and ALNOR is set at 80% of 4500 mRem minus current year to date dose. _____

1.1.9 LOAD the Onsite Field Monitoring Team Kits into the Emergency Van using Attachment 4, Onsite Field Monitoring Equipment Checklist, to help ensure needed items are not left behind _____

1.1.10 PERFORM a radio and a telephone check from the emergency van: _____

SET the radio on frequency

- **1** to contact the Onsite Field Monitoring Team(s) _____
- **4** to contact the Offsite Field Monitoring Team(s). _____

1.1.12 INFORM the RPS-Offsite if the Emergency Van's gas gauge indicates less than 1/2 full, prior to going into the field or at any time while in the field. _____

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PAGE 2 OF 3

1.1.13 REPLENISH Onsite Field Monitoring Team Kits to ensure kits are kept in a ready mode IAW Emergency Preparedness Procedure 1006 at the end of a:

- Drill _____
- Exercise _____
- Declared Emergency _____

1.1.14 PERFORM response checks on instruments used. Inform RPS-Offsite if instrument(s) fails response check. _____

2.0 DIRECTIONS

2.1 The Field Monitoring Team Should Perform The Following:

NOTE

The Onsite Field Monitoring Team should provide input to the RPS-Offsite as they think is necessary concerning plant conditions, sampling, moving to other then assigned locations due to radiological or meteorological conditions. The Onsite Field Monitoring Team members should report conflicting radiological or meteorological conditions to the RPS-Offsite, ASAP.

2.1.1 ENSURE air samples taken using a low volume air sampler should be a total of 10 cubic feet taken at a flow rate not to exceed 2 cfm unless otherwise directed by the RPS-Offsite. _____

2.1.2 PURGE iodine cartridges in low background area outside the plume after collecting the sample. _____

NOTE

Air samples may be taken in accordance with NC.EP-EP ZZ-0306 Emergency Grab Air Sampling and Analysis, if approved by RPS-Offsite.

2.1.3 ENSURE open and closed window readings are be taken at every sampling location. _____

2.1.4 CONTACT with the RPT-Radio should be maintained at least **every 30 minutes.** _____

2.1.5 MAINTAIN contamination controls whenever handling air samples. _____

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2.1.6 STORE all samples in back area of emergency van, unless otherwise directed by the RPS-Offsite. _____

2.1.7 COVER all samples reading 100 mR/hr. or greater on contact with a lead blanket and contact the RPS - Offsite immediately. _____

2.1.8 MONITOR dose rates and check dosimetry upon exiting the plume. _____

2.1.9 FRISK and SURVEY appropriate equipment, as time allows, after exiting the plume to ensure contamination levels are below 50k ccpm smearable contamination. _____

2.1.10 CONTACT RPS-Offsite for further directions on what to do with equipment if contamination levels are 50k ccpm or greater smearable contamination. _____

2.1.11 REFER to Attachment 11, Onsite Emergency Monitoring Locations, for the Onsite Monitoring Locations. _____

2.1.12 REFER to Attachment 12, Offsite Field Monitor Locations, for the Offsite Monitoring Locations. _____

ATTACHMENT 10
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ONSITE PROTECTIVE ACTION GUIDELINES

1.0 RADIATION LEVELS

Dose Rate (mR/hr)	Location	Action
≥ 100	Onsite	Evacuation of all nonessential personnel. Consider evacuation of other personnel.

Dose Rate (mR/hr)	Location	Action
≥ 100	Control Room OSC TSC Control Point	Consider evacuation within one hour, and/or relocation as appropriate.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Onsite	Evacuation of all nonessential personnel Consider immediate evacuation of remaining personnel.

Dose Rate (mR/hr)	Location	Action
≥ 1000	Control Room OSC TSC Control Point	Consider immediate evacuation, and/or relocation upwind of the plume.

2.0 RADIOIODINE

If the Iodine-131 equivalent is calculated or measured in concentrations greater than or equal to 5.0E-7 uCi/cc, consider the use of Potassium Iodide for thyroid blocking. This section is to be applied to areas, in which personnel are working or are planning to work. Refer to Emergency Procedure NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, for additional information.

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ONSITE EMERGENCY MONITORING LOCATIONS

DESIGNATION	LOCATION DESCRIPTION
A-7	Northeast corner of circulating water intake structure.
A-1	End of pier by heli-pad.
B-6	Halfway between north end of circulating water intake and service water intake structure.
C-7	West Corner of "B" Building
B-10	By heli-pad.
B-12	Adjacent to Jet Fuel Storage Tank on wooded fence.
D-5	North of service water structure on security fence.
C-5	Northeast corner of service water structure.
C-6	Chemistry trailer.
C-8	Along sidewalk, 150' north of Unit #1 Guardhouse (at Hose Station).
D-11	Southeast corner of SNGS switchyard, on security fence.
D-4	Security access road, due west of midway between the two Containment Buildings, west of south end of "A" Building.
D-6	On wall of Salem Unit #1 Fuel Handling Building, opposite R-45 shed.
D-7	Closest outside entrance to the Control Point (next to Unit #1 steam mixing bottle).
D-8	Southeast corner of SNGS Cafeteria.
E-4	Northwest corner of security road at right angle (inside fence).
E-6	On wall of Salem Unit #2 Fuel Handling Building, opposite R-45 shed.
E-7	Between Salem Unit #2 Containment Building and Unit #2 Turbine Building.
F-7	Northwest corner of SNGS Unit #2 Turbine Building.
E-8	Northeast corner of SNGS Administration Building

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F-11	Inside site security fence at northeast corner of SNGS switchyard.
F-5	Adjacent to First Aid Trailer.
F-8	Inner Access Road, northeast intersection.
G-7	Adjacent to SE Corner of USNRC Trailer.
G-8	SNGS South Fence Vehicle Access Gate.
G-9	Southwest corner SNGS #2 Warehouse.
H-3	Near the fence between Salem and Hope Creek south of Radwaste Storage Facility.
H-4	Chemical Waste Holding Basin. Near the fence between Salem and Hope Creek 500' northwest of Salem Chemical Waste Holding Basin.
H-5	Near the fence between Salem and Hope Creek near the 907 Building
H-6	Near the fence between Salem and Hope Creek northeast of 906 Building.
H-7	200' West of Security Center.
H-8	Behind Security Center.
I-2	West of Radwaste Storage Facility on lamp post.
I-4	Southwest corner of Hope Creek Reactor Building.
I-6	Hope Creek Unit #1 Turbine Building (Southeast corner of Turbine Building).
I-7	On Hope Creek security fence, 100' east of Southeast corner of Turbine Building.
J-1	Hope Creek Intake Structure.
K-4	Northwest corner of Hope U/2 Reactor Building (Abandoned).
K-6	Northeast corner of Hope Creek Turbine Building.
K-7	On security fence, east of northeast corner of Turbine Building.

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K-1	West of Material Center inside security Fence on lamppost.
L-6	100' southeast of Hope Creek Auxiliary Boiler Building.
M-1	Northwest corner of Hope Creek Security fence.
M-2	Adjacent to Hope Creek Sewerage Treatment facility (Outside Protected Area).
M-3	Inside Hope Creek security fence, 500' east of corner of fence.
M-4	Inside Hope Creek security fence, 100' northwest of fire water tank.
M-5	Inside Hope Creek security fence, North of Aux Boiler House.
N-6	Southwest of Hope Creek Cooling Tower. (Outside Protected Area).
O-1	Along Hope Creek security fence near fuel oil storage tank (Outside Protected Area).
N-5	Along Hope Creek security fence near Circ. Water Building (Outside Protected Area).
O-0	Northwest corner of Hope Creek site, near Cooling Tower Blowdown Outfall Instrument Shelter (Outside Protected Area).

ATTACHMENT 12

OFFSITE EMERGENCY MONITORING LOCATIONS

NOTE

The following pages of this Attachment include Offsite Emergency Monitoring Stations for New Jersey and Delaware. The descriptions and directions to each of the locations are contained in this attachment. Most monitoring points are situated at intersections, end of roads or landmarks. In addition, many points are identified by symbols painted on utility poles. These symbols consist of 2 to 5 letters or numerals (ENE4, etc.) painted in green above 3 orange circles arranged in a triangle. All distances are approximate.

LOCATION	MILE	AZIMUTH	DESCRIPTION
N7	5.8	6.5°	Drive 1.6 miles North on Hancocks Bridge Road from the Hancocks Bridge intersection. Turn left onto Ft. Elfsborg Road proceed 3.5 miles to curve at the intersection of Road 625. The marked pole at the intersection is the monitoring location.
N10	9.6	355.5°	Drive 3.5 miles North on Route 49 from the town of Salem until you reach Lighthouse Road. Turn left onto Lighthouse Road and proceed 2 miles to Fort Mott Road. Turn left onto Fort Mott Road. Proceed 1.5 miles to the end of the road. The marked pole at the end of the road is the monitoring location.
N20	10.5	10°	Drive 3.8 miles North on Route 49 from the town of Salem you reach Richmans Dairy. The monitoring location is located in front of the restaurant.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
NE7	5.8	21°	Drive 1.6 miles North on Hancocks Bridge Road from the Hancocks Bridge Intersection. Turn left onto Ft. Elfsborg Road and proceed 2.2 miles to Amwellbury Road. The marked pole at this intersection is the monitoring location.
NNE8	6.4	11°	Drive 1.6 miles North on Hancocks Bridge Road from the Hancocks Bridge intersection. Turn left onto Ft. Elfsborg Road and proceed 4.2 miles to Country Club Road. The marked pole at the intersection is the monitoring location.
NNE10	8.7	25°	Drive North on Market Street 0.3 miles from the town of Salem. Turn left onto Hancock Avenue and proceed to the end of the Avenue. The marked pole located 50 feet around the corner is the monitoring location.
NNE10a	7.4	26.5°	Drive 0.8 miles South on Walnut Street from East Broadway, to the New Salem High School. The marked pole across the street from the school is the monitoring location.
NNE10b	7.3	10°	Drive 1.6 miles North from the Hancocks Bridge intersection, towards the town of Salem on Hancocks Bridge Road. Turn left onto Ft. Elfsborg Road and proceed 4.3 miles to Sinnickson Landing Road. Turn left and proceed 1.5 miles. After crossing a bridge, the monitoring locations on the left prior to the first house.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
NNE20	10.3	28°	Drive North 2.6 miles on Market Street to the Memorial Hospital of Salem County. The marked pole located in front of the hospital is the monitoring location.
NE4	3.8	50.5°	Drive 0.5 miles North from Hancocks Bridge intersection toward the town of Salem. Turn left onto Front Street, which will become Poplar Street. Front Street is the last street before the bridge. Proceed to the gate located at the end of the road. The marked concrete pole located at the gate is the monitoring location.
NE5	4.1	52°	Drive 0.5 miles North from the Hancocks Bridge intersection toward the town of Salem. Turn left onto Front Street, which will become Poplar Street. Front Street is the last street before the bridge. Proceed 0.9 miles to a farm with a large white and green barn. The marked pole across the street from the farm is the monitoring location.
NE7	5.1	55°	Drive 0.2 miles North from the Hancocks Bridge intersection to the Lower Alloways Creek Municipal Building. The monitoring location is across the street from the Municipal Building on a pole south of the post office.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
NE7a	5.8	40.5°	Drive 1.7 miles North from the Hancocks Bridge intersection toward the town of Salem to the intersection of Hancocks Bridge and Quinton Road and Salem/Hancock Bridge Road. The marked pole is the monitoring location.
NE10	8.8	48.5°	Drive 3.5 miles east from the town of Salem on Route 49 to the intersection of Routes 49 and 581. This is a stoplight located in Quinton. Turn left onto Route 581 and proceed 0.2 miles to the Waterworks Road intersection. The marked pole at this intersection is the monitoring location.
NE20	10.8	45°	Drive East 3.8 miles on Grant Street in the town of Salem to Clancy Road. (Grant Street turns into Quaker Neck Road). The marked pole located at the Clancy Road intersection is the monitoring location.
ENE4	3.7	75°	Drive 3.5 miles on the access road from the Salem and Hope Creek Generating Stations. Located on the west side of the road is an air sampler. The monitoring location is located at the air sampler.
ENE5	4.1	62.5°	Drive 4.8 miles from the Salem and Hope Creek Generating Stations, to the intersection of Grosscup Road. The marked pole located at the Grosscup Road intersection is the monitoring point location.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
ENE7	5.9	65°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store
ENE10	8.6	68°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Proceed straight through the stop light and bear to the left. This should be Harmersville/Peck Corner Cohansey Road. Proceed 2.6 miles to the intersection of Jericho Road. The marked pole at this intersection is the monitoring location.
ENE20	10.5	73°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Proceed straight through the stop light and bear to the left. This should be Harmersville/Peck Corner Cohansey Road. Proceed 4.5 miles to the intersection of Route 49. The monitoring location is at this intersection.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
E1	0.9	106°	The fork in the Access Road between the Salem and Hope Creek Generating Stations. Located on pole to the right of air sampler.
E4	3.5	88°	Drive 3.1 miles from the Salem and Hope Creek Generating Stations, down the Access Road to the sharp bend. The monitoring location is at the sharp bend on the gantry pole.
E7	6.5	85.5°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Proceed straight through the stop light and bear to the left. This should be Harmersville/Pecks Corner Cohansey Road. Turn right onto Canton Road and proceed 3 miles to Frogg Ocean Road. The marked pole located at this intersection is the monitoring location.
E20	12.6	91°	Drive 12.5 miles East, from the town of Salem, on Route 49 to the intersection of East/West Roadstown Road. The marked pole at this intersection is the monitoring location.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
ESE7	6.4	104°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Turn right onto Canton Road and proceed 3.7 miles to Long Bridge Road. Turn right and proceed 1.6 miles to the end of the road. Turn left onto Stow Neck Road and proceed 0.3 miles. The marked pole on is the monitoring location.
ESE10	8.1	103°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Turn right onto Canton Road and proceed 5.2 miles to the intersection of Gum Tree Corner. The monitoring location is at this intersection.
ESE20	11.3	118°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations, to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Turn right onto Canton Road and proceed 3.4 miles to the end of the road. Turn left onto Bacon's Neck Road and proceed 0.3 miles to Market Road. The marked pole located at this intersection is the monitoring location.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
SE10	8.8	129°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Turn right onto Canton Road and proceed 5.2 miles to Gum Tree Corner and bear right onto Gum Tree Corner. Proceed 3.4 miles to the end of the road. Turn right onto Bacon's Neck Road and proceed 0.6 miles until you reach Tindull Island Road. Turn left and proceed 0.2 miles until you reach Bayside Road. Turn left and proceed 2.0 miles to the fork in the road. Take the right fork and proceed to the end of the road. The marked pole located at the end of the road is the monitoring location.
SE20	11.4	125°	Drive 6.8 miles from the Salem and Hope Creek Generating Stations to the Harmersville intersection. The stoplight located at the LAC General Store is the Harmersville intersection. Turn right onto Canton Road and proceed 5.2 miles to Gum Tree Corner and bear right onto Gum Tree Corner. Proceed 3.4 miles to the end of the road. Turn right onto Bacon's Neck Road and proceed 0.6 miles until you reach Tindull Island Road. Turn left and proceed 1.5 miles to Ragged Island Road. Turn left and proceed to the end of the Road. The pole marked at the end of the road is the monitoring location.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
SSE10	9.6	159°	Drive to the Delaware Memorial Bridge and proceed 28 miles on Rte 13 South to Rte 6. Turn left onto Rte 6 and proceed 7.0 miles to the end of the road. The monitoring location is at the end of the road at Wood-land Beach on a telephone pole on the beach.
S5	4.2	187°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Rte 13 South to Odessa. Turn left onto Main St/Rte 299 and proceed 6 miles South to Rd 453.(Rte 299 turns into Rte 9 and Rd 453 is also known as Cedar Swamp Rd).Turn left onto Rd 453 and proceed 2.7 miles to the end of the road. The monitoring location is at the end of the road on a concrete barrier.
S7	6.3	179.5°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Rte 13 South to Odessa. Turn left onto Main St/Rte 299 and proceed South 9 miles to Rd 491.(Rte 299 turns into Rte 9). Proceed 1.4 miles on Rd 491 to the intersection. Monitoring location is at this intersection.
S10	9.1	177°	Drive to the Delaware Memorial Bridge and proceed 28 miles on Rte 13 South to Rte 6. Turn left onto Rte 6 and proceed 4.2 miles to Rte 9. Turn left on Rte 9 and proceed 1.8 miles to Rd 321. The monitoring location is at this intersection.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
SSW4	3.9	203°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Route 13 South to Odessa. Turn left onto Main Street/Route 299 and proceed South 6 miles to Road 453. (Route 299 turns into Route 9 and Road 453 is also known as Cedar Swamp Road). Turn left onto Road 453 and proceed 1.6 miles, the monitoring locations is on the left side of the road.
SSW7	5.6	198.5°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Route 13 South to Odessa. Turn left onto Main Street/Route 299 and proceed 9 miles to Road 454. (Route 299 turns into Route 9 and Road 454 is also known as Saw Mill Road). The monitoring location is at this intersection.
SSW10	9.1	203.5°	Drive to the Delaware Memorial Bridge and proceed 24 miles on Route 13 South to Road 469. (Road 469 is also known as Black Diamond Road). Turn left onto Road 469 and proceed 2 miles to Road 30 and 45. The monitoring location is at this intersection.
SSW20	11.6	199°	Drive to the Delaware Memorial Bridge and proceed 28 miles on Route 13 south to Route 6 in Symra. The monitor location is at this intersection in the back of "Wendy's" parking lot.

ATTACHMENT 12

LOCATION	MILE	AZIMUTH	DESCRIPTION
SW5	4.9	216°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Route 13 South to Odessa. Turn left onto Main Street/Route 299 and proceed 6 miles to Road 453. (Route 299 turns into Route 9 and Road 453 is also known as Cedar Swamp Road). The monitoring location is in the front of light house.
SW7	6.0	235°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Route 13 South to Odessa. Turn left onto Main Street/Route 299 and proceed 3.5 miles to Road 452. (Route 299 turns into Route 9 and Road 452 is also known as Taylor's Bridge Road). The monitoring location is at this intersection in the island.
SW10	9.0	230°	Drive to the Delaware Memorial Bridge and proceed 22 miles on Route 13 South to the intersection of 896. The monitoring location is at this intersection on the south side of Route 13 at the 2nd right of triangle.
SW20	12.3	225°	Drive to the Delaware Memorial Bridge and proceed 22.5 miles on Route 13 south to Road 471. Turn right onto Road 471 proceed 2.5 miles to Road 47. (Road 471 is also known as Salem Church Road and Road 47 is also known as Greenspring/ Vandyke Road). Turn right and drive 1.0 miles to Dexter Corner. The monitoring location is at this intersection on pole with adjacent junction box on the North East corner.

LOCATION	MILE	AZIMUTH	DESCRIPTION
WSW5	4.4	255°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Route 13 South to Odessa. Turn left onto Main Street/Route 299 and proceed 2.6 miles to road 440. (Route 299 turns into Route 9. Road 440 is also known as Thomas Landing Road). Turn right onto Road 440 and drive 0.8 miles to the end of the paved road. Monitoring location is at the end of the paved road.
WSW5a	4.2	263°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 and proceed 11.5 miles to the bridge over the Appoquinimink River. (Rte 72 turns into 9). You will pass W5 monitoring location on the North side of the bridge. Drive 0.5 miles to the monitoring location.
WSW10A	7.7	240°	Drive to the Delaware Memorial Bridge and proceed 20 miles on Route 13 South to Road 25. (Road 25 is also known as Townsend Pine Tree Corner Road). The monitoring location is in the North end of the parking lot at this point.
WSW10	9.4	241°	Drive to the Delaware Memorial Bridge and proceed 20 miles on Route 13 South to Road 25. (Road 25 is also known as Townsend Pine Tree Corner Road). Turn right onto Road 25 and proceed 1.8 miles to the Townsend Elementary School. The monitoring location is at the school.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
WSW20	11.0	242°	Drive to the Delaware Memorial Bridge and proceed 20 miles on Rte 13 South to Rd 25. (Rd 25 is also known as Townsend Pine Tree Corner Rd). Turn right and proceed 3.0 miles to Rd 459. (Rd 459 is also known as Grears Corner Rd). The monitoring location is at this intersection.
W5	4.2	271.5°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 and proceed 11.5 miles to the bridge over the Appoquinimink River. (Rte 72 turns into 9). The monitoring location is on the North side of the bridge.
W7	6.6	264.5°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Rte 13 South to Odessa. Turn left onto Main St/Rte 299. The Monitoring location is at this intersection at the Delaware State Police Station.
W10	9.9	263.5°	Drive to the Delaware Memorial Bridge and proceed 18 miles on Rte 13 South to Odessa. Turn right onto Main St/Rte 299 and proceed 3 miles to Middletown. (Main St/ Rte 299 turns into Rte 9). Turn left onto S. Broad St/Rte 896. The monitoring location is at this intersection at the Fire Station.
W20	11.2	261.5°	Drive to the Del. Memorial Bridge and proceed 18 miles on Rte 13 South to Odessa. Turn right onto Main St/Rte 299 and proceed through the town to the traffic light. At Route 30, turn left and go 0.5 miles to Greers Corner Road.

ATTACHMENT 12

LOCATION	MILE	AZIMUTH	DESCRIPTION
WNW4	3.4	294°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 and proceed to Belts Rd.(Rte 72 turns into Rte 9).Turn left onto Belts Rd and proceed to the lighthouse gate. The monitoring location is at the gate.
WNW5	4.0	295°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 and proceed 10 miles to a sharp 90 curve to the left.(Rte 72 turns into Rte 9). The monitoring location is before the curve across from a 90 curve caution sign on the North side of the road.
WNW7	6.7	291.5°	Drive to the Delaware Memorial Bridge and proceed 14.5 miles on Rte 13 South to Rd 15.(Rd 15 is also known as Boyds Corner Rd). Turn left at light. The monitoring location is in the Wawa parking lot.
WNW10	8.5	288.5°	Drive to the Delaware Memorial Bridge and proceed 14.5 miles on Rte 13 South to Rd 15. Turn right onto Rd 15 and proceed 1.8 miles to Rd 413. (Rd 15 is also known as Boyds Corner Rd and Rd 413 is also known as Jamison Corner Rd). The monitoring location is at the intersection.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
WNW20	10.4	292.5°	Drive to the Delaware Memorial Bridge and proceed 14.5 miles on Rte 13 South to Rd 15. Turn right onto Rd 15 and proceed 3.5 miles to Rte 896 /301.(Rd 15 is also known as Boyds Corner Rd).Turn right onto Rte 896 /301 and proceed 1 mile to the Summit Airport. The monitoring location is at the Summit Airport next to a ditch full of large rocks.
NW4	3.8	315.5°	Drive to the Del. Memorial Bridge & proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 & proceed 8.5 miles to Augustine Bch. (Rte 72 turns into Rte 9). The monitoring location is at Augustine Bch adjacent to sign.
NW7	5.5	312°	Drive to the Del. Memorial Bridge & proceed 14.5 miles on Rte 13 South to Rd 15. Turn left onto Rd 15 & proceed 2.5 miles to the Port Penn intersection. The monitoring location is at this intersection.
NW10	8.4	312°	Drive to the Del. Memorial Bridge & proceed 11 miles on Rte 13 South to St. Georges Bridge. Cross over the bridge & turn right at the first road. The monitoring location is at this intersection.
NW20	11.5	310°	Drive to the Del. Memorial Bridge & proceed 6 miles on Rte 13 South to Rte 301. Bear right onto Rte 301 & proceed 4.5 miles to the intersection of Rd 409. (Rd 409 is also known as St. Georges Rd). The monitoring location is on the south side of RR tracks next to RR signal.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
NNW5	4.2	328°	Drive to the Del. Memorial Bridge & proceed 9 miles on Rte 13 South to Rte 72. Turn left onto Rte 72 and proceed 7.5 miles to the small bridge just south of Port Penn.(Rte 72 turns into Rte 9.) Turn left just prior to the bridge & proceed 0.2 miles to the end of the road. The monitoring location is at the end of the road in front of the sewage plant where an air sampler is located. (NOTE: Map location is wrong. Correction location is about one inch south on map on Rte. 9).
NNW7	5.9	332.5°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Route 13 South to Route 72. Turn left onto Route 72 and proceed 6.5 miles to Torntown Road intersection.(Route 72 turns into Route 9. The monitoring location is on the river side at this intersection.
NNW10	7.8	342°	Drive to the Delaware Memorial Bridge and proceed 9 miles on Route 13 South to Route 72. Turn left onto Route 72 and proceed 4 miles to Delaware City.(Route 72 turns into Route 9). Cross over the small bridge and turn right at the first road.(Follow the signs to the Emergency Plan Center/Governor Bacon Health Center). Turn left at the first road and proceed 0.3 miles to the end of the road. The monitoring location is in the front of the EPC, East of blue garage.

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LOCATION	MILE	AZIMUTH	DESCRIPTION
NNW20	12.3	331°	From Delaware Memorial Bridge take Route 13 South (Delaware) 7.6 miles to Bear-Tybouts Road and make a left. The monitoring point is at the North East Corner of Park & Ride at the light.

ATTACHMENT 13
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DAPA CORRECTION CALCULATIONS

NOTE

"THIS ATTACHMENT IS FOR USE FOR *HOPE CREEK* ONLY!"

DAPA temperature is located on the VAX LA120, Operation Status Board (EOF Menu Selection "2").

1.1 Refer to figure 1 - 1.

1.2 The DAPA Monitor is unreliable and should not be used, if the uncorrected DAPA reading lies below the curve (shaded region).

1.3 Proceed to step 1.4, if the uncorrected DAPA reading lies above the curve.

1.4 Refer to figure 1 - 2.

1.5 Determine a BIAS value to add to the uncorrected DAPA reading by finding the value on the curve that corresponds to the associated average Drywell Air Temperature.

_____	+	_____	=	_____
DAPA Monitor Reading (R/hr)		Bias Value Reading (R/hr)		Corrected DAPA Reading (R/hr)

ATTACHMENT 14
Page 1 of 1

PACKAGE INSERT FOR THYRO-BLOCK TABLETS

1.0 HOW POTASSIUM IODIDE WORKS

- Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.
- In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.
- If you take potassium iodide, it will fill your thyroid gland. This reduces the chance that harmful radioactive iodine will enter the thyroid gland.

2.0 WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicine for a thyroid problem (for example, a thyroid hormone or anti-thyroid drug). Pregnant and nursing women and babies and children may also take this drug.

3.0 HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium Iodide should be taken as soon as possible after public health officials tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than ten days.

4.0 SIDE EFFECTS

- Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.
- Possible side effects include skin rashes, swelling of the salivary glands, and "iodine" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and some times stomach upset and diarrhea).
- A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.
- Taking iodine may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland or enlargement of the thyroid gland (goiter).

5.0 WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide and call a doctor.

ATTACHMENT 15

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OPERATION OF THE VAX LA120 TERMINAL

1.0 METEOROLOGICAL DATA

1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). _____

1.1.2 ENTER MET and depress the RETURN key _____

> **NOTE**
>
> The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15 minute average data will be printed out every 15 minutes

1.1.3 ENTER Option 3 (Disable Automatic Display of MET Data Every 15 minutes) and depress the RETURN key to stop the VAX LA120 from printing out meteorological data every 15 minutes. _____

1.1.4 ENTER Option 1 (Display Current Meteorological Data) and depress the RETURN key to receive the current 15 meteorological data print out. _____

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the RETURN key. (USERNAME should be displayed) _____

1.2.2 ENTER MET and depress the RETURN key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu). _____

1.2.3 ENTER Option 2 (Display Meteorological Data From Data Base) and depress the RETURN key. (Current system Date and Time will be displayed). _____

1.2.4 IF this is the data you want, THEN depress the RETURN key. (Your option will be printed out). _____

1.2.5 IF you want data from an another date and time, THEN go to Step 1.2.6. _____

1.2.6 ENTER start date and time as shown below and depress the RETURN key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). _____

1.2.7 ENTER "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 1.2.6. _____

1.2.8 ENTER the end date and time as shown below and depress the RETURN key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). _____

1.2.9 ENTER "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 1.2.8. _____

2.0 RMS AND MET DATA **(FOR HOPE CREEK ONLY)**

2.1 **Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

2.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). _____

2.1.2 ENTER EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). _____

ATTACHMENT 15

2.1.3 ENTER the letters EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed.) _____

2.1.4 SELECT Option 1 for Hope Creek. _____

2.1.5 DEPRESS the RETURN key. (The EOF Report Options Menu will be displayed). _____

2.1.6 ENTER Option 1 (Current RMS Status) and depress the RETURN key. (The most current instantaneous RMS and 15 minute MET data will be printed out.) _____

2.2 **Perform The Following Steps to Obtain 15 Minute Average RMS Data:**

2.2.1 DEPRESS the RETURN key. (USERNAME should be displayed). _____

2.2.2 ENTER EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). _____

2.2.3 ENTER EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed). _____

2.2.4 SELECT option 1 for Hope Creek. _____

2.2.5 DEPRESS the RETURN key. (The EOF Report Options Menu should be displayed). _____

2.2.6 SELECT and enter option number 6 (15 Minute Historical Data). (Current system date and time should be displayed. A prompt should be displayed for start date and time) _____

2.2.7 DEPRESS the RETURN key for 15 minute average RMS and MET data. (Your selection will be printed). _____

ATTACHMENT 16

INSTRUCTIONS FOR SALEM SPDS DISPLAYS

1.0 SALEM 1 & 2 SPDS RADIOLOGICAL SCREEN INSTRUCTIONS

1.1 Follow The Steps Below In The Listed Order, To Display SPDS Radiological Screens.

NOTE

Values in Red with "HH" displayed are in HIGH HIGH ALARM.
Values in YELLOW with "H" displayed are in HIGH ALARM.

Form – 7, SPDS RMS Log, may be used to record SPDS RMS values.

1.1.1 DEPRESS the UNIT MASTER MENU Key _____

1.1.2 DEPRESS and hold the "SHIFT" key, while depressing the number 5 key. (Radiation Monitor Screen 1 will be displayed. This screen (Radiation Monitor Screen 1 will be displayed. This screen consists of instantaneous values for the RMS monitors listed below). _____

- R46A-E Main Steam Line Mon
- R44A/B Containment Post LOCA Rad Mon
- R11A Containment Particulate
- R12A Containment Noble Gas
- R12B Containment Iodine
- R44A/B Integ Dose Containment Post LOCA Rad Mon

1.1.3 DEPRESS and hold the "SHIFT" key, while depressing the number 2 key. (Radiation Monitor Screen 2 will be displayed. This screen consists of RMS instantaneous monitor values listed below). _____

- R45B Plant Vent Accident Mon (Medium Range Noble Gas)
- R45C Plant Vent Accident Mon (High Range Noble Gas)
- R16 Plant Vent Gas Eff
- R41A Low Range Noble Gas
- R41B Mid Range Noble Gas
- R41C High Range Noble Gas
- R43 Aux Building Roof Mon
- Unit 1 or 2 Noble Gas Release Rate
- Combined Noble Gas Release Rate

1.1.4 DEPRESS and hold the "SHIFT" key, while depressing the number 3 key. (Radiation Monitor Screen 3 will be displayed. This screen consists of RMS 15 minute average monitor values listed below).

- ____ R46A-E Main Steam Line Mon
- R44A/B Containment Post LOCA Rad Mon
- R11A Containment Particulate
- R12A Containment Noble Gas
- R12B Containment Iodine

1.1.5 DEPRESS and hold the "SHIFT" key, while depressing the number 4 key. (Radiation Monitor Screen 4 will be displayed. This screen consists of RMS 15 minute average monitor values listed below).

- Plant Vent Airflow to Atmosphere (Plant Vent Flow Rate)

- R45B Plant Vent Accident Mon (Medium Range Noble Gas)
- R45C Plant Vent Accident Mon (High Range Noble Gas)
- R16 Plant Vent Gas Eff
- R41A Low Range Noble Gas
- R41B Mid Range Noble Gas
- R41C High Range Noble Gas
- R43 Aux Building Roof Mon

1.1.6 RECORD RMS values on Log 4, SPDS RMS Log. _____

2.0 **SALEM 1 & 2 SPDS RADIOLOGICAL SCREEN TRENDING INSTRUCTIONS**

2.1 **Perform The Steps Listed Below In The Listed Order, To Trend SPDS Radiological Monitors.**

2.1.1 DISPLAY the screen that lists the monitor you want to trend. _____

2.1.2 DEPRESS the "DATA ENTRY FORWARD" key to move the cursor to the radiation monitor that is to be trended. _____

2.1.3 DEPRESS the "TREND" key. _____

2.1.4 DEPRESS the "Page Down" key to display the trending of the monitor. _____

2.1.5 DEPRESS the "Page Up" key to return to Radiation Monitor Screen 1. _____

3.0 **RML SCREEN INSTRUCTIONS**

DEPRESS The RML Key To Display The Dome Screen. _____

4.0 **RML SCREEN INSTRUCTIONS**

DEPRESS The RM Key To Display Any Abnormal Releases In Progress. _____

FORM – 1

Page 1 of 1

FIELD SAMPLING FORM

DATE/ TIME	TEAM NAME	LOCATION	OPEN WINDOW GRD (mR/hr)	CLOSED WINDOW GRD (mR/hr)	OPEN WINDOW GA (mR/hr)	CLOSED WINDOW GA (mR/hr)	CART. READING (ccpm)	PART. READING (ccpm)

FORM – 2

Page 1 of 1

DOSIMETRY LOG

NAME	DOSIMETER NUMBER	ISSUED DATE	RTN DATE	INTIAL VALUE (mRem)	END VALUE (mRem)	TOTAL DOSE (mRem)

FORM - 3

Page 1 of 2

KI SIDE EFFECTS/ADMINISTRATION SIGN OFF FORM

AUTHORIZED BY: _____

ADMINISTERED BY: _____

My signature indicates that I have read and understand Attachment 14 Package Insert For Thyroid Blocking Tablets.

PRINT NAME	SOCIAL SEC. NO.	INDIVIDUAL'S SIGNATURE	DATE/TIME	COMMENTS

FORM – 3

Page 2 of 2

NAME OF INDIVIDUAL	SOCIAL SEC. NO.	KI DOSAGE	AUTHORIZED BY DATE/TIME	ADMINISTERED BY DATE/TIME	COMMENTS

FORM – 4

Page 1 of 3

FIELD MONITORING TEAM BRIEFING FORM

1.0 **TEAM BRIEFING**

1.1 **The RPS – Offsite Should Ensure The Following Information Is Completed:**

1.1.1 RPS-Offsite : _____/_____/_____
(PRINT/SIGN) (DATE)

1.1.2 Event Classification/Time : _____/_____

1.1.3 Plant Conditions : _____

_____

_____

1.1.4 Wind Direction : (Expected Plume Direction)

- From : _____ (Degrees) To : _____ (Degrees)
- From : _____ To : _____

1.1.5 Specific Monitoring Location(s) If Applicable

- From : _____ To : _____
- Landmarks (If Applicable) _____

1.1.6 Initial areas or locations to be surveyed: (Refer to Onsite Emergency Monitoring Locations Map or 10 Mile EPZ Map located in the Field Monitoring Kit, as appropriate).

_____

_____

_____

_____

1.1.7 Wind Speed : _____(MPH)

1.1.8 Protective Clothing Requirements : _____

_____

_____

_____

FORM – 4

Page 2 of 3

NOTE

Field Monitoring Team members must be respirator qualified prior to instruction them to wear respirators.

1.1.9 Respiratory Protection Requirements: _____

_____

1.1.10 Additional Specific Radiological Concerns: _____

_____

_____

1.1.11 Color Name for Onsite Team and Members of Team:

- Red Team: Name of Team Leader: _____
  Name of Team Member: _____
- Blue Team: Name of Team Leader: _____
  Name of Team Member: _____
- Green Team: Name of Team Leader: _____
  Name of Team Member: _____

1.1.12 Phonetic Alphabet Name for Offsite Team and Members of Team:

- Alpha Team: Name of Team Leader: _____
  Name of Team Member: _____
- Bravo Team: Name of Team Leader: _____
  Name of Team Member: _____

FORM – 4

Page 3 of 3

Personnel Attending Briefing:

NAME (PRINT)	NAME (SIGNATURE)	SOCIAL SECURITY NUMBER	REMAINING DOSE FOR FIELD TEAM MEMBER (REM)

FORM – 5

Page 1 of 1

TLD ISSUE LOG

Name_____

Date_____

TLD Number_____ Badge Number_____

To the best of my knowledge, my current annual exposure is _____mrem.

Signature_____

Date_____

****
****

Name_____

Date_____

TLD Number_____ Badge Number_____

To the best of my knowledge, my current annual exposure is _____mrem.

Signature_____

Date_____

****
****

Name_____

Date_____

TLD Number_____ Badge Number_____

To the best of my knowledge, my current annual exposure is _____mrem.

Signature_____

Date_____

FORM – 6

Page 1 of 1

HABITABILITY LOG

DATE:

LOCATION	TIME	DOSE RATE (mR/hr)	CONTAMINATION (CPM)	INITIALS

IF other means are used to ensure habitability, THEN list: _____

_____

_____

FORM – 7

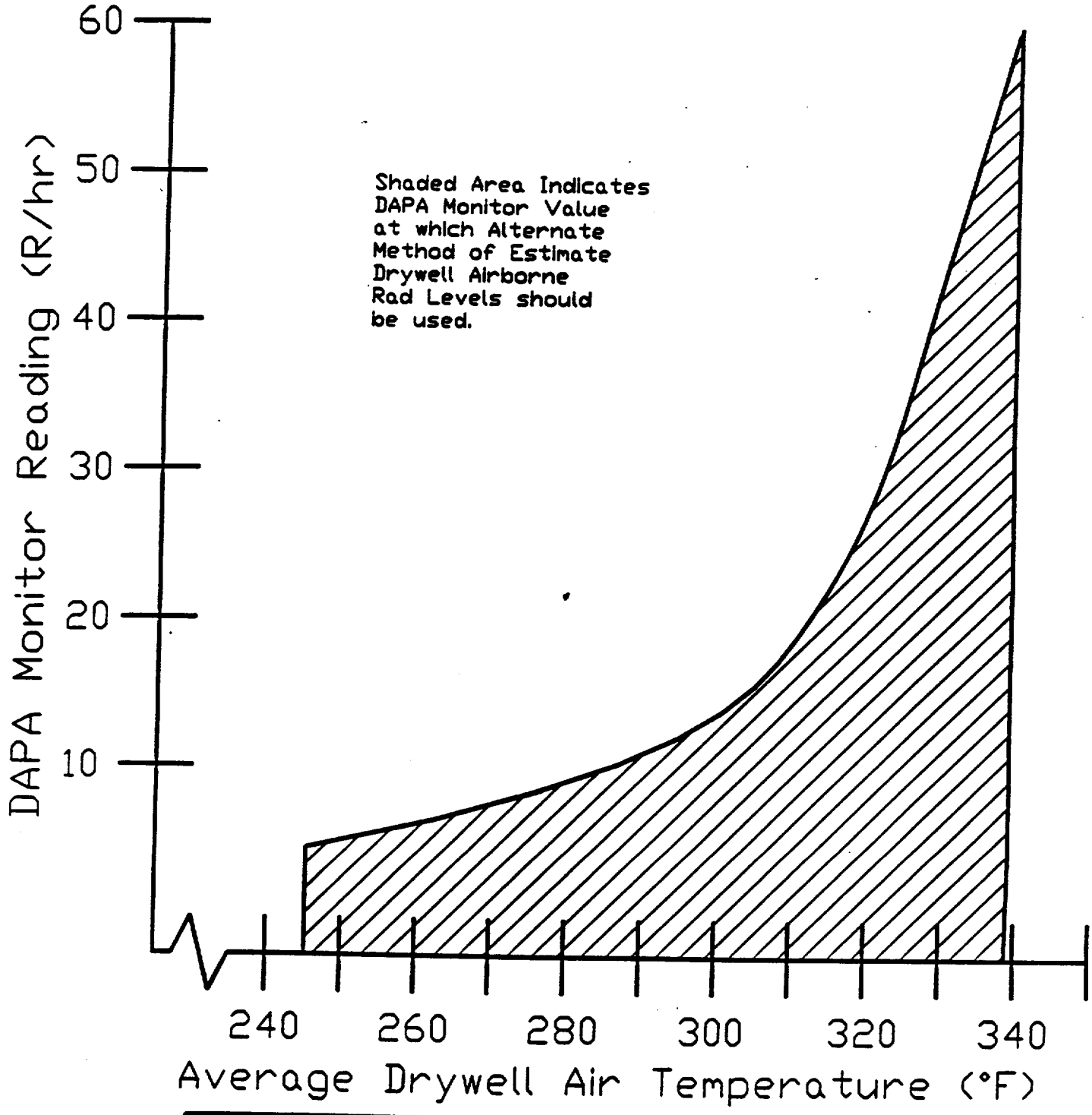
Page 1 of 1

SPDS RMS LOG (SALEM ONLY)

Date/Time: ____-____-____/____:____ Salem Unit ____

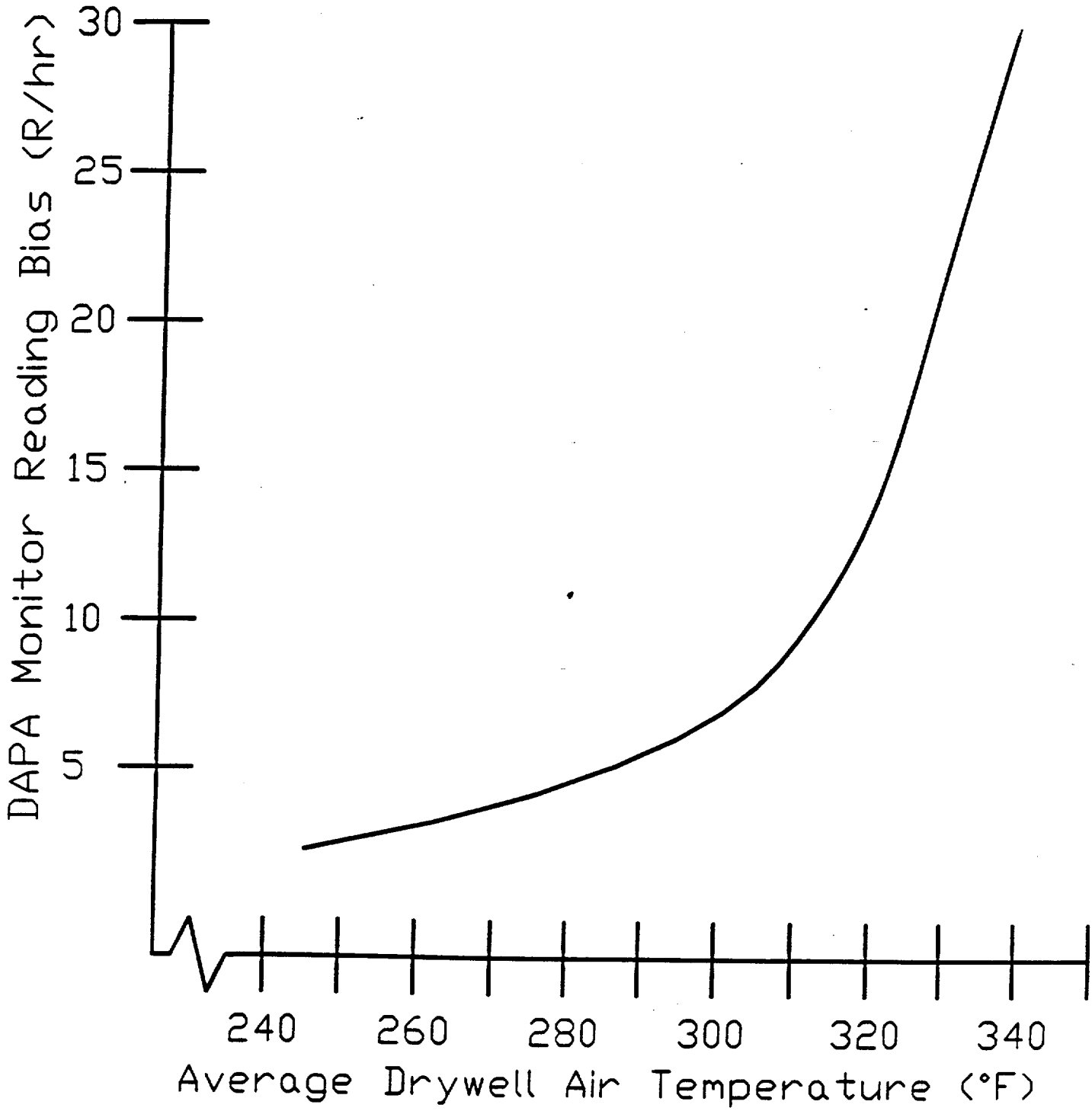
Location on SPDS	Monitor Number	Description of Monitor	Value of Monitor	Units
Screen 1/3	R46A	Main Steam Line Mon	_____	mR/hr
Screen 1/3	R46B	Main Steam Line Mon	_____	mR/hr
Screen 1/3	R46C	Main Steam Line Mon	_____	mR/hr
Screen 1/3	R46D	Main Steam Line Mon	_____	mR/hr
Screen 1/3	R46E	Main Steam Line Mon	_____	mR/hr
Screen 1/3	R44A	CNTMT Post LCOA Mon	_____	R/hr
Screen 1/3	R44B	CNTMT Post LOCA Mon	_____	R/hr
Screen 1/3	R11A	CNTMT Particulate Mon	_____	cpm
Screen 1/3	R12A	CNTMT Noble Gas Mon	_____	cpm
Screen 1/3	R12B	CNTMT Iodine Mon	_____	cpm
Screen 4	R16	Plant Vent Gas Mon	_____	cpm
Screen 2/4	R41A	Low Range Noble Gas Mon	_____	uCi/cc
Screen 2/4	R41B	Mid Range Noble Gas Mon	_____	uCi/cc
Screen 2/4	R41C	High Range Noble Gas Mon	_____	uCi/cc
Screen 2/4	R45B	Plant Vent Accident Mon (Min Range Noble Gas Back-up)	_____	uCi/cc
Screen 2/4	R45C	Plant Vent Accident Mon (High Range Noble Gas Back-up)	_____	uCi/cc

FIGURE 1-1
DAPA CORRECTION FIGURE
Page 1 of 2



NOTE:
No Correction to the DAPA Monitor is Required below 245°

FIGURE 1-2
Page 2 of 2



NOTE:
No Correction to the DAPA Monitor is Required below 245°

PSEG NUCLEAR

NC.EP.EP-ZZ-0312(Q) - REV. 1

CHEMISTRY SUPERVISOR – CP/TSC RESPONSE

USE CATEGORY: II

REVISION SUMMARY:

PSE&G
CONTROL
COPY # EPIP059

1. This procedure deleted an incorrect reference in step 5.1.19.
2. This revision satisfies the requirement for a biennial review.

IMPLEMENTATION REQUIREMENTS:

This procedure is effective for use upon issue.

APPROVED: _____ 3/22/12
Manager – EP & IT — Date

APPROVED: _____ N/A
Vice President - Operations — Date

CHEMISTRY SUPERVISOR – CP/TSC RESPONSE

TABLE OF CONTENTS

1.0 PURPOSE

Provide instruction and guidance to the Hope Creek/Salem Chemistry Supervisor – CP/TSC during a declared emergency.

2.0 PREREQUISITES

2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

2.1.1 Implement this procedure at an Alert or higher event classification, at the request of the Operations Supervisor (OS), or at the request of the Emergency Duty Officer (EDO), or Radiological Assessment Coordinator (RAC).

2.1.2 Personnel who implement this procedure shall be trained and qualified in accordance with Emergency Preparedness training requirements.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

3.1.1 Copies of additional attachments should be made to record recurring steps, as appropriate.

3.1.2 The user may deviate from following procedure steps in written order if it is thought by the user that emergency conditions warrant it.

3.1.3 It is recommended that initials be used instead of check marks, if more then one person implements this procedure.

4.0 EQUIPMENT/MATERIAL REQUIRED

As provided in the Emergency Response Facility.

5.0 PROCEDURE

NOTE

The Chemistry Supervisor – CP/TSC reports directly to the Radiological Assessment Coordinator (RAC).

5.1 The Chemistry Supervisor – CP/TSC Should Perform The Following:

NOTE

The Chemistry Supervisor – CP/TSC may locate at the CP or the TSC as thought necessary.

5.1.1 REPORT initially to the Control Point. _____

5.1.2 REPORT to the RAC and obtain a briefing. This may be done over the phone. _____

5.1.3 OBTAIN a briefing from the Chemistry Shift Technician located at the CP. _____

5.1.4 OBTAIN a current status of the Chemistry related systems for Salem or Hope Creek, as applicable, listed in Attachment 1, Salem/Hope Creek Chemistry Systems. _____

5.1.5 NOTIFY the Control Room (CR) that all Chemistry Sample requests should be directed through you. _____

5.1.6 OBTAIN Chemistry log from Chemistry Technician and ensure log is being kept. _____

5.1.7 DOCUMENT the status of Chemistry related systems in the Chemistry log, if plant conditions change. _____

5.1.8 EVALUATE the chemistry related systems impacted during the emergency, and brief the RAC as conditions warrant. _____

5.1.9 REFER to Attachment 2, Chemistry Guidelines - Power Operation, for actions to consider, if the plant is operating. _____

5.1.10 REFER to Attachment 3, Chemistry Guidelines - Power Reduction, for actions to consider, if there has been a power reduction >15%. _____

5.1.11 **For Salem:** REFER to Attachment 4, Chemistry Guidelines – Reactor Trip, for actions to consider, if there has been a Reactor Trip. _____

5.1.12 **For Hope Creek:** REFER to HC.CH-GP.ZZ-0006(Q), Chemistry Scram Response, for actions if there has been a Reactor Scram. _____

5.1.13 INITIATE an emergency sample log, as necessary. _____

5.1.14 **For Salem:** IF a primary to secondary leak is suspected or is in progress, THEN REFER to Attachment 7, Chemistry Guidelines - Primary to Secondary Leak, for actions that should be considered for implementation. _____

5.1.15 REFER to Attachment 6 IF:

- Status of outside systems is required during power operation. _____

- Actions to Outside Systems are required due to power reduction. _____
- Actions to Outside Systems are required due to Reactor SCRAM. _____
- Chemistry Technicians are to be sent outside the Protected Area. _____

5.1.16 COORDINATE and direct emergency chemistry actions, sampling, and analysis functions. _____

CAUTION

Elevator use should be limited to transporting equipment unless Site Protection indicates that the elevator is needed to move an injured person.

5.1.17 **For Hope Creek:** IF PASS sampling is likely to be performed at Hope Creek THEN VERIFY that the Service Radwaste Elevator is operational, (The Service Radwaste Elevator Number is 31-04 and is energized from MCC 00B474-034). _____

5.1.18 COORDINATE the activation of the PASS system. (Guidance and information are provided in Attachment 5, Chemistry Guidelines – PASS). _____

5.1.19 COORDINATE applicable surveillances with the RAC and the Shift Chemistry Technician. _____

NOTE

An individual, in lieu of a team, may be dispatched by the Chemistry Supervisor - CP after OSC Coordinator notification and approval. The individual should be in contact with the Control Point or the OSC via some type of audio communications, (page, radio, or telephone), and should check in every 15 minutes.

Using an individual in lieu of a team should be the exception and not the norm.

5.1.20 USE a team in the field instead of an individual IF:

- Exposure is expected to exceed 1000 mRem. _____
- The task would require entry into "Harsh Environment Area", (i.e.: a steam atmosphere, a heat stress area, etc.). _____

- Acts of sabotage or suspected sabotage. _____

5.1.21 ENSURE that the Radiation Protection Supervisor – Exposure Control or the OSC Coordinator has been notified prior to dispatching Chemistry Teams. This should be done remotely (telephone, page, radio, etc.). _____

5.1.22 DISPATCH Chemistry Teams as required for appropriate actions (i.e., sampling, chem feed controls, etc.). _____

5.1.23 EVALUATE sample analysis data, as results become available. _____

5.1.24 MAINTAIN communications with the Chemistry Technicians at the CP, and brief as conditions warrant. _____

NOTE

The **Salem** Containment Sump pH must be adjusted to a value > 7.0 within 48 hours of initiation of recirculation. This is required to preclude chloride induced stress corrosion cracking of stainless steel.

EP96-005

5.1.25 IF the **SALEM** Containment Spray did not activate, THEN SAMPLE the **SALEM** Containment Sump for pH and chlorides within 24 hours of initiation of recirculation mode of core cooling, _____

5.1.26 IF the sample results of the **Salem** Containment Sump indicate a pH of < 7.0, THEN REQUEST the TSC to establish a plan to increase pH to a value > 7.0 within 48 hours of recirculation actuation, _____

5.1.27 NOTIFY the RAC and Nuclear Fuels Engineer - TSC of PASS sample analysis results. _____

5.1.28 CONSIDER the status of liquid effluent releases using appropriate Chemistry procedure(s), to quantify sample results. _____

5.1.29 ASSIST in the evaluation and resolution of radioactive waste problems and activities as conditions warrant. _____

5.1.30 BRIEF the RAC as data and information warrant. _____

5.1.31 REQUEST that the RAC augment chemistry staff as necessary. _____

5.1.32 BRIEF the RAC of potential unmonitored release paths as situations warrant. _____

5.1.33 IF **HOPE CREEK'S** Standby Liquid Control has been injected, THEN consider refilling the **Hope Creek** SLC tank using Procedure HC.CH-AD.BH-0001(Q). _____

NOTE

In accordance with NUREG 0737, a PASS sample shall be analyzed for chlorides within 96 hours during post accident conditions. The following steps outline how this should be done to meet this criteria as the need arises.

5.1.34 PERFORM the following steps to ship a PASS sample to Babcock and Wilcox for analysis:

A. NOTIFY the Radiation Protection Supervisor-Radioactive Material Control (RPS-RMC) that the NUPAC PAS - 1 Shipping Cask is needed to transport a large volume PASS sample offsite to Babcock and Wilcox. _____

B. PHONE Robert Smith at 205-992-6820 or the PIMS Technician at 803-776-4714 to request the Shipping Cask. _____

NOTE

The following information should be prepared to be given to Babcock and Wilcox:

- The name of the person calling and the plant involved. _____
- The name and phone number of the responsible person at the utility to whom follow-up communication should be addressed. _____
- The number and type of samples to be shipped (liquid and/or gaseous). _____
- Measured radiation levels from the shipping container on contact and at three feet. If not known at time of initial phone call, call back as soon as the values are known. _____
- The estimated shipping time and time of arrival at the Laboratory. If not known at time of initial phone call, call back as soon as the ETA is known.

C. NOTIFY Babcock and Wilcox that a PASS sample is going to be shipped to them for chloride analysis at 804-522-5833. _____

D. TRANSPORT and load the PASS sample as directed by the RPS-RMC. _____

NOTE

Assembly shall be implemented after the declaration of an Alert Emergency Condition.

Accountability shall be implemented after the declaration of a Site Area Emergency, and/or implemented at any time after assembly, at the discretion of the Emergency Coordinator.

5.1.35 COORDINATE with the Shift Radiation Protection Technician (SRPT), or the Onshift Radiation Protection Technician ORPT), accountability utilizing the guidance provided in Attachment 8, Assembly/Accountability Instruction - Control Point. _____

5.1.36 COORDINATE with the RAC, SRPT/ORPT, and Chemistry Technician - CP, relocation of the Control Point, if required. Utilize Attachment 9, Chemistry – Control Point Evacuation Checklist. _____

5.1.37 **Salem Chemistry** COORDINATE with Hope Creek Chemistry to act as Salem's Count Room, if the Salem Count Room can not be used. _____

5.1.38 **Hope Creek Chemistry** COORDINATE with Salem Chemistry to act as Hope Creek's Count Room, if the Hope Creek Count Room can not be used. _____

6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent to the Manager – EP & IT.

7.0 REFERENCES

7.1 References

7.1.1 Nuclear Business Unit Emergency Plan

7.2 Cross References

7.2.1 NC.NA-AP.ZZ-0311(Q), Control Point – Chemistry Response

7.2.2 Nuclear Administrative Procedure NC.NA-AP.ZZ –0005
7.2.3 Sampling the Primary Condensate Pumps HC.CH-SA.AD-0001(Q)
7.2.4 Operation of the Demineralized Water Make-Up Plant HC.CH-SO. AN-0001(Q)
7.2.5 Environmental Monitoring and Compliance Sampling HC.CH-TI.ZZ-0003(Q)
7.2.6 Operation of the Zinc Injection System HC.CH-SO.BQ-0001(Z)
7.2.7 Operation of the Reactor Water Cleanup System HC.CH-SO.BG-0001(Q)
7.2.8 Condensate Demineralizer System Service Vessel Operation HC.CH-SO.AK-0001(Q)
7.2.9 Hydrogen/Oxygen Injection System Operation HC.CH-SO.AX-0001(Q)
7.2.10 Condensate Oxygen Injection System Operation HC.CH-SO.AX-0005(Q)
7.2.11 Post Accident Sample Panel Operation HC.CH-EO.SH-0001(Q)
7.2.12 Post Accident Sample Analysis HC.CH-EO.SH-0004(Q)
7.2.13 Post Accident Sample Dilution HC.CH-EO.SH-0005(Q)
7.2.14 Transporting Post Accident Sampling System Sampler HC.CH-EO.SH-0007(Q)
7.2.15 Sampling From the Turbine Building Sample Station (BOP Panel) HC.CH-SA.RC-0001(Q)

7.3 **Commitments**

Emergency Preparedness Commitment EP96-005

ATTACHMENT 1

Page 1 of 1

SALEM AND HOPE CREEK CHEMISTRY SYSTEMS

1.0 **Salem Systems**

- (CP) Condensate Polishing System
- (DM) Demineralized Water Make Up
- (CF) Chemical Feed Systems
- (SS) Sampling Systems
- (CL) Chlorination Systems
- (LW) Non-Radioactive Liquid Waste Disposal System
- (PAS) PASS Sampling

2.0 **Hope Creek Systems**

- (AK) Condensate Demineralizers
- (AN) Demineralized Water Make Up, Storage and Transfer
- (AQ/BQ) Chem. Control - Zinc - Condensate and Feedwater
- (AX) Hydrogen and Oxygen Injection Systems
- (BG) Reactor Water Clean Up System Filtration and Demineralization (RWCU)
- (DD) Circ Water Hypochlorination
- (DE) Circ Water Caustic Addition
- (DF) Cooling Tower Blowdown Dechlorination
- (ED) RACS Demineralization System (Reactor Auxiliary Cooling System)
- (EG) SACS Demineralization System (Safety Auxiliary Cooling System)
- (EQ) Service Water Hypochlorination
- (GB) Chilled Water System Filtration and Demineralization
- (LB) Storm Drainage
- (LD) Chemical Waste
- (LE) Oily Waste
- (RC) Process Sampling
- (SH) PASS Sampling
- (HA) Offgas System

ATTACHMENT 2

CHEMISTRY GUIDELINES - POWER OPERATION

1.0 **Salem**

1.1 IF a RCS sample is requested, and general area dose rates at the primary sample panel permit, THEN SAMPLE RCS using appropriate Chemistry procedure. _____

1.2 IF dose rates at the sample panel do not permit, THEN REFER to Attachment 5, Chemistry Guidelines - PASS. _____

1.3 IF the data obtained is out of specification or suspect, THEN OBTAIN and analyze the applicable sample(s). _____

1.4 DETERMINE if the status of the Demin Water Storage Tanks are at an acceptable level. _____

1.5 IF tank levels are not acceptable, THEN MAKE - UP to the tanks using appropriate Chemistry procedures. _____

2.0 **Hope Creek**

2.1 REVIEW current reactor water chemistry data. _____

2.2 IF a Reactor Water sample is requested, and general area dose rates at the sample panel permit, THEN SAMPLE Reactor Water at the sample panel. _____

2.3 IF dose rates at the sample panel do not permit, THEN REFER to Attachment 5, Chemistry Guidelines - PASS. _____

2.4 SAMPLE the Off Gas system, as required, using appropriate procedures. _____

2.5 OBTAIN current chemistry data on the Condensate Polisher system and review instrument readings. _____

2.6 CHECK the status of the Demin Water Storage Tanks on panel 00C118 and make up to demin water tanks as required. _____

2.7 CHECK status of the outside systems (Service Water, Circ Water, and Cooling Tower Blowdown) IAW Attachment 6, Chemistry Guidelines – Outside Systems. _____

2.8 CHECK status of the Hydrogen Water Chemistry Injection System. _____

ATTACHMENT 3
Page 1 of 2

CHEMISTRY GUIDELINES - POWER REDUCTION

1.0 **Salem**

1.1 IMPLEMENT the actions listed in Attachment 6, Chemistry Guidelines - Outside Systems, Section 1.0. _____

1.2 IF dose rates permit, THEN OBTAIN an RCS sample 2-6 hours after a power reduction of ≥ 15%/hr. at normal sampling locations using appropriate Chemistry procedure. _____

1.3 IF dose rates do not permit, THEN REFER to Attachment 5, Chemistry Guidelines - PASS. _____

1.4 IF the data obtained is out of specification or suspect, THEN OBTAIN and analyze the applicable sample(s). _____

1.5 CHECK the status of the Demin Water Storage Tanks and determine if they are at an acceptable level. _____

1.6 IF tank levels are not acceptable, THEN MAKE - UP to the tanks using appropriate Chemistry procedures. _____

1.7 UTILIZE other Chemistry Department procedures for power reduction as appropriate. _____

2.0 **Hope Creek**

2.1 MONITOR the effect of reduced power on outside systems IAW HC.CH-TI.ZZ-0003(Q). _____

2.2 CHECK the status of the RWCU System, and if appropriate, reset vessel flow at the RWCU Panel 10076. _____

2.3 REVIEW all instrument readings from the RWCU sample panels. _____

2.4 IF dose rates permit at the sample panel, THEN OBTAIN a Reactor Water sample 2-6 hours after the power reduction at the normal sample point. _____

2.5 IF dose rates do not permit, THEN REFER to Attachment 5, Chemistry Guidelines - PASS. _____

2.6 SAMPLE the Off Gas System as required IAW procedure HC.CH-SA.HA-0001(R). _____

2.7 OBTAIN current chemistry data on the Condensate System. _____

ATTACHMENT 3

Page 2 of 2

2.8 REVIEW instrument readings at the Condensate Polishers and ensure that flows are above 3000 gpm. _____

2.9 CHECK the status of the Demin Water Storage Tanks at Panel 00C118 and make up to the demin tanks as required. _____

ATTACHMENT 4

CHEMISTRY GUIDELINES – SALEM REACTOR TRIP

1.0 **Salem Trip**

1.1 IF dose rates permit, THEN OBTAIN an RCS sample 2-6 hours after a power reduction of ≥ 15%/hr. at normal sampling locations using appropriate Chemistry procedure. _____

1.2 IF dose rates do not permit; THEN REFER to Attachment 5, Chemistry Guidelines – PASS. _____

1.3 CHECK the status of the Condensate Polishers and isolate vessels as necessary to maintain adequate flow for the in service vessels. _____

1.4 CHECK the status of the Demin Water Storage Tanks and determine if they are at an acceptable level. _____

1.5 IF the Demin Water Storage Tank's levels are not acceptable, THEN MAKE - UP to the tanks using appropriate Chemistry procedures. _____

1.6 UTILIZE other Chemistry Department procedures for shutdown as appropriate. _____

ATTACHMENT 5

Page 1 of 3

CHEMISTRY GUIDELINES - PASS

NOTE

The plant's current operational condition will determine the appropriate sample location. Utilize the sample location lists below to help in making this determination.

1.0 **SALEM SAMPLE TYPES**

1.1 IF samples are requested for fuel damage assessment, THEN OBTAIN a sample using the preference list for sample type listed below:

- RCS Loop – Liquid _____
- RHR/Containment Sump - Liquid _____
- RCS/RHR – Gas _____

1.2 IF samples are requested for source term determination, THEN OBTAIN a sample using the preference list for sample type listed below:

- RCS/RHR – Gas _____
- RCS Loop – Liquid _____
- RHR/Containment Sump – Liquid _____

1.3 IF the Containment is to be vented or purged, THEN OBTAIN a sample from the Containment Atmosphere – Gas. _____

2.0 **COORDINATION AND STORAGE OF PASS AT SALEM STATION**

NOTE

Figure – 1, Salem PASS Storage Location, illustrates the PASS storage locations outlined in step 2.1.

2.1 REFER to Figure – 1 to ensure the transportation and storage of post accident samples in one of the acceptable storage locations listed below occurs. _____

- Blowdown panel room, elevation 100'. A lead brick cave will be available for optimum shielding. **(a)** _____
- Fuel handling annex (small truck bay) elevation 100'. **(b)** _____
- Hot drum storage cask labyrinth, adjacent to Fuel Handling Building yard, elevation 100'. **(c)** _____
- Hot drum storage area, elevation 100', Solid Radwaste. **(d)** _____
- Waste evaporator bottoms hold tank area, elevation 100'. **(e)** _____

2.2 ENSURE that radiation protection provides escorts, survey, posting, and shielding as appropriate. _____

2.3 ENSURE that all samples are labeled, and entered in the Chemistry Emergency Log including storage location. _____

2.4 KEEP the Chemistry Supervisor – CP/TSC informed of transportation and storage activities. _____

NOTE

The plant's current operational condition will determine the appropriate PASS sampling location. Utilize the sample location lists below to help in making this determination.

3.0 **HOPE CREEK SAMPLE TYPES**

3.1 IF samples are requested for fuel damage assessment, THEN OBTAIN a sample using the preference list for sample location listed below:

- Jet Pump – Liquid _____
- RHR – Liquid (RHR Loop A - Pumps A and C) (RHR Loop B - Pumps B and D) _____
- Torus – Gas _____
- Drywell Atmosphere – Gas _____

3.2 IF samples are requested for source term determination, THEN OBTAIN a sample using the preference list for sample location listed below:

- Drywell Atmosphere – Gas _____
- Torus – Gas _____

- Jet Pump – Liquid _____
- RHR – Liquid (RHR Loop A - Pumps A and C
  (RHR Loop B - Pumps B and D) _____

3.3 IF the Drywell is to be vented, THEN OBTAIN a sample using the preference list for sample location listed below:

- Torus – Gas _____
- Drywell Atmosphere – Gas _____
- Jet Pump – Liquid _____
- RHR – Liquid (RHR Loop A - Pumps A and C)
  (RHR Loop B - Pumps B and D) _____

4.0 **APPLICABLE HOPE CREEK PASS PROCEDURES**

- (HC.CH-EO.SH-0001Q) Post Accident Sample Panel Operation
- (HC.CH-EO.SH-0004Q) Post Accident Sample Analysis
- (HC.CH-EO.SH-0005Q) Post Accident Sample Dilution
- (HC.CH-EO.SH-0007Q) Transporting Post Accident Sampling System Samples

5.0 **COORDINATION AND STORAGE OF PASS AT HOPE CREEK STATION**

5.1 Transport and store post accident samples IAW procedure HC.CH-EO.SH-0007(Q), as thought necessary by the Chemistry Supervisor. _____

5.1 REFER to Figure - 2, Hope Creek PASS Storage Location, for acceptable locations. _____

5.2 ENSURE that radiation protection provides escorts, survey, posting, and shielding as appropriate. _____

5.3 ENSURE that all samples are labeled, and entered in the sample log, including storage location. _____

5.4 KEEP the Chemistry Supervisor - Control Point informed of transportation and storage activities. _____

ATTACHMENT 6

Page 1 of 1

CHEMISTRY GUIDELINES - OUTSIDE SYSTEMS

1.0 **Dosimetry**

ENSURE that all personnel dispatched to the outside systems keep there dosimetry upon exiting the Building. _____

2.0 **Communications**

ENSURE that all personnel dispatched to the outside systems have a portable radio and maintain communications with the CR, OSC, TSC, or CP as appropriate. _____

3.0 **HOPE CREEK ACTIONS DURING POWER OPERATION**

3.1 CHECK the status of (EQ) Service Water Hypochlorination. _____

3.2 CHECK the status of (DD) Circ Water Hypochlorination. _____

3.3 CHECK the status of (DE) Circ Water Caustic Addition. _____

3.3 CHECK the status of (DF) Cooling Tower Blowdown Dechlorination. _____

4.0 **HOPE CREEK ACTIONS DURING POWER REDUCTION**

4.1 DECREASE (EQ) Service Water Hypochlorination. _____

4.2 DECREASE (DD) Circ Water Hypochlorination. _____

4.3 DECREASE (DE) Circ Water Caustic Addition. _____

4.4 INCREASE (DF) Cooling Tower Blowdown Dechlorination. _____

4.5 ANALYZE the effluent at the Cooling Tower Blowdown. _____

5.0 **HOPE CREEK ACTIONS AFTER A REACTOR SCRAM**

5.1 ISOLATE (EQ) Service Water Hypochlorination. _____

5.2 ISOLATE (DD) Circ Water Hypochlorination. _____

5.3 ISOLATE or Secure (DE) Circ Water Caustic Addition. _____

5.4 INCREASE (DF) Cooling Tower Blowdown Dechlorination. _____

5.5 ANALYZE the effluent at the Cooling Tower Blowdown. _____

ATTACHMENT 7

CHEMISTRY GUIDELINES - PRIMARY TO SECONDARY LEAK (SALEM ONLY)

1.0 POWER OPERATION and POWER REDUCTION FOR SALEM

1.1 IF appropriate, THEN SAMPLE and analyze the following for isotopic content:

- Steam Generator Liquid _____
- RCS Liquid _____
- Air Ejector Effluent _____

1.2 IF appropriate, THEN NOTIFY Radiation Protection that radiological surveys in the secondary plant may be necessary, with emphasis on filters and demineralizers. _____

2.0 SALEM REACTOR TRIP

2.1 REQUEST that the control room open the blowdown isolation valves. _____

2.2 IF appropriate, THEN SAMPLE and analyze the following for isotopic content:

- Steam Generator Liquid _____
- RCS Liquid _____

2.3 IF appropriate, THEN NOTIFY Radiation Protection that radiological surveys in the secondary plant may be necessary, with emphasis on filters and demineralizers. _____

ATTACHMENT 8

Page 1 of 2

ASSEMBLY/ACCOUNTABILITY INSTRUCTIONS - CONTROL POINT

1.0 IMPLEMENTATION OF ASSEMBLY AT THE CONTROL POINT

1.1 The Chemistry Supervisor-CP/TSC Or Designee SHALL:

NOTE

Assembly/Accountability actions at the Control Point are to be coordinated with the SRPT/ORPT and the RAC.

1.1.1 ASSEMBLE all Chemistry Personnel at the Control Point. _____

1.1.2 DIRECT personnel exiting the RCA to proceed to their accountability station or direct them to assemble in change areas dependent on radiological conditions. _____

1.1.3 DIRECT personnel remaining at the Control Point to sign-in on the Accountability Station Attendance Sheet (Form - 1). _____

1.1.4 IF accountability implementation is called for, THEN PROCEED to step 2.0 of this attachment. _____

2.0 IMPLEMENTATION OF ACCOUNTABILITY

2.1 The Chemistry Supervisor-CP/TSC Or Designee SHALL:

T – 0 MIN

2.1.1 IF the Radiation Alert Alarm and page announcement sounds, **"ALL ACCOUNTABILITY STATIONS IMPLEMENT ACCOUNTABILITY"**,
THEN ENSURE all personnel at the Control Point, including all personnel in the Rad. Pro. Break Room and Change Areas, have passed their photobadges through the special accountability cardreader located at the Control Point. _____

T - + 20 MIN

2.1.2 WHEN the page announcement sounds, **"ALL ACCOUNTABILITY STATIONS COMPLETE YOUR ACCOUNTABILITY"**, THEN ENSURE that any personnel arriving at the Control Point since the initial call for accountability also have passed their photobadges through the Control Point accountability cardreader. _____

2.1.3 DIRECT all stragglers (personnel arriving at the Control Point after 30 minutes have lapsed) to pass their photobadge through the accountability cardreader and report the badge number(s) of stragglers to the Security Center (Ext. 2223). _____

2.1.4 MAINTAIN continuous accountability until Hope Creek's/Salem's emergency is terminated. _____

2.1.5 IF the Automated Accountability System malfunctions, THEN REFER to step 3.0. _____

3.0 AUTOMATED ACCOUNTABILITY SYSTEM MALFUNCTION

3.1 The Chemistry Supervisor-CP/TSC Or Designee SHALL:

3.1.1 IF the automated accountability system malfunction, THEN PROVIDE a copy of the Accountability Station Attendance Sheet, Form - 1, to the Security Force Member dispatched to the Control Point. _____

ATTACHMENT 9

Page 1 of 2

CONTROL POINT EVACUATION CHECKLIST

1.0 EVACUATION OF THE CONTROL POINT

1.1 **The Chemistry Supervisor-CP/TSC Or Designee Should:**

1.1.1 ENSURE Chemistry personnel are assisting Radiation Protection personnel in evacuation of the Control Point. _____

1.1.2 ENSURE that the TSC and Control Room are kept aware of the new location. _____

1.1.3 ENSURE the following equipment is included in the Control Point evacuation:

- Movable Counting Room Equipment. _____
- Dosimeters, additional TLDs from the Control Point. _____
- Emergency Logbooks. _____
- Portable Survey Equipment. _____
- Survey materials (air sample filters etc.). _____
- SCBA and spare tanks. _____
- Respirators and canisters. _____
- Protective Clothing. _____
- Posting Materials and Barricades. _____
- Emergency Plan Implementing Procedures. _____
- Event Classification Guide. _____
- Station Procedures. _____

1.1.4 NOTIFY the RAC of the new telephone numbers. _____

1.1.5 NOTIFY the RAC when the new Control Pont has become operational. _____

1.1.6 RE-ESTABLISH the operability of the evacuated equipment as soon as possible. _____

1.1.7 MONITOR continuously Chemistry personnel exposure. Rotate personnel as appropriate to ensure dose limits are not exceeded. _____

ATTACHMENT 9

Page 2 of 2

1.1.8 ENSURE all pertinent information is entered in log books. _____

1.1.9 USE the equipment checklist and note deficiencies. _____

1.1.9 IF additional materials or services are required due to relocation, THEN CONTACT the RAC. _____

NOTE

A list of categories, corresponding Vendors and telephone numbers is provided in the EP Phone Directory, NC.EP-WB.ZZ-0001(Z), located at the Control Point, TSC, Control Room, and EOF. For PSEG stockroom items refer to SAP.

1.1.10 WHEN requesting inventory status, THEN GIVE due regard to habitability of particular areas. _____

FORM – 1

Page 1 of 1

ACCOUNTABILITY STATION ATTENDANCE SHEET

Facility: CR, CP, TSC, OSC (circle) **Date:** _____

LAST NAME/FIRST NAME	BADGE NUMBER

Attach additional pages with appropriate information as needed.

FIGURE-1

Page 1 of 2

SALEM PASS STORAGE LOCATION

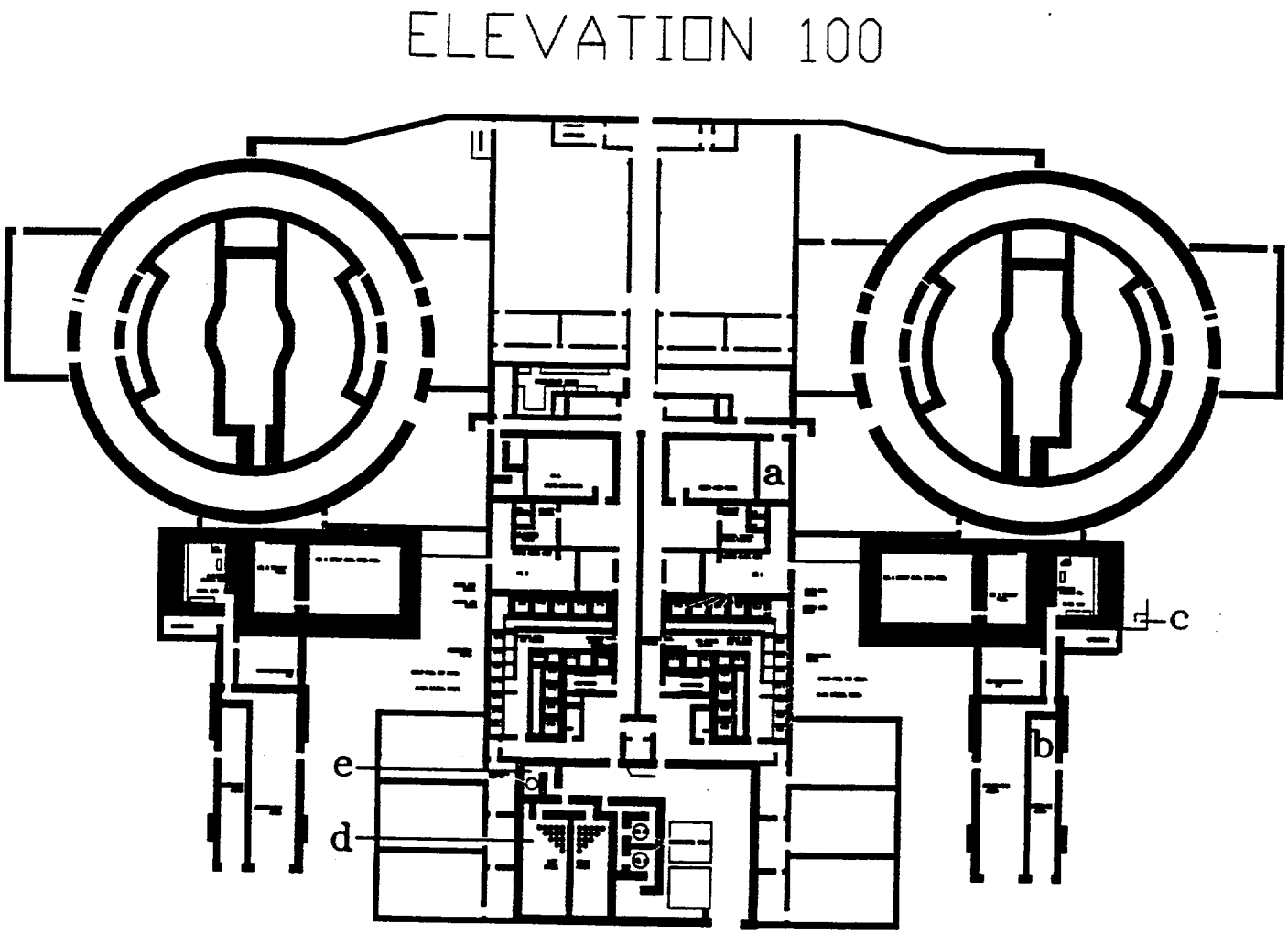


FIGURE – 1

Page 2 of 2

Blowdown panel room, elevation 100'. A lead brick cave will be available for optimum shielding. ***(a)***

Fuel handling annex (small truck bay) elevation 100'. ***(b)***

Hot drum storage cask labyrinth, adjacent to Fuel Handling Building yard, elevation 100'. ***(c)***

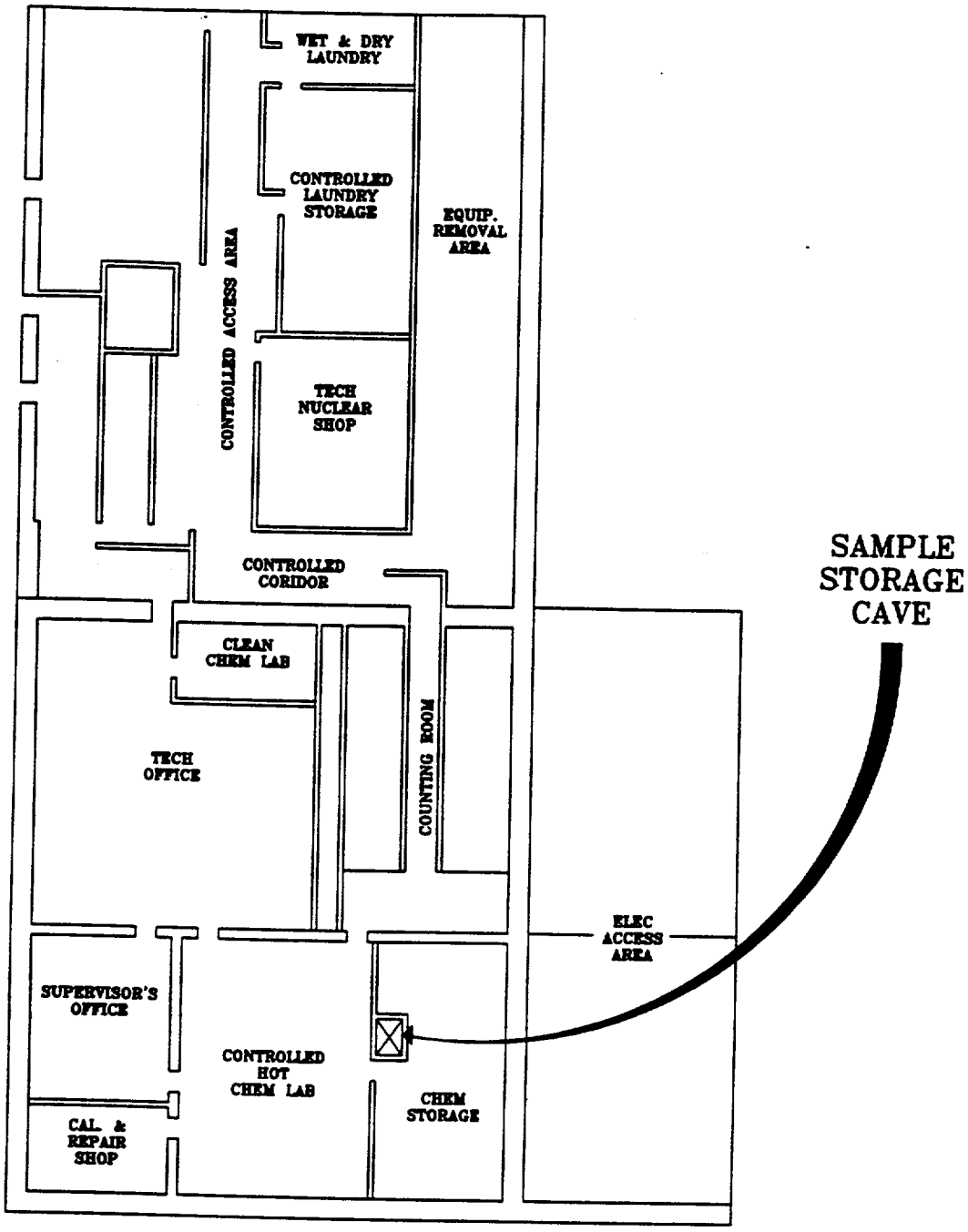
Hot drum storage area, elevation 100', Solid Radwaste.***(d)***

Waste evaporator bottoms hold tank area, elevation 100'. ***(e)***

FIGURE-2

Page 1 of 1

HOPE CREEK PASS STORAGE LOCATION



SERVICE AND RADWASTE AREA
124' 0" ELEVATION