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NC.EP-EP.ZZ-0302 (Q) - REV. 04

RADIOLOGICAL ASSESSMENT COORDINATOR RESPONSE

PSE&G CONTROL COPY # EPIP059

USE CATEGORY: II

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.

2. Added a note to Attachment 1 (after Step 1.1.7) to inform the RAC that the Radiation Protection Supervisor-Exposure Control located in the OSC will be contacting him/her to receive permission to call IT to have Emergency Responder's dose limits changed to 4500 mRem. This change was incorporated into NC.EP-EP.ZZ-0304(Q) (Operational Support Center (OSC) Radiation Protection Response), revision 03. NC.EP-EP.ZZ-0304(Q) was processed and approved as a non-editorial change, so the revision to this procedure (NC.EP-EP.ZZ-0302) is considered to be a editorial change.

IMPLEMENTATION REQUIREMENTS

This procedure is effective for use upon issue. 5-24-01

APPROVED: _____ EP Manager — 5/9/01 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

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

3.1.1 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.

3.1.2 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.

3.1.3 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.

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.

3.1.7 The Radiological Assessment Coordinator needs to follow-up on instructions to ensure they are being followed in a timely manner or have been completed.

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.

7.2.7 The Hope Creek and Salem Offsite Dose Calculation Manual (ODCM)

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. _____

NOTE

The Radiation Protection Supervisor – Exposure Control (RPS-EXP) will be contacting the RAC to get permission to call the Nuclear IT Network Operations person located at x7200 to execute the SQL script titled **"Emergency Exposure Limits – Increase"** to have Emergency Responder's dose limits raised to 4500 mRem in PRORAD. This will not raise anyone's dose limits with dose limits less than 2000 mRem.

RPS-EXP will be contacting the RAC to get permission to call the Nuclear IT Network Operations person located at x7200 to execute the SQL script titled **"Emergency Exposure Limits – Normal"** to have Emergency Responder's dose limits returned to normal in PRORAD.

ATTACHMENT 1

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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 _____

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. _____

NOTE

Offsite Dose Calculation Manual (ODCM)/Federal Limits for Noble Gas Radiological Release Rate are:

Hope Creek: 1.2E+04 uCi/Sec.

Salem: 2.42E+05 uCi/Sec.

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

- NOTIFY the EDO. _____

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

  B. REQUEST a plant vent sample (iodine at minimum) be taken from the appropriate release point (vent). _____

- **ONLY IF THE POTENTIAL OF A RADIOLOGICAL RELEASE ABOVE FEDERAL LIMITS/ODCM 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

Persons/vehicles leaving or entering the Owner Controlled Area (OCA) should be coordinated with the Security Liaison and the RSM, if the EOF is manned or activated.

- RECOMMEND travel routes

NOTE

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

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

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. _____ **RAC**

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 Federal Release Rate Limits/ODCM Limits is in progress. _____
- The potential is though high of a radiological release greater than the Noble Gas Federal Release Rate Limits ODCM Limits. _____
- Normal RCA boundaries have been breached. _____
- At the discretion of the RAC. _____

ATTACHMENT 2
Page 4 of 5

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. _____
RAC

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 Federal Limits/ODCM Limits is in progress. _____
- The potential that a Radiological Release greater than Federal Limits/ODCM 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. _____

ATTACHMENT 2
Page 5 of 5

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
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 4
Page 1 of 3

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
Page 3 of 3

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

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

Page 4 of 4

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 LLC

NC.EP-EP.ZZ-0304 (Q) Rev. 03

OPERATIONAL SUPPORT CENTER (OSC) RADIATION PROTECTION RESPONSE

USE CATEGORY: II

PSE&G CONTROL COPY # EPIP059

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Added instructions in Attachment 1 (Steps 1.1 and 1.2) for the Radiation Protection Supervisor – Exposure Control to follow so the Emergency Response Organization's (ERO) dose limits are raised to 4500 mRem in PRORAD during an alert or higher event classification and return the ERO's dose limits to normal after the emergency is concluded. The means to perform this action on paper already existed in this procedure, but until recently, could not be performed on PRORAD.

IMPLEMENTATION REQUIREMENTS

This procedure is effective upon issue.

5/21/01

APPROVED: _____ EP Manager 5/10/01 Date 5/9/01

APPROVED: _____ Vice President – Operations Date 5/15/01

OPERATIONAL SUPPORT CENTER (OSC) RADIATION PROTECTION RESPONSE

TABLE OF CONTENTS

1.0 PURPOSE

- To outline and describe the duties Radiological Protection Supervisor – Exposure Control (RPS-EXP).
- To provide guidance to emergency response personnel for administration of Radiation Protection Team Response for the Operational Support Center (OSC) during an emergency at Hope Creek or Salem Nuclear Generating Station.

2.0 PREREQUISITES

2.1 Prerequisites To Be Followed Prior To Implementing This Procedure.

Implement this procedure at:

- The OS' discretion.
- The manning of the OSC.
- The declaration of an Alert.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precautions and Limitations To Be Followed Prior To Implementing This Procedure.

3.1.1 SALEM ONLY

Dose Rates in the 78' Electrical Penetration Area could be higher than what is indicated on the R47 ARM. The R47 ARM is located across the room from the PASS lines. **CAUTION** should be exercised when entering this area.

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

3.1.3 Personnel who implement this procedure shall be trained and qualified in accordance with (IAW) the Emergency Plan.

4.0 EQUIPMENT REQUIRED

As provided In the Emergency Response Facility.

5.0 PROCEDURE

5.1 The Radiation Protection Supervisor – Exposure Control Should Perform The Following:

5.1.1 DIRECT habitability to be performed every 30 minutes and the results logged on Form 2, Habitability Log. _____

5.1.2 COMPARE habitability results to Attachment 4, Onsite Protective Action Guidelines, and perform appropriate actions. _____

5.1.3 OBTAIN current status of the emergency from the OSCC. _____

NOTE

- An individual's yearly dose limit is to be automatically raised to 4500 mrem upon the declaration of an Alert or higher classification. The dose extension to 4500 mrem may be entered into the PRORAD system, but is not required.
- An authorization needs to be placed into the system before a person's dose can be raised to 4500 mrem in PRORAD. Refer to Attachment 1 for instructions on how to accomplish this task and return a person's dose limit to normal upon the termination of an Emergency.
- No dose extension shall be allowed, if a person does not have a completed NRC Form 4 on record. The person's dose limit will be 400 mrem.

5.1.4 IF persons in the OSC do not have a TLD,
THEN ensure one is issue and log it on Form 1, TLD Log. _____

NOTE

Dose Tracking may be performed using the PRORAD System instead of Attachment 1, Individual Radiation Exposure Record, if PRORAD is operational

5.1.5 ENSURE 1.0 of Attachment 1 is completed for the onsite emergency response personnel assigned to the OSC and Control Point. _____

5.1.6 ENSURE control of Attachment 1 is maintained in order to expedite and provide a tracking mechanism for OSC/CP personnel activities and exposures. _____

5.1.7 NOTIFY the OSCC prior to any CP teams being sent out into the plant and ensure they are tracked on the OSC Team Status Board. _____

NOTE

An individual, in lieu of a team, may be dispatched by the OSCC. The individual should be in contact with the Control Point or OSC via some type of audio communications (page, radio, or telephone) and should check-in every 15 to 30 minutes with the OSC or Control Point.
An individual should not be dispatched under the following circumstances:

- An individual's exposure is expected to exceed 1000 mrem External Dose Equivalent (EDE).
- The task would require entry into a "Harsh Environment Area", (i.e., steam atmosphere, a heat stress area, etc.).
- Acts of sabotage or suspected sabotage.

5.1.8 DIRECT all OSC and CP teams to be made up of at least two people, unless a task meets the criteria from the note above for dispatching an individual. _____

5.1.9 IF travel path dose rates, or dose rates at destination are ≥1000 mR/hr EDE,
THEN **COMPLETE Attachment 2, ALARA Analysis Form.** _____

5.1.10 IF travel path dose rates, or dose rates at destinations are ≤1000 mR/hr EDE,
THEN **Attachment 2 does NOT have to be completed.** _____

5.1.11 PROVIDE job status information to the Radiological Assessment Coordinator (RAC) concerning completed and ongoing jobs. _____

NOTE

- Radiological briefings of teams should take place during pre-job briefing. Two separate briefings (pre-job and radiological) is not the proper method of performing OSC briefings, in the majority of cases. No duplicate radiological briefings should take place at the Control Point prior to the OSC team entering the Radiological Control Area (RCA).
- Pre-job briefings should try to meet a goal of not going longer than 20 minutes. Circumstances may arise that make meeting this goal impossible, but the 20 minute target should tried to be met.

5.1.12 BRIEF all team members on appropriate radiological conditions. _____

5.1.13 DEBRIEF all teams and ensure 2.0 of Attachment 1 is completed. _____

5.1.14 OBTAIN plant status updates from the OSCC. _____

5.1.15 OBTAIN current RMS status from the most appropriate location listed below:

(HOPE CREEK ONLY)

- the VAX LA120 utilizing Attachment 5, Operation of the VAX LA120. _____
- Control Point personnel. _____
- TSC Radiological Assessment personnel. _____

(SALEM ONLY)

- Shift Radiation Protection Technician (SRPT) _____
- TSC Radiological Assessment personnel. _____

NOTE

Noble Gas Technical Specification Radiological Release Limits are:

- Hope Creek = 1.20E+04 uCi/Second
- Salem = 2.42E+05 uCi/Second

5.1.16 ESTABLISH contamination controls (no eating, no drinking, no smoking, proper postings, setting up step off pads and friskers) when any of the following have occurred. _____

- A radiological release $\geq$ Noble Gas technical specification limits is in progress. _____
- The potential of a radiological release $\geq$ Noble Gas technical specification limit is in progress. _____
- Normal RCA boundaries have been breached. _____
- At the RAC's discretion. _____

5.1.17 NOTIFY the RAC or SRPT of the changing conditions as determined from step 5.1.16. _____

NOTE

It is part of the RAC's responsibilities to establish best routes and ways in and out of the Owner Controlled Area if step 5.1.17 has been implemented.

HOPE CREEK ONLY

Movements of teams outside the Emergency Response facilities (ERFs) and Power Block should be coordinated with the RAC.

SALEM ONLY

Movements of teams outside the ERFs and Turbine Buildings, Auxiliary Buildings, Containments, Diesel Buildings, and the Main Guard House should be coordinated with the RAC.

5.1.18 COORDINATE with the OSCC and the RAC, transportation of injured person(s) or person(s) receiving exposures of 5 rem acute EDE dose, or greater to appropriate medical facilities. _____

5.2 **Perform The Following Steps If Emergency Exposure Is Required**:

NOTE

- Voluntary consent, pre-job briefings, and EDO authorization for Life Saving Tasks, that require Emergency Exposure, should done verbally prior to, or during, the OSC Team being dispatched.
- Attachment 3 should be completed as soon as possible, after the return of the OSC Life Saving Team's return.
- Attachment 3 contains instructions for making Emergency Exposure Authorizations and filling out necessary documentation.

5.2.1 IMPLEMENT Attachment 3, Selection and Authorization for Emergency Exposures. _____

6.0 **RECORDS**

Return completed procedure, original copies of Attachments to the Manager – EP & IT.

7.0 REFERENCES

7.1 References

7.1.1 EPA 400-R-92-001: October 1991
7.1.2 Roger E. Linneman, M.D., Correspondence Dated November 24, 1993
7.1.3 10CFR20, Standards for Protection against Radiation, December 31, 1992.
7.1.4 Nuclear Business Unit Emergency Plan

7.2 Cross References

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

7.2.2 NC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

7.3 Closing Documents

Closing Document-027Z (CD-027Z) NRC Inspection Item 354/85-44-01

ATTACHMENT 1
PAGE 1 OF 1

INDIVIDUAL RADIATION EXPOSURE RECORD

DATE/TIME: ___ - ___ - ___ / ___:___

1.0 **INDIVIDUAL INFORMATION**

Name: _____ Badge Number: _____

NOTE

Dose tracking may be performed using the PRORAD system, if PRORAD is operational, instead of this attachment.

1.1 REQUEST the RAC for permission to contact the Nuclear IT Network Operations person located at x7200 to execute the SQL script titled **"Emergency Exposure Limits – Increase"** to have Emergency Responder's dose limits raised to 4500 mRem in PRORAD.

1.2 REQUEST the RAC for permission to contact the Nuclear IT Network Operations person located at x7200 to execute the SQL script titled **"Emergency Exposure Limits – Normal"** to have Emergency Responder's dose limits returned to normal in PRORAD upon termination of the emergency.

2.0 OBTAIN the following information and fill in the appropriate blanks if PRORAD is not being used.

2.1 NAME: _____ BADGE NUMBER: _____

2.2 CURRENT YEARLY DOSE: _____ (mRem)

2.3 **Job Specific Information**

Team Number	Dose Rec'd (mRem)	Yr. Remaining Dose (mRem)*	Initial When Entered into PRORAD

***Year Remaining Dose (mRem) = [(4500 mRem – Current Year Dose) – Dose Received]**

ATTACHMENT 2

Page 1 of 2

ALARA ANALYSIS FORM

NOTE

Planned exposure to an individual that is projected to result in dose to an individual ≥ 4500 mrem(EDE) in this calendar year requires emergency exposure authorization and should meet the criteria of accident mitigation or life saving tasks as outlined in Attachment 3.

1.0 **Projected Dose Analysis:**

1.1 Entry Route: _____

_____

1.1.1 Time Required to reach job site: _____ (hours)

1.1.2 Dose Rate(s) in areas that need to be traversed: _____ (rem/hr)

1.1.3 Calculated Dose (indiviual dose): _____ (rem)
(1.1.1 * 1.1.2 = 1.1.3)

1.2 Tasks to be Performed: _____

_____

1.2.1 Time required to perform job: _____ (hours)

1.2.2 Dose rate in job areas: _____ (rem/hr)

1.2.3 Calculated Dose (individual dose): _____ (rem)
(1.2.1 * 1.2.2 = 1.2.3)

1.3 Exit Routes: _____

_____

1.3.1 Time Required to exit area: _____ (hours)

1.3.2 Dose Rate(s) in areas that need to be traversed: _____ (rem/hr)

1.3.3 Calculated Dose (individual dose): _____ (rem)
(1.3.1 * 1.3.2 = 1.3.3)

1.4 Total Individual External Dose Equivalent: _____ (rem)
[(1.1.3 + 1.2.3 + 1.3.3 = 1.4) Total Individual EDE]

ATTACHMENT 2 (cont)
Page 2 of 2

2.0 **Team Briefing**

2.1 Information Covered During Briefing:_____

_____

_____

_____

_____

_____

_____

_____

2.2 Personnel Attending Briefing:

Name	Signature	Badge #	Name	Signature	Badge #

ATTACHMENT 3

Page 1 of 4

SELECTION AND AUTHORIZATION FOR EMERGENCY EXPOSURES

1.0 Effects Of Exposure To Radiation on the Human Body

1.1 The Following Information Is Based on ACUTE EDE Exposure to Radiation.

RANGE	0 to 100 (rem)	100 to 200 (rem)	200 to 600 (rem)	600 to 1000 (rem)	1000 to 5000 (rem)	1000 to 5000 (rem)
Vomiting	None	5 to 50%	> 300 rem 100%	100%	100%	100%
Delay Time	----------	3 hr.	2 hr.	1 hr.	30 minutes	
Leading Organ	None	Bone Marrow			GI Tract	Central Nervous Ststem
Character-istic Signs	None	Moderate leukopenia	Severe leukopenia, hemorrhage, infection, purpura, epilation at > 300 rem		Diarrhea, fever, electrolyte loss	Convulsions tremor, ataxia
Therapy	Reassur-ance	Blood Monitoring	Blood Transfusion Antibiotics	Marrow transplant? Growth factors?	Maintain electrolytes	Sedatives
Prognosis	Excellent	Excellent	Good	Guarded	Grave to Hopeless	
Incidence of Death	None	None	0 to 80%	80% to 90%	90 to 100%	

Leukopenia – drop in leukocyte (white blood cell) count.

Purpura – formation of small splotchy red or purple spots on the skin caused by rupture of a capillary with leakage of a small amount of blood under the skin layers.

Epilation – loss of hair. Will generally grow back within a month.

Ataxia – loss of muscular coordination.

2.0 GENERAL INFORMATION

- Voluntary consent, pre-job briefings, and EDO authorization for Life Saving Tasks, that require Emergency Exposure, should done verbally prior to, or during, the OSC Team being dispatched.

- This attachment (Attachment 3) should be completed as soon as possible, after the return of the OSC Life Saving Team's return.

- Emergency exposure should only be authorized by the Emergency Duty Officer (EDO) and cannot be delegated. The OS has this responsibility until the EDO assumes his responsibilities.
- Emergency exposure authorization may be done via telephone.
- Emergency exposure should be voluntary.
- Individual who do volunteer should:
  - Have attended and passed Radiation Worker Training
  - Be above age 45 if available and physically qualified for the task
  - Not have previously received Emergency exposure.
- Emergency exposures received should be added to the individual's current occupational radiation exposure history.
- An individual's exposure is not considered to be an Emergency exposure if his/her total exposure for the year is 4.5 rem or less upon finishing an accident mitigation or life saving task and may still volunteer to receive Emergency exposure.
- Declared pregnant women **SHALL NOT** be allowed to volunteer for Emergency exposure.

3.0 EXPOSURE CRITERIA LIFE SAVING EMERGENCY

- Any and all actions necessary to preserve life, including, but not limited to:
  - Removal of injured personnel
  - Providing medical treatment/first aid
  - Providing ambulance service to injured personnel
- Planned Emergency Exposure Limit (PEEL) for life saving is 75 rem EDE.

4.0 ACCIDENT MITIGATION EMERGENCY EXPOSURE CRITERIA

- Any and all actions necessary to mitigate an accident, including, but not limited to:
  - Performance of actions to prevent immediate deterioration of the plant status.

- ♦ Performance of actions to cause significant reduction of onsite or offsite radiological hazards.

- Planned Emergency Exposure Limit (PEEL) for accident mitigation is 25 rem EDE.

5.0 TEAM BRIEFING

Information Covered During Briefing: _____

ATTACHMENT 3

6.0 **VOLUNTARY CONSENT**

I, the under signed, volunteer for Emergency Exposure:

PEEL (REM)	NAME	SIGNATURE	BADGE #

7.0 **EMERGENCY EXPOSURE AUTHORIZATION**

I hereby authorize the planned Emergency Exposure(s) for the individual(s) listed in Section 6 of (Voluntary Consent) of this Attachment.

Emergency Exposure Authorized by: (EDO) _____

DATE/TIME: _____ - _____ - _____ / _____: _____

8.0 **ACTUAL EDE DOSE RECEIVED**

Badge #	Name (Print)	Current Yr. Dose (REM)	Dose Received (REM)	Total Dose (REM)

Initial when entered into PRORAD: _____ DATE/TIME: ___-___-___/___:___

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 NC EP-EP.ZZ-0305(Q), Potassium Iodine (KI) Administration, for additional information.

ATTACHMENT 5

Page 1 of 3

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 _____

1.1.3 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

1.1.4 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. _____

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

1.1.6 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 2.1.8. _____

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). _____

2.1.3 ENTER 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). _____

ATTACHMENT 5

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). _____

FORM - 1

TLD LOG

Name_____

Date _____ TLD Number _____ Badge Number _____

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

Signature_____

Date_____

****

Name_____

Date _____ TLD Number _____ Badge Number _____

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

Signature_____

Date_____

****

Name_____

Date _____ TLD Number _____ Badge Number _____

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

Signature_____

Date_____

****

FORM - 2

Page 1 of 1

HABITABILITY LOG

DATE: / /

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

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

_____

_____

PSEG NUCLEAR LLC

NC.EP-EP.ZZ-0309 (Q) Rev. 02

DOSE ASSESSMENT

PSE&G CONTROL COPY # EPIP059

USE CATEGORY: II

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Added guidance to Section 5.4 (to the Note after Step 5.4.28) to ensure personnel were aware that they could use R46 monitor data to perform dose assessment during a steam generator tube rupture. This was not spelled out clearly in the procedure. This is considered an editorial change, since this was an enhancement was added to a note.
3. Figure following 5.2.1.A was part of the procedure, but it was a CAD insert prior to this. The figure was a made Word drawing, so the figure resides in the procedure.
4. Table 10 –1 (Drywell Rate Nomogram) was part of the procedure, but it was a CAD insert prior to this. The figure was a made Word drawing, so the figure resides in the procedure.
5. Fixed some typos and made some minor editorial changes.

IMPLEMENTATION REQUIREMENTS

This procedure is effective for use upon issue. 5-24-01

APPROVED: _____ EP Manager — Date 5/9/01

APPROVED: _____ Vice President - Operations — Date

DOSE ASSESSMENT

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides guidance concerning dose assessment and operating instructions for the Dose Assessment Program (MIDAS) for all emergency response dose assessors.

2.0 PREREQUISITES

2.1 Prerequisites to be Followed Prior to Implementing This Procedure

Implement this procedure:

- Upon the declaration of an Unusual Event or higher emergency classification.
- At the request of the Operation Superintendent (OS).
- At the request of the Emergency Duty Officer (EDO).
- At the request of the Radiation Protection Duty Supervisor (RPDS) or Shift Radiation Protection Technician (SRPT).
- IAW HC.RP-AR.SP-0001(Q), Radiation Monitoring System Gaseous Monitor Alarm Response.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precautions 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 Steps in this procedure may be performed in the order deemed appropriate for the emergency situation. Only steps that are applicable to the specific MIDAS dose assessment mode of operation that is being performed need be followed.

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

4.0 EQUIPMENT REQUIRED

As provided in the Emergency Response Facilities.

5.0 PROCEDURE

NOTE

- Dose Assessment should be performed using 10 or 15-minute average RMS and Meteorological data, unless circumstances in step 5.1.1 are met.
- Attachment 1, Operation of the VAX LA120 Terminal, should be referred to for operational directions for the VAX LA120.
- Attachment 2, Instructions for Salem SPDS Displays, should be referred to for operational directions for the radiological SPDS screens.

5.1 Performance of Dose Assessment When Plant Vent Effluent Monitors Increase by a Factor of > 10:

NOTE

Salem and Hope Creek Plant Vent Effluent Monitors are:

- **SALEM PLANT VENT EFFLUENT MONITORS**
  - Unit 1 or 2 R41 A-C
  - Unit 1 or 2 R45B,C
- **HOPE CREEK PLANT VENT EFFLUENT MONITORS**
  - SPV – 9RX606, 9RX607, 9RX581
  - NPV – 9RX602, 9RX603, 9RX591
  - FRVSV – 9RX640, 9RX610, 9RX611
  - HTV – 9RX516, 9RX517

5.1.1 IF any Plant Vent Effluent Monitor(s) increase by a factor of 10 or more, THEN perform the following:

A. PERFORM dose assessment calculations in the manual mode using instantaneous value(s) In Accordance With (IAW) Section 5.4 of this procedure. _____

B. WRITE on top of the Station Status Checklist Page 2 (SSCL), "RELEASE RATE CALCULATED FROM INSTANTANEOUS MONITOR VALUES." _____

C. RECOMMEND radiological PARs using the SSCL, IAW SA.EP-EP.ZZ-0301(Q), HC.EP-EP.ZZ-0301(Q), OR NC.EP-EP.ZZ-0602(Q), as appropriate. _____

D. ADVISE the appropriate person (OS, RAC, RSM) that the SSCL and radiological PAR, if any, was calculated from instantaneous Plant Vent data and may not reflect actual radiological conditions. An additional SSCL will be forth coming in approximately 20 minutes. _____

E. PERFORM another dose assessment in approximately 15 to 20 minutes using 10 or 15 minute average data, after the previous SSCL, and present the SSCL and radiological PAR, if appropriate, to the proper person (OS, RAC, RSM). _____

5.2 Preplanned Alternative Guidance and Common Commands For MIDAS Screens

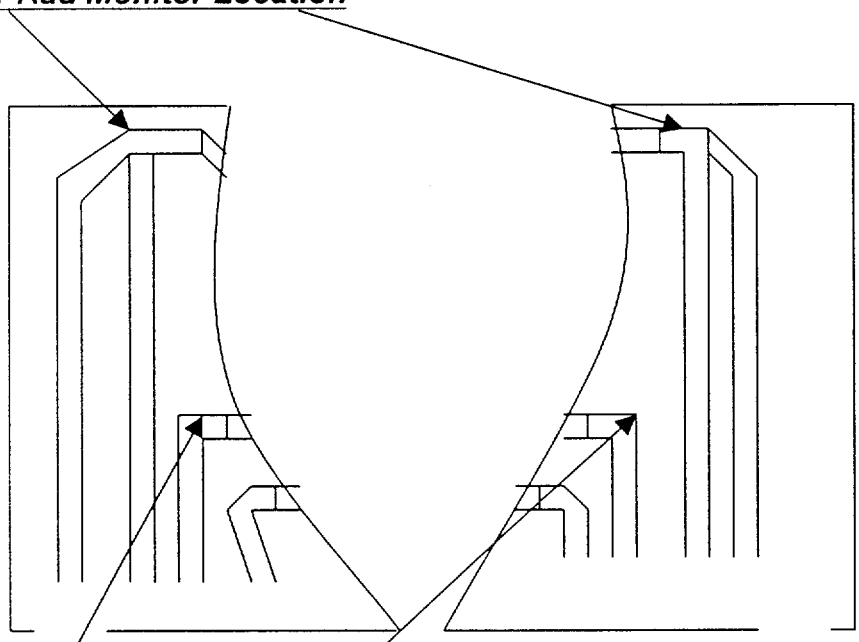
NOTE

(SALEM ONLY) Contact the OS prior to performing dose assessment calculations for preplanned alternative, if the 1R41 or 2R41 skids are out of service/inoperational and are needed to perform dose Assessment calculations.

5.2.1 PERFORM the applicable steps listed below, to calculate a SSCL, when the normal method to perform dose assessment at **SALEM UNIT 1 & 2** is not possible:

A. IMPLEMENT Section 5.4, to perform dose assessment calculations using Main Steam Line (MSL) teletector readings. All contact teletector readings on the MSLs should be obtained on the curve of the line prior to the MSIV. (See the diagram below).

Teletector Rad Monitor Location



Teletector Rad Monitor Location

MAIN STEAM LINES 12, 14, 22, 24 ARE FOUND IN THE OUTSIDE PIPING PENETRATIONS. MAIN STEAM LINES 11, 13, 21, 23 ARE ACCESSIBLE BY WAY OF THE CHILLER ROOMS AND ARE LOCATED IN THE INNER PIPE PENETRATIONS.

B. IMPLEMENT Section 5.4, to perform dose assessment calculations based on the 2R45 monitor values. _____

C. PERFORM steps 1 – 2 for Salem Unit 1 or Steps 3 – 4 for Salem Unit 2 to calculate a value using the R16 monitor, that can be used by MIDAS to perform dose assessment calculations, if the 1R41A monitor or the 2R41A is not operational. _____

1 DIVIDE the 1R16 value by 3.6E+07* to calculate a uCi/cc value for **SALEM UNIT 1**. _____

$$\frac{\text{\_\_\_\_\_ (cpm)}}{\text{3.6E+07 (cpm/uCi/cc)}} = \text{\_\_\_\_\_ uCi/cc}$$

2 INPUT the uCi/cc value into MIDAS under the 1R45 monitor header using Manual MIDAS Mode (Section 5.4). _____

* = Correction Factor used is found in PSBP 315733 (Unit 1RMS Manual).

3 DIVIDE the 2R16 value by 3.5E+07* to calculate a uCi/cc value for **UNIT 2**. _____

$$\frac{\text{\_\_\_\_\_ (cpm)}}{\text{3.5E+07 (cpm/uCi/cc)}} = \text{\_\_\_\_\_ uCi/cc}$$

4 INPUT the uCi/cc value into MIDAS under the 2R45 monitor header using Manual MIDAS Mode (Section 5.4). _____

* = Correction Factor used is found in PSBP 315734 (Unit 2 RMS Manual).

5.2.2 IF isotopic data is available, THEN IMPLEMENT Section 5.6, to perform dose assessment calculations based on isotopic sample values for Hope Creek, Salem Unit 1, or Salem Unit 2. _____

5.2.3 PERFORM the following steps to change the Date and/or Time for the PC based MIDAS dose assessment system for Hope Creek, Salem Unit 1, and Salem Unit 2:

A. **POWER UP** the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

B. DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

C. INPUT **admin** into the User name line. _____

D. INPUT **secret** into the Password line and depress the **RETURN** key. (The Main Windows screen will be displayed with several icons. The CAPTURE Eze97 screen will appear momentarily, while it loads and then be displayed in a box in the lower left hand corner next to the Start box). _____

E. POSITION the cursor over the **MY COMPUTER** icon and double click the mouse. (The MY COMPUTER box will be displayed with different icons in the box). _____

F. POSITION the cursor over the **CONTROL PANEL** icon and double click the mouse. (The DATE/TIME icon will be displayed with several other icons). _____

G. Position the cursor over the **DATE/TIME** icon and double click the mouse. (The DATE/TIME PROPERTIES screen will be displayed with the current month, date, and time highlighted). _____

H. IF the DATE/TIME Properties screen is not displayed, THEN POSITION the cursor over the **DATE & TIME** file and click the mouse once. _____

I. POSITION the cursor on the **DOWN ARROW** adjacent to the month, and click the mouse once. _____

J. PERFORM the following to change the **MONTH:**
- POSITION the cursor over the appropriate month and click the mouse once. _____

K. PERFORM the following to change the **YEAR:**
- POSITION the cursor on the **UP or DOWN ARROW** next to the CURRENT YEAR box and click the mouse until the appropriate year is displayed. _____

L. PERFORM the following to change the **CALENDAR DATE:**
- POSITION the cursor on the **CALENDAR DATE** you wish to change and click the mouse once. _____

M. PERFORM the following to change the **CURRENT HOUR:**

- POSITION the cursor to the left side of the **CURRENT HOUR** that is displayed in the time box, and click the mouse until the appropriate hour is displayed. **[EXAMPLE:** For 12:15:30 it would look like 12I:15:30. (I is the cursor)].

N. PERFORM the following to change the **CURRENT MINUTE:**

- POSITION the cursor to the left side of the **CURRENT MINUTE** that is displayed in the time box, and click the mouse until the appropriate minute is displayed. **[EXAMPLE:** For 12:15:30 it would look like 12:15I:30. (I is the cursor)].

O. PERFORM the following to change the **CURRENT SECOND:**

- POSITION the cursor to the left side of the **CURRENT SECOND** that is displayed in the time box, and click the mouse until the appropriate minute is displayed. [**EXAMPLE:** For 12:15:30 it would look like 12:15:30I. (I is the cursor)].

P. PERFORM the following to change from **PM to AM or AM to PM:**

- POSITION the cursor on the displayed AM/PM and click the mouse once. Use the **UP or DOWN ARROW** adjacent to the time box to change the AM/PM by clicking the mouse once.

Q. PERFORM the following to **APPLY THE CHANGES, EXIT OUT OF THIS MODE, AND RUN MIDAS:**

1. POSITION the cursor on the **APPLY** box and click the mouse once.
2. POSITION the cursor on the **OK** box and click the mouse once.
3. POSITION the cursor over the **X** located in the upper right hand corner of the CONTROL PANEL box and click the mouse once.
4. POSITION the cursor over the **X** located in the upper right hand corner of the MY COMPUTER box and click the mouse once.

5. POSITION the cursor on the **START** and click the mouse once. (The WINDOWS NT WORKSTATION box will be displayed). _____

6. POSITION the cursor on the **SHUT DOWN** box and click the mouse once. (The SHUT DOWN WINDOWS box will be displayed). _____

7. POSITION the cursor on the close **ALL PROGRAMS and LOG ON AS A DIFFERENT USER** circle and click the mouse once. (The circle will become filled in). _____

8. POSITION the cursor over the **YES** box and click the mouse once. (The computer will start to close all programs. The BEGIN LOGON box will appear). _____

9. DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

10. INPUT **midas** into the User name line. _____

11. INPUT **midas** into the Password line and depress the **RETURN/ENTER** key. _____

12. POSITION the cursor over the **Midas** icon and double click the mouse. (The MIDAS Program will start). _____

5.2.4 PERFORM the following steps to EXIT MIDAS using CTRL, ALT, and DELETE keys **for Hope Creek, Salem Unit 1, and Salem Unit 2**:

A. DEPRESS the **CTRL, ALT,** and **Delete** keys simultaneously. (The Windows NT Security box will be displayed). _____

B. MOVE the cursor to the **Shut Down** box and click the mouse once. (The Shutdown Computer box will be displayed with the Shutdown circle filled in). _____

C. MOVE cursor to the **OK** box and click the mouse once. (The MIDAS – FROZEN box will be displayed). _____

D. MOVE the cursor to the **End Task** box and click the mouse once. The computer will begin to restart. (All data inputted and dose assessment calculations will be lost). _____

5.2.5 POSITION the cursor over the **RESET** box and click the mouse once to reset data that is displayed in a data box. _____

NOTE

The Station Status Checklist (SSCL) will printout automatically after the dose assessment calculations have finished.

5.2.6 PERFORM the following to print a screen, report or map:

A. DEPRESS **ALT + ENTER**, **PRINT SCREEN** keys. _____

B. DEPRESS the **ALT + ENTER** keys to exit the print option and to continue with normal MIDAS operation. _____

5.2.7 PERFORM the following to print a SSCL.

A. POSITION the cusor to the **SSCL Box** located on the **Reports Screen.** _____

B. CLICK the mouse. The latest SSCL will be printed to the screen and the printer. _____

5.3 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE AUTOMATIC DOSE ASSESSMENT MODE

NOTE

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner:
Choose YE. If the above message appears again, choose NO and proceed with manual data entry IAW Section 5.4, Perform The Following To Produce A SSCL Page 2 Using The Manual Dose Assessment Mode, of this procedure.

NOTE

Dose Assessment MIDAS in automatic mode will not function correctly unless all appropriate Plant Vent Effluent monitors and the MET data are operational.

IF the appropriate Plant Vent Effluent Monitors or the MET data are **NOT** operational, THEN implement Section 5.4 of this procedure.

5.3.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.3.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.3.3 INPUT **midas** into the User name line. _____

5.3.4 INPUT **midas** into the Password line and depress the **RETURN** key. _____

5.3.5 POSITION the cursor to the Midas Icon and click the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.3.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.3.7 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Function Selection screen will appear). _____

5.3.8 POSITION the cursor over **ACCIDENT DOSE CALCULATIONS (AC)** box and click the mouse once. (Your selection will become highlighted). _____

5.3.9 POSITION the cursor over the **CONFIRM** box and click the mouse once. (It will become highlighted and the Accident Dose Calculations (AC) screen will appear). _____

5.3.10 POSITION the cursor over the **Quick Dose Projection AUTO REAL TIME (Menu A)** box and click the mouse once. (Your selection will become highlighted). _____

5.3.11 POSITION the cursor over the **CONFIRM** box and click the mouse once. MIDAS will start to perform dose assessment calculations. (The calculating screen will appear. The SSCL will automatically printout and the 10 mile map will appear on the screen). _____

5.3.12 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and click the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). _____

5.3.13 POSITION the cursor over the **NEXT REPORT** box and click the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). _____

5.3.14 POSITION the cursor over the **MORE REPORTS** box and click the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.3.15 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.3.15 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.3.15 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL Box** and click the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out. _____

5.3.16 POSITION the cursor over the **EXIT** box and click the mouse once. (The box will become highlighted). _____

5.3.17 CLICK the mouse again. (The Function Selection screen will appear). _____

5.3.18 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.3.8 through 5.3.17. _____

5.3.19 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear).

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.4 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE MANUAL DOSE ASSESSMENT MODE

NOTE

Manual Mode Dose Assessment, should be performed IF:

- A Plant Vent Effluent monitor is not operational.
- A surveillance of the Plant Vent Effluent monitor is ongoing.
- Automatic radiological data acquisition is not operational.
- Automatic meteorological data acquisition is not operational.
- To input the total isotopic noble gas and iodine 131 value.

5.4.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.4.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.4.3 TYPE **midas** into the User name line. _____

5.4.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.4.5 POSITION the cursor to the Midas Icon and click the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.4.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.4.7 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Function Selection screen will appear). _____

5.4.8 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and click the mouse once. (Your selection will become highlighted). _____

5.4.9 POSITION the cursor over the **CONFIRM** box and click the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear). _____

5.4.10 POSITION the cursor over **MANUAL ENTRY ON SPREADSHEET (MENU C)** and click the mouse once. Your selection will become highlighted. _____

5.4.11 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The box will become highlighted and the Scenario Data Table Control screen will appear). _____

5.4.12 SELECT the appropriate box and position the cursor in it:

- IF this is the first initial input or the first input after a radiological release ≥ technical specifications, THEN SELECT **START NEW SCENARIO** box and click the mouse once. (The **START NEW** SCENARIO and **WARNING CURRENT DATA WILL BE ERASED** boxes will become highlighted). _____
- IF this is updating dose assessment calculations, THEN SELECT **CURRENT SCENARIO EDIT** box and click the mouse once. (The **CURRENT SCENARIO EDIT** box will become highlighted). _____
- IF a previous dose assessment run has been calculated by MIDAS, and the user wishes to view the plume map from that previous run and **NOT** obtain a **VALID** SSCL, THEN SELECT **CURRENT SCENARIO NO EDIT** box and click the mouse once. (The **CURRENT SCENARIO NO EDIT** box will become highlighted). _____

NOTE

15-minute average MET conditions should be inputted every 15 minutes. (MIDAS will treat the release as a puff release that lasted only 15 minutes, if appropriate 15-minute increments are not inputted).

5.4.13 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The box will become highlighted and the Meteorological Spread Sheet screen will appear with the current time highlighted. A blue rectangle will be displayed under the **SPD33P (MPH)** column). _____

5.4.14 MOVE the blue rectangle down the **SPD33 (MPH)** column until it is next to the highlighted time using the down arrow key. _____

5.4.15 INPUT appropriate data for the 33 foot elevation wind speed.

5.4.16 MOVE the blue rectangle over to the **SPD300 (MPH)** column using the right arrow key. _____

5.4.17 INPUT appropriate data for the 300 foot elevation wind speed.

5.4.18 MOVE the blue rectangle over to the **DIR33P (DEG)** using the right right arrow key. _____

5.4.19 INPUT appropriate data for the 33 foot elevation wind direction. _____

5.4.20 MOVE the blue rectangle over to the **DT300 (DEG C)** using the right arrow key. _____

5.4.21 INPUT appropriate data for the 300 - 33 foot delta temperature. _____

NOTE

The value used for the ambient temperature may be a reasonable guess, if the actual ambient temperature is not known.

5.4.22 MOVE the blue rectangle over to the **TEM33 (DEG C)** using the right arrow key to input the ambient temperature. _____

5.4.23 INPUT appropriate data for the ambient temperature. _____

5.4.24 MOVE the blue rectangle over to the **RAINFL (IN)** using the right arrow key. _____

5.4.25 INPUT appropriate data for the 15 minute average rainfall. (The values 0.08 for Heavy, 0.02 for Moderate, and 0.01 for Light, rainfall may be used if actual rainfall in inches is not known). _____

5.4.26 DEPRESS the **ENTER** key. _____

5.4.27 IF all inputs are correct, THEN Depress the **X** key. (The Gaseous Vent and Flow screen will appear with the current time highlighted). _____

5.4.28 IF all inputs are **NOT** correct, THEN use the arrow keys to go back to the appropriate column(s) and input correct data and depress the **X** key. (The Gaseous Vent and Flow screen will appear with the current time highlighted).

NOTE
FOR HOPE CREEK AND SALEM UNIT 1 & 2

- 10 or 15 Minute Average Plant vent (PV) monitor data and PV flow rates should be inputted every 15 Minutes.
- Monitoring Points with – DI next to them (i.e. FRVS – DI, R45 - DI) should be used to input the total I-131 isotopic value in uCi/cc, when available from an effluent sample.
- The following monitoring points are available for use in manual dose assessment at **HOPE CREEK:** NPV-P, NPV-I, NPV-NG, SPV-P, SPV-I, SPV-NG, FRVS-NG, HTV-NG, NPV-DI, SPV-DI, FRVS-DI, HTV-DI

SALEM UNT 1 & 2

Follow the below guidance to help in making the correct decision of which **R41** monitor value to use:
R41A should be used if values are between 1E-08 uCi/cc to 9.99E-02 uCi/cc.
R41B should be used if values are > 1E-01 uCi/cc to 9.99E+01 uCi/cc.
R41C should be used if values are > 1E+02 uCi/cc to 1E+05 uCi/cc.

The **R45 monitors** are to be used **ONLY** if R41 monitor values are not available. Follow the below guidance in making the correct decision of which R45 monitor value to use:
R45B should be used if values are > 1E-03 uCi/cc to 1E+01 uCi/cc.
R45C should be used if values are > 1E+01 uCi/cc to 1E+05 uCi/cc.

- Dose assessment may be performed using the **R46 monitor** value during a primary to secondary leak or SGTR and entered in the R46MSL column.
- The following information concerns inputting contact **Teletector** readings from the Main Steam Lines into MIDAS.
  - Refer to section 5.2 concerning where contact readings on the MSL should be taken.
  - The Teletector value obtained from contact reading on the MSL must be multiplied by the correction factor of 9.33E-05.
  - The value should be entered in the R46MSL column.
  - The flow rate in lbs/hr may be obtained from the Control Room. (The value 4.50E+05 lbs/hr should be used as the default flow rate, if the actual flow rate is not known).
- The **R44** Monitor values should be used for "What If" type Calculations or if the Containment has been breached and an unmonitored release is progress
  - The flow rate range for the R44's is 1 to 1000 cfm, with the 1000 being

5.4.29 MOVE the blue rectangle over to the right until the monitor of interest is highlighted using right arrow key. _____

NOTE

Hope Creek's Hardened Torus Vent's value should be inputted in uCi/second. **NO** Plant Vent flow rate should be inputted. All other Plant Vent Effluent data **for Hope Creek and Salem Unit 1 & 2** should be inputted in uCi/cc and include Plant Vent Flow Rates for each input.

5.4.30 INPUT appropriate 15 minute average radiological data, or Instantaneous data if the criteria listed in Section 5.1 are met. _____

5.4.31 MOVE the blue rectangle over to the right one position to flow rate for the monitor selected. _____

5.4.32 INPUT appropriate flow rate in cfm. _____

5.4.33 DEPRESS the **ENTER** key. _____

5.4.34 IF all inputs are correct, THEN DEPRESS the **X** key _____

5.4.35 IF an input is incorrect, THEN correct it and DEPRESS the **x** key. (The DBA Accident Type Selection screen will appear with the **UNKNOWN MIX** box highlighted). _____

NOTE

Unless directed by the RAC or RSM, UNKNOWN MIX should be used.

5.4.36 POSITION the cursor over the **CONFIRM** box and click the mouse once. (**WARNING - SOURCE IS ZERO FOR SELECTED POINT(S)** and the points of release that the user did not input data for will appear). _____

5.4.37 POSITION the cursor over the **CONTINUE** box and click the mouse once. (The box will become highlighted and the Release Timing Selection screen will appear with the Trip Date, Release Start Same As Trip Date and Duration (Minutes) boxes highlighted). _____

5.4.38 INPUT the duration of a release in minutes by performing the following:

A. POSITION the cursor over the **REMAINING DURATION (MIN)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right hand corner of the screen). _____

B. POSITION the cursor over the appropriate number(s) you wish to enter (use **240** minutes for a four hour default release, if the duration of a release is not known) and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

C. POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will now appear in the highlighted REMAINING DURATION (MINUTES) box). _____

D. IF the information was inputted incorrectly, THEN position the cursor over the **CL** box and CLICK the mouse once to clear the entire input that is displayed in the top portion of pop-up screen. _____

- RE-ENTER data IAW steps 5.4.38 (A. – C.). _____

E. POSITION the cursor over the **CONFIRM** box and click the mouse once. (MIDAS will start to perform calculations. The calculating screen will appear. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen). _____

5.4.39 MOVE the cursor to the **CONTINUE** box on the bottom of the screen and click the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). _____

5.4.40 POSITION the cursor over the **NEXT REPORT** box and click the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). _____

5.4.41 POSITION the cursor over the MORE REPORTS box and click the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.4.42 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.4.42 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.4.42 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and click the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out.

_____

5.4.43 POSITION the cursor over the **EXIT** box and click the mouse once. (The box will become highlighted). _____

5.4.44 CLICK the mouse again. (The Function Selection screen will appear). _____

5.4.45 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.4.8 through 5.4.44. _____

5.4.46 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.5 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING ENHANCED DOSE ASSESSMENT MODE

NOTE

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner:
Choose YE. If the above message appears again, choose NO and proceed with manual data entry IAW Section 5.4, Perform The Following To Produce A SSCL Page 2 Using The Manual Dose Assessment Mode, of this procedure.

NOTE

Enhanced Automatic Mode Dose Assessment should be used if Reactor SCRAM/TRIP time needs to be adjusted, while running MIDAS in Automatic Mode. Ensure all appropriate Plant Vent Effluent monitors and the MET data are operational prior to using Automatic Mode.. IF the appropriate Plant Vent Effluent Monitors or the MET data are **NOT** operational, THEN implement Section 5.4 of this procedure.

5.5.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.5.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.5.3 TYPE **midas** into the User name line. _____

5.5.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.5.5 POSITION the cursor to the **Midas** Icon and click the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.5.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.5.7 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Function Selection screen will appear). _____

5.5.8 POSITION the cursor over **ACCIDENT DOSE CALCULATIONS (AC)** box and click the mouse once. (Your selection will become highlighted). _____

5.5.9 POSITION the cursor over the **CONFIRM** box and click the mouse once. (It will become highlighted and the Accident Dose Calculations (AC) screen will appear). _____

5.5.10 POSITION the cursor over the **ENHANCED DOSE AUTO ACC TYPE (MENU B)** and click the mouse once. Your selection will become highlighted. _____

5.5.11 POSITION the cursor over the **CONFIRM** box and click once. It will become highlighted and the DBA Accident Type Selection Menu will appear with the **UNKNOWN MIX** box highlighted. _____

5.5.12 POSITION the cursor over the **CONFIRM** box and click the mouse once, if the isotopic mix is unknown. Select correct isotopic mix, if known and confirm. The box will become highlighted and the Release Timing Selection screen will appear. _____

5.5.13 POSITION the cursor over the **TRIP CURRENT TIME** box and click the mouse once. _____

5.5.14 POSITION the cursor over the **RELEASE START SAME AS TRIP DATE** box and click the mouse once. _____

5.5.15 INPUT the duration of a release in minutes by performing the following:

A. POSITION the cursor over the **REMAINING DURATION (MIN)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right hand corner of the screen). _____

B. POSITION the cursor over the appropriate number(s) you wish to enter (use **240** minutes for a four hour default release, if the duration of a release is not known) and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

C. POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will now appear in the highlighted REMAINING DURATION (MINUTES) box). _____

D. IF the information is inputted incorrectly, THEN position the cursor over the **CL** box and CLICK the mouse once to clear the entire input that is displayed in the top portion of pop-up screen. _____

- RE-ENTER data IAW steps 5.5.15 (A. – C.). _____

E. POSITION the cursor over the **CONFIRM** box and click the mouse once. (MIDAS will start to perform calculations. The calculating screen will appear. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen). _____

5.5.16 MOVE the cursor to the **CONTINUE** box on the bottom of the screen and click the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). _____

5.5.17 POSITION the cursor over the **NEXT REPORT** box and click the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). _____

5.5.18 POSITION the cursor over the **MORE REPORTS** box and click the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.5.19 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.5.19 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.5.19 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out. _____

5.5.20 POSITION the cursor over the **EXIT** box and click the mouse once. (The box will become highlighted). _____

5.5.21 CLICK the mouse again. (The Function Selection screen will appear). _____

5.5.22 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.5.8 through 5.5.21 _____

5.5.23 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.6 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE ISOTOPIC DOSE ASSESSMENT MODE

NOTE

Dose Assessment should be performed in Isotopic Mode, if Dose Assessment calculations are needed to be performed using Plant Vent grab sample isotopic results.

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner: Choose NO and proceed with following the steps listed in this attachment.

5.6.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.6.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.6.3 TYPE **midas** into the User name line. _____

5.6.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.6.5 MOVE the cursor to the **Midas** Icon and CLICK the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.6.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.6.7 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Function Selection screen will appear). _____

5.6.8 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and CLICK the mouse once. (Your selection will become highlighted). _____

5.6.9 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear). _____

5.6.10 POSITION the cursor over **ADVANCED CALCS ALL SCREENS (MENU X)** and CLICK the mouse once. Your selection will become highlighted. _____

5.6.11 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted. MIDAS will attempt to collect automatic data . The Miscellaneous Parameters screen will then appear). _____

5.6.12 PERFORM the following to highlight appropriate selections:

A. POSITION the cursor over the **RESET** box and CLICK the mouse. No boxes will now be highlighted. _____

B. POSITION the cursor over the **MANUAL** box and CLICK the mouse once. _____

C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and CLICK the mouse once. The box will become highlighted. _____

D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and CLICK the mouse once. A pop-up screen will appear. (_____

E. INPUT **0 (ZERO)** for **FLOW EX VEL (CFM)** for **REL PT 1, 2, 3, & 4** for Hope Creek. _____

F. INPUT **0 (ZERO)** for **FLOW EX VEL (CFM)** for **REL PT 1, & 4** for Salem 1 & 2. (Salem 1 & 2 do not have a release point 3). _____

G. INPUT **95** for **FLOW EX VEL (CFM)** for **REL PT 2** for Salem 1 & 2(Salem 1 & 2 do not have a release point 3). _____

H. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the correct values and CLICKING the mouse once. _____

I. POSITION the cursor over the **EN** box when the appropriate values are inputted and CLICK the mouse once. (The box will become highlighted with the flow rate inside the box). _____

J. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and CLICK the mouse once. A pop-up screen will appear. _____

K. INPUT **10** using the pop-up screen by:

1. POSITION the cursor over **1** and CLICK the mouse once. _____

2. POSITION the cursor over **0** and CLICK the mouse once. _____

3. POSITION the cursor over the **EN** box and CLICK the mouse once. (The box will become highlighted with 10 appearing inside the box). _____

5.6.13 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and CLICK the mouse once. (The box will become highlighted). _____

5.6.14 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). _____

5.6.15 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box and CLICK the mouse once.

5.6.16 POSITION the cursor over the **START DATE INTEG. CURRENT** Box and CLICK the mouse once.

5.6.17 IF the **PROJ. TIMES (HRS)** box doesn't have **.25, 1, 4, 24** inside of it and is not highlighted, THEN POSITION the cursor over the **PROJ. TIMES (HRS)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right of the screen). _____

A. INPUT **.25, 1, 4, 24** by:

1. POSITION the cursor over **.** and CLICK the mouse once. _____

2. POSITION the cursor over **2** and CLICK the mouse once. _____

3. POSITION the cursor over **5** and CLICK the mouse once. _____

4. POSITION the cursor over **,** and CLICK the mouse once. _____

5. POSITION the cursor over **1** and CLICK the mouse

once. _____

6. POSITION the cursor over , and CLICK the mouse once. _____

7. POSITION the cursor over **4** and CLICK the mouse once. _____

8. POSITION the cursor over , and CLICK the mouse once. _____

9. POSITION the cursor over **2** and CLICK the mouse once. _____

10. POSITION the cursor over **4** and CLICK the mouse once. _____

11. POSITION the cursor over the **EN** box and CLICK the mouse once.

5.6.18 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). _____

5.6.19 POSITION the cursor over the **MANUAL ENTRY OF ISOTOPE CONCENTRATION** box and CLICK the mouse once. (The box will become highlighted). _____

5.6.20 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Isotope Concentrations screen for the release point selected will appear). _____

5.6.21 POSITION the cursor over the **RESET** box and CLICK the mouse. _____

5.6.22 POSITION the cursor over the appropriate isotope box(es) and CLICK the mouse once. (The box(es) will become highlighted and a pop up screen will appear in the right corner of the screen). _____

5.6.23 POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop up screen). _____

5.6.24 IF the value(s) displayed is correct, THEN PLACE the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the box). _____

5.6.25 IF the value is incorrect, THEN position the cursor over the **CL**

box and CLICK the mouse once. (This will clear the input that is displayed in the top portion of the pop-up screen and allow you to reenter the value(s).

5.6.26 POSITION the cursor over the **SAMPLE STREAM FLOW RATE (CFM)** box to input the release flow rate and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the right corner of the screen).

5.6.27 FOLLOW steps 5.6.23 through 5.6.25 to input the appropriate value.

5.6.28 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Release Timing Selection screen will appear).

5.6.29 POSITION the cursor over the **RELEASE CURRENT TIME** box and CLICK the mouse once.

5.6.30 POSITION the cursor over the **DURATION (MINUTES)** box and CLICK the box once. A pop-up screen will appear in the upper right corner of the screen.

5.6.31 INPUT the duration of the release in minutes (**240** minutes if the release duration is unknown) using the pop-up screen by:

A. POSITION the cursor over the appropriate values.

B. CLICK the mouse once.

C. POSITION the cursor over **EN.**

D. CLICK the mouse once.

E. ENTER the duration value chosen. (The **DURATION** box will become highlighted with the value Inputted inside the box).

5.6.32 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Weather Selection screen will appear).

5.6.33 PERFORM the following steps to input meteorological data :

NOTE

The user will not be prompted for the SPD33P (MPH) if the release is an elevated release.

A. POSITION the cursor over the **DIR33P (DEG)** box and CLICK the mouse once to input the 33 foot elevation from wind direction. _____

B. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

C. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. DIR33P DEG)]. _____

D. POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. _____

E. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

F. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)]. _____

NOTE

The user will not be prompted for the SPD300 (MPH) if the release is a ground release.

G. POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. _____

H. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

I. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

J. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). _____

K. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

L. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

NOTE

MIDAS does not use the ambient temperature. Any reasonable guess for the actual temperature should be inputted.

M. POSITION the cursor over the **TEMP33 (DEG.C)** box and CLICK the mouse once to input the ambient temperature. (The box will become highlighted). _____

N. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

O. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

P. POSITION the cursor over the **RAIN (INCHES)** box and CLICK the mouse once to input the 15 minute average precipitation. (The box will become highlighted). _____

NOTE

The following values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0", if it is not raining.

Q. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

R. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

> **NOTE**
>
> The three boxes labeled **PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE** and **USE DEFAULT MET** should NOT be used.

S. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The Release Point Data screen will appear). _____

5.6.34 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and Summary of Meteorological Data screen will appear). _____

5.6.35 POSITION the cursor over **CONTINUE** box and CLICK the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished.) _____

5.6.36 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The NEXT REPORT box will replace the CONTINUE box).

5.6.37 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box).

5.6.38 POSITION the cursor over the MORE REPORTS box and CLICK the mouse once. (The More Reports Selection screen will appear).

NOTE

- Step 5.6.39 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.6.39 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.6.39 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). _____

5.6.40 POSITION the cursor over the **EXIT** box and CLICK the mouse once. (The EXIT box will become highlighted). _____

5.6.41 CLICK the mouse again. (The Function Selection screen will appear). _____

5.6.42 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.6.8 through 5.6.41. _____

5.6.43 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.7 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE BACK CALCULATION DOSE ASSESSMENT MODE

NOTE

Back Calculation Dose Assessment should be used if dose assessment values are needed based on onsite or offsite field team meter results.

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner: Choose NO and proceed with following the steps listed in this attachment.

5.7.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.7.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.7.3 TYPE **midas** into the User name line. _____

5.7.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.7.5 MOVE the cursor to the Midas Icon and CLICK the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.7.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.7.7 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Function Selection screen will appear). _____

5.7.8 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and CLICK the mouse once. (Your selection will become highlighted). _____

5.7.9 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear). _____

5.7.10 POSITION the cursor over the **FIELD TEAM STRAIGHT LINE (MENU E)** box and CLICK the mouse once. The box will become highlighted. _____

5.7.11 POSITION the cursor over the **CONFIRM** box and CLICK the Mouse once. (The Field Monitoring Parameter Selection screen will then appear). _____

5.7.12 POSITION the cursor over the **RESET** box and CLICK the mouse once. (The highlighted boxes will now be cleared and data may now be inputted). _____

5.7.13 POSITION the cursor over the **GROUND** box and CLICK the mouse once. (The box will become highlighted) _____

5.7.14 POSITION the cursor over the **FIELD MONITOR READING (MR/HR)** box and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen). _____

5.7.15 POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

5.7.16 POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box). _____

5.7.17 POSITION the cursor over the **DISTANCE FROM THE PLANT (MILES)** box and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen). _____

5.7.18 POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

5.7.19 POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box). _____

5.7.20 POSITION the cursor over the **SILVER ZEOLITE (CPM)** box and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen). _____

5.7.21 POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

5.7.22 POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box). _____

5.7.23 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. IF the calculating screen appears, THEN MIDAS is starting to perform dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen. _____

5.7.24 IF the Meteorological Spread Sheet screen appears, THEN REFER to Section 5.8, and follow Steps 5.8.1 through 5.8.18 and then return to Step 5.7.25. _____

5.7.25 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The NEXT REPORT box will replace the CONTINUE box). _____

5.7.26 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box). _____

5.7.27 POSITION the cursor over the MORE REPORTS box and CLICK the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.7.28 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.7.28 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.7.28 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). _____

5.7.29 POSITION the cursor over the **EXIT** box and CLICK the mouse once. (The EXIT box will become highlighted). _____

5.7.30 CLICK the mouse again. (The Function Selection screen will appear). _____

5.7.31 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.7.8 through 5.7.29. _____

5.7.32 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.8 Manual Input of MET Data While Performing Automatic Dose Assessment

NOTE

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner:
Choose YE. If the above message appears again, choose NO and proceed with manual data entry IAW Section 5.4, Perform The Following To Produce A SSCL Page 2 Using The Manual Dose Assessment Mode, of this procedure.

NOTE

This Section (5.8) of the procedure should be used when Automatic Meteorological data acquisition stops functioning while performing dose assessment in the automatic data acquisition mode.

5.8.1 POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. (The box will become highlighted and a pop-up screen will appear in the upper right hand corner of the screen). _____

5.8.2 POSITION the cursor over the appropriate number(s) you wish to enter and click the mouse once. The number you chose will be displayed in the top portion of the pop-up screen. _____

5.8.3 POSITION the cursor over the **EN** box and CLICK the mouse once, if the value(s) displayed is correct. The value chosen will be displayed in specific weather parameter box that is being inputted [i.e. SPD33P (MPH)]. _____

5.8.4 IF the information is incorrect, THEN POSITION the cursor over the **CL** box and CLICK the mouse once. (This will clear the entire input that is displayed in the top portion of the pop-up screen). _____

5.8.5 POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. (The box will become highlighted). _____

5.8.6 INPUT the appropriate value(s) IAW steps 5.8.2 through 5.8.4. _____

5.8.7 POSITION the cursor over the **DIR33P (DEG)** box and CLICK the mouse once to input the 33 foot elevation wind direction from. (The box will become highlighted). _____

5.8.8 INPUT the appropriate value(s) IAW steps 5.8.2 through 5.8.4. _____

5.8.9 POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). _____

5.8.10 INPUT appropriate value(s) IAW steps 5.8.2 through 5.8.4. _____

NOTE

Any reasonable guess for ambient temperature may be inputted if actual temperature isn't known.

5.8.11 POSITION cursor over the **TEMP33 (DEG.C)** box and CLICK the mouse once to input the ambient temperature. (The box will become highlighted). _____

5.8.12 INPUT appropriate value(s) IAW steps 5.8.2 through 5.8.4. _____

5.8.13 POSITION cursor over the **RAIN (INCHES)** box and click the mouse once to input if it is or is not raining (precipitation). (The box will become highlighted). _____

5.8.14 INPUT **0.08** if the rainfall is heavy. _____

5.8.15 INPUT **0.02** if the rainfall is moderate. _____

5.8.16 INPUT **0.01** if the rainfall is light. _____

5.8.17 INPUT **0 (ZERO)** if their is no rainfall or if the user is not sure if it is raining. _____

NOTE

The PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE and **USE DEFAULT MET** boxes should not be used.

5.8.18 POSITION the cursor over **CONFIRM** box and click the mouse once. (The CONFIRM box will become highlighted and the Calculations In Progress screen will appear. PC MIDAS will now start performing dose assessment calculations). _____

5.9 PERFORM THE APPROPRIATE OPERATIONAL INSTRUCTIONS TO MANIPULATE MAP SCREENS AND PRINTOUT MAPS

NOTE

This section (5.9) should be used to access different map functions and options.

5.9.1 PERFORM the following to print a screen, report or map:

A. DEPRESS **ALT + ENTER**, **PRINT SCREEN** keys. _____

B. DEPRESS depress the **ALT + ENTER** keys to exit the print option and to continue with normal MIDAS operation. _____

5.9.2 PERFORM the Following Steps to Display A POI Dose Rate:

A. POSITION the cursor over the **POI** box located at the bottom of the map screen and CLICK the mouse once. (The Operational Choices menu located at the bottom of the screen next to the POI box is replaced with the **CURSOR HERE TO EXIT** box). _____

B. POSITION the cursor + to the POI on the map you wish to know the dose rates at and CLICK the mouse once. (The dose rate of the POI will appear). _____

C. POSITION the cursor to the **CURSOR HERE TO EXIT** box and CLICK the cursor once to return to the other map command options. _____

5.9.3 PERFORM the following steps to draw map features onto a map:

A. POSITION the cursor over the **MAP FEATURES** box and CLICK the mouse once. (A Pop-up box will appear at the right side of the screen). _____

B. POSITION the cursor over the option(s) selected (**WIND SPIDER, COUNTY BOUNDARIES, ERPAS, and/or TEXT**) to be drawn on the map and CLICK the mouse once. (The options selected will become highlighted). _____

C. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Confirm box will become highlighted and the map will be redrawn with the option(s) selected illustrated on it). _____

5.9.4 PERFORM the following to add another or remove the Map Feature Selected Perform.

A. POSITION the cursor over the **MAP FEATURES** box and CLICK the mouse once. (A Pop-up box will appear at the right side of the screen). _____

B. POSITION the cursor over the option(s) selected (**WIND SPIDER, COUNTY BOUNDARIES, ERPAS, and/or TEXT**) to be added to or removed from the map and CLICK the mouse once. (Any additional options selected will be highlighted, while options to be removed from the map will go from being highlighted to not being highlighted). _____

C. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Confirm box will become highlighted and the map will be redrawn with the option(s) selected either deleted or illustrated on it). _____

5.9.5 PERFORM the following to select an area on a map to blowup:

A. POSITION the cursor over the **SELECT AREA** box and CLICK the mouse once. (The Operational Choices menu located on the bottom of the screen will disappear). _____

B. POSITION the cursor to one edge of the area you wish to enlarge on the screen and CLICK the mouse once. (A black dot will appear where the cross hairs of the cursor was). _____

C. POSITION the cursor to other edge of the area you wish to enlarge on the screen and CLICK the mouse once. (A black dot will appear where the cross hairs of the cursor was and the area you selected will appear on the screen enlarged with the Operational Choices menu reappearing on the bottom of the screen. This can be done as many times as the user wishes). _____

D. POSITION the cursor over the **RESTORE** box and CLICK the mouse once to return the map to its original size. _____

5.9.6 PERFORM the following steps to project the plume Into the future using the current meteorological and radiological conditions:

A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The Operational Choices menu located at the bottom of the screen will disappear being replaced by the PROJ. TIME 0.25 (HOURS), CONFIRM and NEXT REPORT boxes). _____

B. POSITION the cursor over the **PROJ. TIME 4.00 (HOURS)** box and:

1. CLICK the mouse to change the projection time to 24.00 hours. _____

2. CLICK the mouse again to change the projection time to 0.25 hours. _____

3. CLICK the mouse again to change the projection time to 1.00 hours. _____

4. CLICK the mouse again to change the projection time back to 4.00 hours. _____

C. POSITION the cursor over the **CONFIRM** box when the appropriate projection time has been selected and CLICK the mouse once. (The map will be redrawn showing the plume and radiological conditions projected into the future by the time increment chosen by the user. The map Operational Choices menu will also reappear at the bottom of the screen). _____

5.9.7 PERFORM the following steps to change the plume back to 4.00 hour projection time:

A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The Operational Choices menu located at the bottom of the screen will disappear being replaced by the PROJ. TIME with 1.00, 4.00, or 24.00 HOURS, CONFIRM and NEXT REPORT boxes). _____

B. POSITION the cursor over the **PROJ. TIME** box and CLICK the mouse until 4.00 (HOURS) appears. _____

C. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The map will be redrawn showing the plume and radiological conditions returned to their original state. The map Operational Choices menu will also reappear at the bottom of the screen). _____

5.9.8 PERFORM the following steps to change the distance of a map displayed:

> **NOTE**
>
> A map MUST be already displayed prior to varying the map's distance.

A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The CONTINUE box will be replaced by the NEXT REPORT box). _____

B. POSITION the mouse over the **NEXT REPORT** box and CLICK the mouse once. (The NEXT REPORT box will be replaced by the MORE REPORTS box). _____

C. POSITION the cursor over the **MORE REPORTS** box and CLICK the mouse once. (The More Reports Selection Screen will appear). _____

D. POSITION the mouse over the Report Plot the user would like to select and CLICK the mouse once. (The selection will become highlighted. Maps can be only drawn using REPORT PLOT choices). _____

E. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. The box will become highlighted and the Report Parameter Selection screen will appear with the user's selection enclosed in a box in the middle of the screen. _____

F. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Map Scale Selection screen will appear with the current map distance appearing highlighted in a box in the upper left-hand corner of the screen). _____

G. POSITION the cursor over **MAP SCALE (MILES)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right hand corner). _____

H. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number(s) you chose will be displayed at the top of the pop-up screen). _____

I. POSITION the cursor over the **EN** box in the pop-up screen and CLICK the mouse once. _____

J. IF the number(s) displayed in the top of the pop up screen is incorrect, THEN position the cursor over the **CL** box and CLICK the mouse once. (This will clear the entire input that is displayed in the top of the pop up screen).

K. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The CONFIRM box will become highlighted and the map will be drawn to the scale selected). _____

5.10 The Following Steps Should Be Performed To Calculate Liquid Release Dose Assessment For Swimmers

NOTE

Liquid Release Dose Assessment for Swimmers should be performed IAW Section 5.10, IF Dose to swimmers needs to be calculated from a liquid release.

5.10.1 PERFORM the following to perform dose assessment for swimmers. _____

A. OBTAIN the gross liquid release activity from chemistry and record the value in Space ***A***. _____

B. SELECT the Dose Rate Conversion Factor from below. _____

Gamma External Dose Equivalent = 1.44E-06 mRem/hr/pCi/l
Beta/Gamma Skin Dose Equivalent = 1.72E-06 mRem/hr/pCi/l

C. RECORD the value in Space ***D***. _____

D. OBTAIN the exposure time. _____

E. RECORD in Space ***E***. _____

NOTE

- The average yearly dilution factor for routine releases is 1.00E-03.
- The default dilution factor is 1.00E+00 and should be used if the dilution factor is unknown.

F. OBTAIN the dilution factor from chemistry or use the default value.

G. RECORD value in Space ***F***.

H. MULITPLY the value in Space ***A*** by the value in Space ***B*** . (The value calculated will be the total concentration of the liquid release).

I. RECORD the value in space ***C***.

J. MULTIPLY the values from Spaces ***C, D, E*** and ***F*** to (The calculated value will be the External Dose Equivalent (EDE) dose).

K. RECORD the value in Space ***G***.

A. _____ * ***B.*** 1.00E+09 = ***C.*** _____
Gross Liquid Activity (uCi/ml) | Conversion Factor | Total Concentration (pCi/l)

D. _____ * ***E.*** _____ * ***F.*** _____
DRCF (mRem/hr/pCi/l) | Exposure Time | Dilution Factor (Hours)

G. _____
EDE in mRem

5.11 The Following Steps Should Be Performed To Calculate Dose Assessment DAPA Values (Leakage From The Drywell)

NOTE

This section (5.11) is for **HOPE CREEK ONLY** and should be used to perform **Leakage from the Drywell** Dose Assessment using DAPA Values, if needed.

5.11.1 OBTAIN the DAPA A or B monitor reading and record this value on the horizontal axis of Table 10-1 titled Drywell (Primary Containment) High Range Monitor Response (DAPA) R/hr. _____

5.11.2 MULTIPLY the leak rate in uCi/sec by 1.00E-03 to obtain percent of Drywell Leakage. [The leak rate in uCi/sec may be obtained from the RM-11 or the VAX LA120. IF the Reactor Building Ventilation hasn't been isolated, THEN use 9RX580 (FRVS Effluent Monitor Reading]. [IF the Reactor Building Ventilation has been isolated, THEN use 9RX680 (SPV Effluent Monitor Reading)]. _____

5.11.3 RECORD the percent of Drywell Leakage on Table 10-1 by choosing the most appropriate diagonal line (100% 2 hrs, 100%, 10, 1.0,0.5, or 0.1). _____

5.11.4 LOCATE where the DAPA monitor value and the percent leakage intersect on Table 10-1. _____

5.11.5 DRAW a line from this point of intersection to Scale ***"A"*** titled Release Rate (uCi/sec). _____

5.11.6 PERFORM the following steps to determine the X/Q value on Scale ***"B"***:

A. DIVIDE the wind speed (mph) by 2.24 to obtain the wind speed in m/sec. _____

B. RECORD the wind speed in the wind speed blank. _____

C. REFER to Table 10-2 for an elevated release

OR

REFER to Table 10-3 for a ground release and locate the specific distance of interest. _____

D. FOLLOW the appropriate table over to the right to

the current Stability Class. _____

E. MULTIPLY this value by 1.00E-06. _____

F. RECORD the value in the Xu/Q blank. _____

G. DIVIDE the Xu/Q value by the wind speed in m/sec. and record the value in the X/Q blank. _____

5.11.7 LOCATE the approximate X/Q value on Scale ***"B"*** and plot the value. _____

_____ / _____ = _____
Xu/Q / wind speed (m/sec) X/Q

5.11.8 DRAW a straight line from the point of interest on Scale ***"A"*** to the X/Q value located on Scale ***"B"***. _____

5.11.9 CONTINUE TO DRAW the line to the point of intersection on Scale ***"C"***. _____

5.11.10 DETERMINE by interpolation the approximate value of the intercept point on Scale ***"C"***. (This is the projected external dose equivalent (EDE) offsite dose rate in mRem/hr). _____

5.11.11 MULTIPLY this value by four to obtain a four-hour projected EDE dose. _____

NOTE

The TEDE + 4 to EDE Correction Factor is 1.

5.11.12 MULTIPLY the EDE dose by 1 to obtain the four-hour projected TEDE dose. _____

5.12 Perform The Following To Produce A SSCL Page 2 Using Default Dose Assessment Mode

NOTE

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner:
Choose YE. If the above message appears again, choose NO and proceed with manual data entry.

NOTE

This section (5.12) should only be used to perform "WHAT IF DOSE ASSESSMENT" calculations for **Default Dose Assessment based on UFSAR** Accidents.

5.12.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.12.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.12.3 TYPE **midas** into the User name line. _____

5.12.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.12.5 MOVE the cursor to the Midas Icon and CLICK the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.12.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.12.7 POSITION the cursor over the **CONFIRM** box and CLICK

the mouse once. (The Function Selection screen will appear)._____

5.12.8 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and CLICK the mouse once. (Your selection will become highlighted). _____

5.12.9 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear)._____

5.12.10 POSITION the cursor over **ADVANCED CALCS ALL SCREENS (MENU X)** and CLICK the mouse once. (Your selection will become highlighted). _____

5.12.11 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted. MIDAS will attempt to collect automatic data . The Miscellaneous Parameters screen will then appear). _____

5.12.12 PERFROM the following to highlight appropriate selections:

A. POSITION the cursor over the **RESET** box and CLICK the mouse. No boxes will now be highlighted. _____

B. POSITION the cursor over the **MANUAL** box and CLICK the mouse once. _____

C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and CLICK the mouse once. (The box will become highlighted). _____

D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and CLICK the mouse once. (A pop-up screen will appear). _____

NOTE

HOPE CREEK

- REL PT 1, 2, 3, and 4 FLOW (EX VEL) should always be 0.

SALEM UNITS 1 & 2

- REL PT 1, and 4 FLOW (EX VEL) should always be 0. REL PT 2 FLOW (EX VEL) should always be 95. Salem Units1/2 do not have a release point 3.

E. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the correct values and CLICKING the mouse once. _____

F. POSITION the cursor over the **EN** box when the appropriate values are inputted and CLICK the mouse once. (The box will become highlighted with the flow rate inside the box). _____

G. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and CLICK the mouse once. A pop-up screen will appear. _____

H. INPUT **10** using the pop-up screen by:

1. POSITION the cursor over **1** and CLICK the mouse once. _____

2. POSITION the cursor over **0** (zero) and CLICK the mouse once. _____

3. POSITION the cursor over the **EN** box and CLICK the mouse once. (The box will become highlighted with 10 appearing inside the box). _____

5.12.13 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and CLICK the mouse once. (The box will become highlighted). _____

5.12.14 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). _____

5.12.15 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box. _____

5.12.16 IF the **PROJECTED (FORECAST) DOSE** is highlighted, THEN GO to step 5.12.18. _____

5.12.17 IF the **PROJECTED (FORECAST) DOSE** box is not highlighted, THEN CLICK the mouse once. _____

5.12.18 POSITION the cursor over the **START DATE INTEG. CURRENT** Box and CLICK the mouse once. _____

5.12.19 IF the **PROJ. TIMES (HRS)** box does have **.25, 1, 4, 24** inside of the box and is highlighted, THEN go to Step 5.12.21. _____

5.12.20 IF the **PROJ. TIMES (HRS)** box doesn't have **.25, 1, 4, 24** inside of it and is not highlighted, THEN POSITION the cursor over the **PROJ. TIMES (HRS)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right of the screen). _____

A. INPUT **.25, 1, 4, 24** by:

1. POSITION the cursor over **.** and CLICK the mouse once. _____
2. POSITION the cursor over **2** and CLICK the mouse once. _____
3. POSITION the cursor over **5** and CLICK the mouse once. _____
4. POSITION the cursor over **,** and CLICK the mouse once. _____
5. POSITION the cursor over **1** and CLICK the mouse once. _____
6. POSITION the cursor over **,** and CLICK the mouse once. _____
7. POSITION the cursor over **4** and CLICK the mouse once. _____
8. POSITION the cursor over **,** and CLICK the mouse once. _____
9. POSITION the cursor over **2** and CLICK the mouse once. _____
10. POSITION the cursor over **4** and CLICK the mouse once. _____
11. POSITION the cursor over the **EN** box and CLICK the mouse once. _____

5.12.21 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). _____

5.12.22 POSITION the cursor over the **DEFAULT DBA ACCIDENT** box and CLICK the mouse once. (The box will become highlighted). _____

5.12.23 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Design Basis Accident Selection screen for the release point selected will appear). _____

5.12.24 POSITION the cursor over the appropriate accident of interest and CLICK the mouse once. (The box will become highlighted) _____

5.12.25 POSITION the cursor over the appropriate selections and CLICK the mouse once. (The Release Timing Selection screen will appear). _____

5.12.26 POSITION the cursor over the **TRIP CURRENT TIME** box and CLICK the mouse once. _____

5.12.27 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). _____

5.12.28 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (DO **NOT** ENTER ANY VALUES IN THE DURATION OR REMAINING DURATION BOXES. The Weather Selection screen will appear). _____

5.12.29 PERFORM the following steps to input meteorological data :

> **NOTE**
>
> The user will not be prompted for the SPD33P (MPH) if the release is an elevated release.

A. POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. _____

B. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

C. MOVE the cursor over the **EN** box and CLICK the

mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)]. _____

NOTE

The user will not be prompted for the SPD300 (MPH) if the release is a ground release.

D. POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. _____

E. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

F. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

G. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). _____

H. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

I. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

NOTE

Any reasonable guess for the actual temperature should be inputted, if actual temperature is not known.

J. POSITION the cursor over the **TEMP33 (DEG.C)** box and CLICK the mouse once to input the ambient temperature.(The box will become highlighted). _____

K. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

L. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

M. POSITION the cursor over the **DIR33P (DEG.C)** box and CLICK the mouse once to input the 33 foot wind direction. (The box will become highlighted). _____

N. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

O. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

P. POSITION the cursor over the **RAIN (INCHES)** box and CLICK the mouse once to input the 15 minute average precipitation. (The box will become highlighted). _____

NOTE

The following values of values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0" if it is not raining.

Q. POSITION the cursor over the appropriate number(s) You wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

R. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

NOTE

The **PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE** and **USE DEFAULT MET** boxes should not be used.

S. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The Rad Monitoring Channel screen will appear). _____

5.12.30 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and Release Point Data screen will appear). _____

5.12.31 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and the Summary of Meteorological Data screen will appear). _____

5.12.32 POSITION the cursor over **CONTINUE** box and CLICK the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished). _____

5.12.33 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The NEXT REPORT box will replace the CONTINUE box). _____

5.12.34 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box). _____

5.12.35 POSITION the cursor over the **MORE REPORTS** box and CLICK the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.12.36 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.12.36 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.12.36 IF a SSCL needs be printed to the screen or another SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, another SSCL will be printed out). _____

5.12.37 POSITION the cursor over the **EXIT** box and CLICK the Mouse once. (The EXIT box will become highlighted). _____

5.12.38 CLICK the mouse again. (The Function Selection screen will appear). _____

5.12.39 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.12.8 through 5.12.38. _____

5.12.40 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

5.13 Perform The Following To Produce A SSCL Page 2 Using The Default Dose Assessment Based On NUREG 1228 Mode

NOTE

IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS
DATA COLLECTION FROM DADIS WAS TERMINATED
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN
[NO] PROCEED WITH MANUAL ENTRY

Respond in the following manner:
Choose YE. If the above message appears again, choose NO and proceed with manual data entry IAW Section 5.4, Perform The Following To Produce A SCCL Page 2 Using The Manual Dose Assessment Mode, of this procedure.

NOTE

This section (5.13) should only be used to perform "WHAT IF DOSE ASSESSMENT" calculations for **Default Dose Assessment based on NUREG 1228** accidents.

5.13.1 POWER UP the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). _____

5.13.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). _____

5.13.3 TYPE **midas** into the User name line. _____

5.13.4 TYPE **midas** into the Password line and depress the **RETURN** key. _____

5.13.5 MOVE the cursor to the Midas Icon and CLICK the mouse twice. (The MIDAS unit selection screen will be displayed). _____

5.13.6 POSITION the mouse cursor + over the box of your selection (Hope Creek, Salem Unit 1, or Salem Unit 2) and click the mouse once. (Your selection will become highlighted). _____

5.13.7 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Function Selection screen will appear)._____

5.13.8 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and CLICK the mouse once. (Your selection will become highlighted). _____

5.13.9 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear)._____

5.13.10 POSITION the cursor over **ADVANCED CALCS ALL SCREENS (MENU X)** and CLICK the mouse once. (Your selection will become highlighted). _____

5.13.11 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted. MIDAS will attempt to collect automatic data . The Miscellaneous Parameters screen will then appear). _____

5.13.12 PERFROM the following to highlight appropriate selections:

A. POSITION the cursor over the **RESET** box and CLICK the mouse. No boxes will now be highlighted. _____

B. POSITION the cursor over the **MANUAL** box and CLICK the mouse once. _____

C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and CLICK the mouse once. (The box will become highlighted). _____

D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and CLICK the mouse once. (A pop-up screen will appear). _____

NOTE

HOPE CREEK

- REL PT 1, 2, 3, and 4 FLOW (EX VEL) should always be 0.

SALEM UNITS 1 & 2

- REL PT 1, and 4 FLOW (EX VEL) should always be 0. REL PT 2 FLOW (EX VEL) should always be 95. Salem Units 1/2 do not have a release point 3.

E. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the correct values and CLICKING the mouse once. _____

F. POSITION the cursor over the **EN** box when the appropriate values are inputted and CLICK the mouse once. (The box will become highlighted with the flow rate inside the box). _____

G. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and CLICK the mouse once. A pop-up screen will appear. _____

H. INPUT **10** using the pop-up screen by:

1. POSITION the cursor over **1** and CLICK the mouse once. _____

2. POSITION the cursor over **0** (zero) and CLICK the mouse once. _____

3. POSITION the cursor over the **EN** box and CLICK the mouse once. (The box will become highlighted with 10 appearing inside the box). _____

5.13.13 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and CLICK the mouse once. (The box will become highlighted). _____

5.13.14 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). _____

5.13.15 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box. _____

5.13.16 IF the **PROJECTED (FORECAST) DOSE** is highlighted, THEN GO to step 5.13.18. _____

5.13.17 IF the **PROJECTED (FORECAST) DOSE** box is not highlighted, THEN CLICK the mouse once. _____

5.13.18 POSITION the cursor over the **START DATE INTEG. CURRENT** Box. _____

5.13.19 IF the **PROJ. TIMES (HRS)** box does have **.25, 1, 4, 24** inside of the box and is highlighted, THEN go to Step 5.13.21. _____

5.13.20 IF the **PROJ. TIMES (HRS)** box doesn't have **.25, 1, 4, 24** inside of it and is not highlighted, THEN POSITION the cursor over the **PROJ. TIMES (HRS)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right of the screen). _____

A. INPUT **.25, 1, 4, 24** by:

1. POSITION the cursor over **.** and CLICK the mouse once. _____
2. POSITION the cursor over **2** and CLICK the mouse once. _____
3. POSITION the cursor over **5** and CLICK the mouse once. _____
4. POSITION the cursor over **,** and CLICK the mouse once. _____
5. POSITION the cursor over **1** and CLICK the mouse once. _____
6. POSITION the cursor over **,** and CLICK the mouse once. _____
7. POSITION the cursor over **4** and CLICK the mouse once. _____
8. POSITION the cursor over **,** and CLICK the mouse once. _____
9. POSITION the cursor over **2** and CLICK the mouse once. _____
10. POSITION the cursor over **4** and CLICK the mouse once. _____
11. POSITION the cursor over the **EN** box and CLICK the mouse once. _____

5.13.21 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). _____

5.13.22 POSITION the cursor over the **EVENT TREE NUREG 1228** box and CLICK the mouse once. (The box will become highlighted). _____

5.13.23 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Event Tree NUREG 1228 Selection screen for the different NUREG 1228 default accidents will appear). _____

5.13.24 POSITION the cursor over the appropriate accident of interest and CLICK the mouse once. (Choices for the specific accident selected will appear). _____

5.13.25 POSITION the cursor over the appropriate selections and CLICK the mouse once. (The Release Timing Selection screen will appear). _____

5.13.26 POSITION the cursor over the **TRIP CURRENT TIME** box and CLICK the mouse once. _____

5.13.27 POSITION the cursor over the **RELEASE START SAME AS TRIP DATE** box and CLICK the mouse once. _____

5.13.28 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (DO **NOT** ENTER ANY VALUES IN THE DURATION OR REMAINING DURATION BOXES). The Weather Selection screen will appear). _____

5.13.29 PERFORM the following steps to input meteorological data :

> **NOTE**
>
> The user will not be prompted for the SPD33P (MPH) if the release is an elevated release.

A. POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. _____

B. POSITION the cursor over the appropriate number(s) You wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

C. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)]. _____

NOTE

The user will not be prompted for the SPD300 (MPH) if the release is a ground release.

D. POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. _____

NOTE

The user will not be prompted for the SPD300 (MPH) if the release is a ground release.

E. POSITION the cursor over the appropriate number(s) You wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

F. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

G. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). _____

H. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

I. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

NOTE

Any reasonable guess for the actual temperature should be inputted, if actual ambient temperature is not known.

J. POSITION the cursor over the **TEMP33 (DEG.C)** box and CLICK the mouse once to input the ambient temperature. (The box will become highlighted). _____

K. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

L. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

M. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). _____

N. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

O. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

P. POSITION the cursor over the **RAIN (INCHES)** box and CLICK the mouse once to input the 15 minute average precipitation. (The box will become highlighted). _____

NOTE

The following values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0" if it is not raining.

Q. POSITION the cursor over the appropriate number(s) You wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). _____

R. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). _____

NOTE

The **PCT CLOUD COVER REQUIRES SPEED**, **USE LAST MET DATE** and **USE DEFAULT MET** boxes should not be used.

S. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The Rad Monitoring Channel screen will appear). _____

5.13.30 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and Release Point Data screen will appear). _____

5.13.31 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and the Summary of Meteorological Data screen will appear). _____

5.13.32 POSITION the cursor over **CONTINUE** box and CLICK the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished). _____

5.13.33 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The NEXT REPORT box will replace the CONTINUE box). _____

5.13.34 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box). _____

5.13.35 POSITION the cursor over the MORE REPORTS box and CLICK the mouse once. (The More Reports Selection screen will appear). _____

NOTE

- Step 5.13.36 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.13.36 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.13.36 IF a SSCL needs be printed to the screen or another SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. _____

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, another SSCL will be printed out). _____

5.13.37 POSITION the cursor over the **EXIT** box and CLICK the Mouse once. (The EXIT box will become highlighted). _____

5.13.38 CLICK the mouse again. (The Function Selection screen will appear). _____

5.13.39 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.13.8 through 5.13.38. _____

5.13.40 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). _____

B. POSITION the cursor over the **EXIT** box, click the mouse twice. _____

6.0 RECORDS

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

7.0 REFERENCES

7.1 References

7.1.1 EPA 400, Manual of Protective Action Guides And Protective Actions For Nuclear Incidents

7.1.2 MIDAS Documentation Volumes 1-5

7.1.3 Nuclear Business Unit Emergency Plan

7.2 Cross References

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

7.2.2 HC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

7.2.3 SA.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

ATTACHMENT 1

Page 1 of 3

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). _____

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 2

Page 1 of 3
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 – 1, 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)

ATTACHMENT 2

- 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. _____

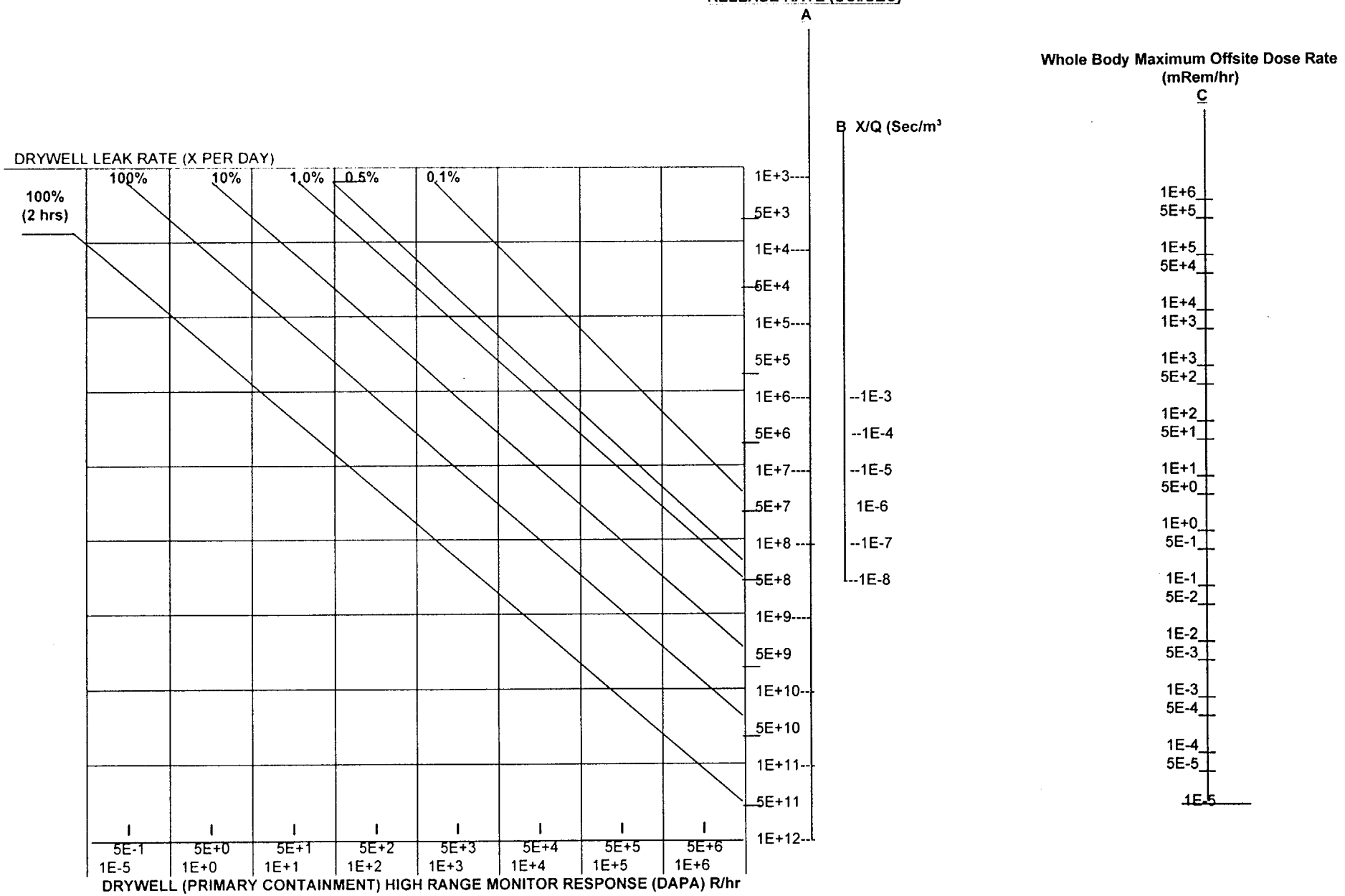
3.0 **RML SCREEN INSTRUCTIONS**

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. _____

DRYWELL LEAK RATE NOMOGRAM



Xu/Q VALUES FOR ELEVATED RELEASES AT HOPE CREEK

(MULTIPLY ALL VALUES BY 1.0E-06)
STABILITY CLASS

MILES	METERS	A	B	C	D	E	F	G
0.06	100	47.6	9.5	103.2	1.1E-09	1.9E-18	6.4E-49	----------
0.12	200	120.2	105.9	338.9	5.7E-01	1.1E-03	1.7E-13	5.5E-39
0.19	300	77.5	113.3	270.1	16.5	0.72	7.8E-06	4.7E-19
0.25	400	42.7	87.8	194.0	47.4	7.6	7.2E-03	4.8E-11
0.31	500	24.7	65.1	142.0	70.3	22.4	0.22	5.6E-07
0.37	600	15.3	48.9	107.5	81.2	39.3	1.5	1.3E-04
0.44	700	10.1	37.6	84.0	83.7	53.7	4.9	4.1E-03
0.50	800	7.0	29.6	67.4	81.7	63.9	10.6	0.042
0.56 (MEA)	900	5.1	23.8	55.3	77.5	70.3	18.1	0.22
0.79	1270	1.8	12.4	30.5	58.8	73.3	46.6	5.7
1.0	1609	1.1	7.8	20.1	45.6	65.3	57.9	15.0
1.5	2414	0.77	3.5	9.7	27.7	46.1	57.7	31.7
2.0	3218	0.59	2.0	5.8	18.9	34.0	49.6	37.6
2.5	4023	0.48	1.3	3.9	13.9	26.3	42.0	38.3
3.0	4827	0.41	0.89	2.8	10.8	21.2	36.0	37.1
3.5	5632	0.36	0.65	2.1	8.7	17.6	31.2	35.1
4.0	6436	0.32	0.50	1.7	7.2	14.9	27.5	33.0
4.5	7241	0.28	0.40	1.3	6.1	12.9	24.4	31.0
5.0 (LPZ)	8045	0.26	0.34	1.1	5.2	11.3	22.0	29.1
5.5	8850	0.24	0.32	0.93	4.6	10.1	19.9	27.4
6.0	9654	0.22	0.29	0.80	4.0	9.0	18.2	25.8
6.5	10459	0.20	0.27	0.69	3.6	8.2	16.7	24.4
7.0	11263	0.19	0.25	0.60	3.2	7.4	15.4	23.1
7.5	12068	0.18	0.24	0.53	2.9	6.8	14.3	21.9
8.0	12872	0.17	0.22	0.47	2.7	6.3	13.3	20.8
8.5	13677	0.16	0.21	0.42	2.4	5.8	12.5	19.8
9.0	14481	0.15	0.20	0.38	2.3	5.4	11.7	18.9
9.5	15286	0.14	0.19	0.35	2.1	5.1	11.1	18.1
10.0 (EPZ)	16090	0.14	0.18	0.32	1.9	4.7	10.4	17.4
15.0	24135	0.096	0.13	0.17	1.1	2.8	6.6	12.2
20.0	32180	0.074	0.098	0.13	0.72	2.0	4.8	9.4
25.0	40225	0.060	0.080	0.11	0.52	1.5	3.7	7.6
30.0	48270	0.051	0.068	0.090	0.40	1.2	3.0	6.4
35.0	56315	0.045	0.059	0.078	0.32	0.98	2.5	5.5
40.0	64360	0.040	0.053	0.069	0.27	0.83	2.2	4.8
45.0	72405	0.036	0.047	0.062	0.22	0.71	1.9	4.3
50.0	80450	0.032	0.043	0.057	0.19	0.63	1.7	3.9

HOPE CREEK *ELEVATED* RELEASES

Xu/Q VALUES FOR GROUND RELEASES AT HOPE CREEK

(MULTIPLY ALL VALUES BY 1.0E-06)
STABILITY CLASS

MILES	METERS	A	B	C	D	E	F	G
0.06	100	351.2	417.0	473.7	517.9	534.9	546.9	552.3
0.12	200	174.6	257.9	344.4	439.8	488.7	525.1	542.6
0.19	300	83.0	159.0	243.5	361.4	435.8	497.1	529.3
0.25	400	43.0	103.6	175.7	295.1	384.3	466.0	513.3
0.31	500	24.6	71.5	131.0	242.5	337.6	433.8	495.5
0.37	600	15.2	51.8	100.8	201.5	296.7	402.2	476.4
0.44	700	10.1	39.0	79.7	169.4	261.6	371.9	456.7
0.50	800	7.0	30.4	64.5	144.2	231.7	343.5	436.7
0.56 (MEA)	900	5.0	24.2	53.3	124.2	206.3	317.1	416.7
0.79	1270	1.8	12.5	29.9	78.4	140.4	237.6	346.3
1.0	1609	1.1	7.9	19.8	56.3	104.8	189.0	296.6
1.5	2414	0.77	3.5	9.7	31.5	62.1	122.5	216.1
2.0	3218	0.59	2.0	5.8	20.7	42.4	88.1	166.9
2.5	4023	0.48	1.3	3.9	15.0	31.5	67.7	134.6
3.0	4827	0.41	0.89	2.8	11.4	24.7	54.4	112.1
3.5	5632	0.36	0.65	2.1	9.1	20.1	45.1	95.6
4.0	6436	0.32	0.50	1.7	7.5	16.9	38.3	83.1
4.5	7241	0.28	0.40	1.3	6.3	14.4	33.2	73.3
5.0 (LPZ)	8045	0.26	0.34	1.1	5.4	12.5	29.2	65.4
5.5	8850	0.24	0.32	0.93	4.7	11.0	26.0	59.0
6.0	9654	0.22	0.29	0.80	4.2	9.8	23.4	53.7
6.5	10459	0.20	0.27	0.69	3.7	8.9	21.2	49.2
7.0	11263	0.19	0.25	0.60	3.3	8.0	19.4	45.3
7.5	12068	0.18	0.24	0.53	3.0	7.3	17.8	42.0
8.0	12872	0.17	0.22	0.47	2.7	6.7	16.5	39.2
8.5	13677	0.16	0.21	0.42	2.5	6.2	15.3	36.6
9.0	14481	0.15	0.20	0.38	2.3	5.8	14.3	34.4
9.5	15286	0.14	0.19	0.35	2.1	5.4	13.3	32.4
10.0 (EPZ)	16090	0.14	0.18	0.32	2.0	5.0	12.5	30.6
15.0	24135	0.096	0.13	0.17	1.1	3.0	7.7	19.5
20.0	32180	0.074	0.098	0.13	0.72	2.1	5.4	14.2
25.0	40225	0.060	0.080	0.11	0.52	1.5	4.2	11.1
30.0	48270	0.051	0.068	0.090	0.40	1.2	3.3	9.1
35.0	56315	0.045	0.059	0.078	0.32	1.0	2.8	7.7
40.0	64360	0.040	0.053	0.069	0.27	0.8	2.4	6.7
45.0	72405	0.036	0.047	0.062	0.23	0.7	2.1	5.9
50.0	80450	0.032	0.043	0.057	0.19	0.6	1.8	5.2

HOPE CREEK *GROUND* RELEASES

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

PSEG NUCLEAR LLC

NC.EP-EP.ZZ-0310 (Q) Rev. 03

RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE

PSE&G CONTROL COPY # EPIP059

USE CATEGORY: II

REVISION SUMMARY:

1. This revision satisfies the requirement for a biennial review.
2. Fixed some typos in Attachment 12 and placed Figures 1 and 2 permanently into Word. The two figures resided in CAD prior to this.

IMPLEMENTATION REQUIREMENTS

Issued for use. 5-24-01

APPROVED: _____ EP Manager 5/9/01 Date

APPROVED: _____ Vice President - Operations NA Date

RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE

TABLE OF CONTENTS

1.0 PURPOSE

To outline and describe the Radiation Protection Supervisor – Offsite (RPS – Offsite), Radiation Protection Technician – Radio (RPT-Radio), and Onsite Field Monitoring Team's 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.
- 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 RPS – Offsite, RPT – Radio, and Onsite Field Monitoring Team.

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 is implementing this procedure.

3.1.6 Personnel who implement this procedure shall be trained and qualified in accordance with (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 the duties of the RAC, 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:

NOTE

The RPT-Radio may use the Attachment 5's Form-1, Field Sampling Log, to log mutiple field samples and measurements.

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 applicable 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 PSEG Nuclear Emergency Plan

7.1.5 Salem Offsite Dose Calculation Manual

7.1.6 Hope Creek Offsite Dose Calculation Manual

7.2 Cross References

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

NC.EP-EP.ZZ-0603(Q) Field Monitoring

ATTACHMENT 1

Page 1 of 2
TSC PRE - ACTIVATION CHECKLIST

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

1.0 **RPS - OFFSITE INITIAL ACTIONS**

> **NOTE**
>
> Attachment 2, RPS-Offsite Checklist may be implemented concurrently with the implementation of this procedure.

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 PERFORM or ASSIGN a RPT to perform habitability every 30 minutes and log habitability results in Form 1, Habitability Log. _____

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

1.1.4 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). _____

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

1.1.6 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.

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

ATTACHMENT 1

Page 2 of 2

1.1.8 PERFORM or ASSIGN a RPT to perform the following tasks:

> **NOTE**
>
> The TSC radiological assessment should not be generating the official Page 2 of the Station Status Checklist (SSCL) until the TSC is activated, 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. _____
- ALL persons in the TSC have a TLD, or issue them one IAW Form – 3, TLD Log. _____

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

1.1.10 IF implementation of Attachment 2 has not begun, THEN implement Attachment 2. _____

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

TSC ACTIVATED: ____:____ (TIME)

ATTACHMENT 2
Page 1 of 2

RPS-OFFSITE CHECKLIST

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 vehicle are located in the TSC lock box and in 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 vehicle. _____

1.1.4 INSTRUCT a RPT to obtain current meteorological data utilizing Attachment 14, 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:

A. **HOPE CREEK ONLY:** Attachment 14, Operation of the VAX LA120 Terminal. _____

B. **SALEM ONLY:** Attachment 15 Instructions for SPDS _____

1.1.7 **HOPE CREEK ONLY**:

REFER to Attachment 12, Hope Creek DAPA Correction Calculations, to determine if a Bias Value is needed to be used to corrected DAPA values _____

1.1.8 REQUEST the RAC to assign personnel for Onsite Field Monitoring Team members, as the need arises. _____

1.1.9 Brief Onsite Field Monitoring Teams IAW Attachment 3, Field Monitoring Team Briefing Guidance. _____

1.1.10 Brief Offsite Field Monitoring Teams IAW Attachment 3, Field Monitoring Team Briefing Guidance. _____

ATTACHMENT 2

Page 2 of 2

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

1.1.12 ENSURE/INSTRUCT the RPT-Radio to implement Attachment 5, Field Monitoring Team Log _____

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

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

NOTE

- The **HOPE CREEK** Noble Gas (NG) Federal Limit/Offsite Dose Calculation manual (ODCM) Limit is 1.20E+04 uCi/sec.
- The **SALEM** Noble Gas (NG) Fedreal Limit/ODCM Limit is 2.42E+05 uCi/Sec.
- Alnors,or electronic equivalent dosimetry may be used instead of SRDs. Electronic dosimetry may be positioned throughout the TSC and SRDs, or electronic equivalent dosimetry, handed out only to people who exit the TSC.

1.1.15 ENSURE preparation is ongoing to log, record on Form-2 (Dosimetry Log), and handout dosimetry as required if:

- A radiological release > Federal Limits/ODCM Limits is in progress.
- Potential of a radiological release > Federal Limits/ODCM Limits is thought to be high.
- Dose rates in the TSC are $\geq$ 2.5 mR/hr.
- At the discretion of the RAC.

ATTACHMENT 3
Page 1 of 5

FIELD MONITORING TEAM BRIEFING GUIDANCE

NOTE

The Onsite/Offsite Field Monitoring Teams should have the actual or a copy of the briefing form prior to being sent out to perform field monitoring.

1.0 **At A Minimum, The Following Items Should Be Included In The Briefing, and Recorded On Form – 1, Field Monitoring Team Briefing Form, of This Attachment:**

1.1 **Onsite and Offsite Field monitoring Teams Briefing Guidance**

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 PROVIDE current meteorological conditions and forecast. _____

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

1.1.4 DIRECT the Teams to use the guidanace provided to them from the RPT – Radio/Field Team Coordinator concerning which monitoring locations to travel to and what type of samples to take.

1.1.5 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 1.8 ASSIGN a color name for the Onsite Field Monitoring Teams (Red Team, Blue Team, Green Team, etc,).

1.1.9 INSTRUCT the Teams to use Frequency 1 to contact the TSC or Frequency 4 to contact the Offsite Field Monitoring Team. _____

1.2 **ONSITE FIELD MONITORING TEAM GUIDANCE:**

NOTE

1. Onsite Field Team air samples should be taken with a Low Volume air sampler if:

   SALEM ONLY:
   - The R41A effluent monitor is in range (1E-07 to 1E-01 uCi/cc).

   HOPE CREEK ONLY
   - The combined Plant vent effluent concentration is 1E-07 to 1E-01 uCi/cc

2. Onsite Field Team air samples should be taken using the marinelli emergency air sampler in accordance with NC.EP-EP ZZ-0306, Emergency Grab Air Sampling and Analysis, if:

   SALEM ONLY:
   - The R41B or R41C effluent monitors are in range (>1E-01 to 1E+05 uCi/cc).

   HOPE CREEK ONLY
   The combined Plant vent effluent concentration is >1E-01 uCi/cc.

1.2.1 ENSURE Onsite Field Monitoring Team understand the correct type of air sample to obtain based on Plant Vent effluent concentrations. _____

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

1.2.3 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 recommendation to the RAC. _____

1.2.4 INSTRUCT the Onsite Field Monitoring team to read Attachment 13 and sign Attachment 13's Form-1. _____

1.2.5 INSTRUCT the Onsite Field Monitoring team to sign Attachment 13's Form-2 prior to going out to perform monitoring. _____

ATTACHMENT 3
Page 3 of 5

1.3 **Offsite Field Monitoring Team Guidance:**.

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

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

1.3.2 INSTRUCT the teams to read and sign Attachment 10 and Form – 5, KI Side Effects/Administration Sign Off Form found in NC.EP-EP.ZZ-0603(Q). _____

1.3.3 ASSIGN a phonetic name for the Offsite Field Monitoring Teams (Alpha Team, Bravo Team, Charlie Team, etc,). _____

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

1.3.5 INSTRUCT the Teams to follow one of the provisions for gas, tolls, and meals listed below:

- 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. _____

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

ATTACHMENT 3
Page 4 of 5

FIELD MONITORING TEAM BRIEFING FORM
FORM – 1

2.0 **TEAM BRIEFING**

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

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

2.1.2 Event Classification/Time : _____/_____

2.1.3 Plant Conditions : _____

_____

_____

2.1.4 Wind Direction : (Expected Plume Direction)

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

2.1.5 Specific Monitoring Location(s) If Applicable

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

2.1.6 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).

_____

_____

_____

_____

2.1.7 Wind Speed : _____(MPH)

2.1.8 Protective Clothing Requirements : _____

_____

_____

_____

ATTACHMENT 3
Page 5 of 5
FORM – 1 (Continued)

NOTE

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

2.1.9 Respiratory Protection Requirements: _____

_____

2.1.10 Additional Specific Radiological Concerns: _____

_____

_____

2.1.11 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: _____

2.1.12 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: _____

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 the kit(s)/cabinet(s) 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 when performing a full inventory of the Emergency Locker.

1.0 DIRECT Onsite Field Team Members to replace missing or out of service items by asking a RPT for necessary items to complete the Onsite Field Monitoring Team kit. _____

2.0 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. _____

EQUIPMENT/SUPPLIES CHECKLIST

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

ATTACHMENT 4
Page 2 of 2

- 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).

- One Onsite Map. _____
- One Pair of Tweezers. _____
- One Button Check Source. _____
- Silver Zeolite Cartridges. _____
- Box of Air Sample Filters. _____
- Box of Smear Papers. _____
- Protective Clothing/Paper Coveralls. _____
- Shoe Covers. _____
- Gloves. _____
- Small Envelopes for Particulate Air Sample Filters. _____
- Roll of Masking Tape. _____
- Small Plastic Bags. _____
- Flashlight. _____
- Spare Nine Volt Batteries _____
- Spare D Cell Batteries. _____
- One Bottle of KI Tablets. _____
- One First Aid Kit. _____
- Respirators. _____

ATTACHMENT 5
Page 1 of 5

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. _____

1.1.7 PERFORM a radio check with the Field Team(s). _____

NOTE

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

Form-1, Field Sampling Form, of this attachment may be used to log mutiple field samples and measurements.

Onsite/OffsiteField 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 : _____

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.

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)

ATTACHMENT 5
Page 4 of 5

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 5
Page 5 of 5

FORM – 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)

ATTACHMENT 6
Page 1 of 1

PARTICULATE AIR ACTIVITY VS. COUNT RATE TABLE

CORRECTED CPM (ccpm)	SAMPLE VOLUME 5 (CUBIC FT.) (uCi/cc)	SAMPLE VOLUME 10 (CUBIC FT.) (uCi/cc)	SAMPLE VOLUME 15 (CUBIC FT.) (uCi/cc)	SAMPLE VOLUME 20 (CUBIC FT.) (uCi/cc)	SAMPLE VOLUME 25 (CUBIC FT.) (uCi/cc)	SAMPLE VOLUME 30 (CUBIC FT.) (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
Page 1 of 1

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
Page 1 of 1

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
Page 1 of 3

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 the Forms Kit briefcase from RPS-Offsite. _____

1.1.3 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.

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

1.1.5 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. _____

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

1.1.7 PERFORM a radio and a telephone check from the emergency vehicle: _____

- SET the radio on Frequency: _____
  - **1** to contact the Onsite Field Monitoring Team(s)
  - **4** to contact the Offsite Field Monitoring Team(s). _____

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

1.1.9 REPLENISH Onsite Field Monitoring Team Kits to ensure kits are kept in a ready mode IAW NC.EP-AP.ZZ- 1006, Emergency Preparedness Inventory RadiationProtection at the end of a:

- Drill _____
- Exercise _____
- Declared Emergency _____

1.1.10 PERFORM response checks on instruments used. _____

1.1.11 IF instrument(s) fail a response check, THEN INFORM RPS-Offsite. _____

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 necessary, concerning unusual plant conditions observed, sampling results, and moving to other then assigned locations due to changing radiological or meteorological conditions.

The Onsite Field Monitoring Team members should report conflicting radiological or meteorological conditions to the RPS-Offsite, AS SOON AS POSSIBLE.

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. _____

2.1.3 ENSURE open and closed window readings are 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. _____

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

ATTACHMENT 9
Page 3 of 3

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, if necessary. _____

2.1.12 OBTAIN a copy of Attachment 9 (Offsite Emergency Monitoring Locations) from NC.EP-EP.ZZ-0603(Q) (Field Monitoring), for the Offsite Monitoring Locations, if required. _____

ATTACHMENT 10
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 - 07 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 11
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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

ATTACHMENT 11

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
Page 1 of 3

HOPE CREEK DAPA CORRECTION CALCULATIONS

NOTE

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

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

2. No correction to the DAPA Monitor is required below 245 degrees Fahrenheit (F).

1.0 DAPA CORRECTION CALCULATIONS

1.1 To Correct For DAPA High Temperature, Perform The Following:

1.1.1 REFER to Figure 1 of this attachment (Attachment 12).

1.1.2 IF the uncorrected DAPA reading lies below the curve (in the lined region), THEN the DAPA Monitor value is unreliable and should **NOT** be used at all.

1.1.3 PROCEED to Step 1.1.4, IF the uncorrected DAPA reading lies above the curve (above the lined region).

1.1.4 REFER to Figure 2 of this attachment (Attachment 12).

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.

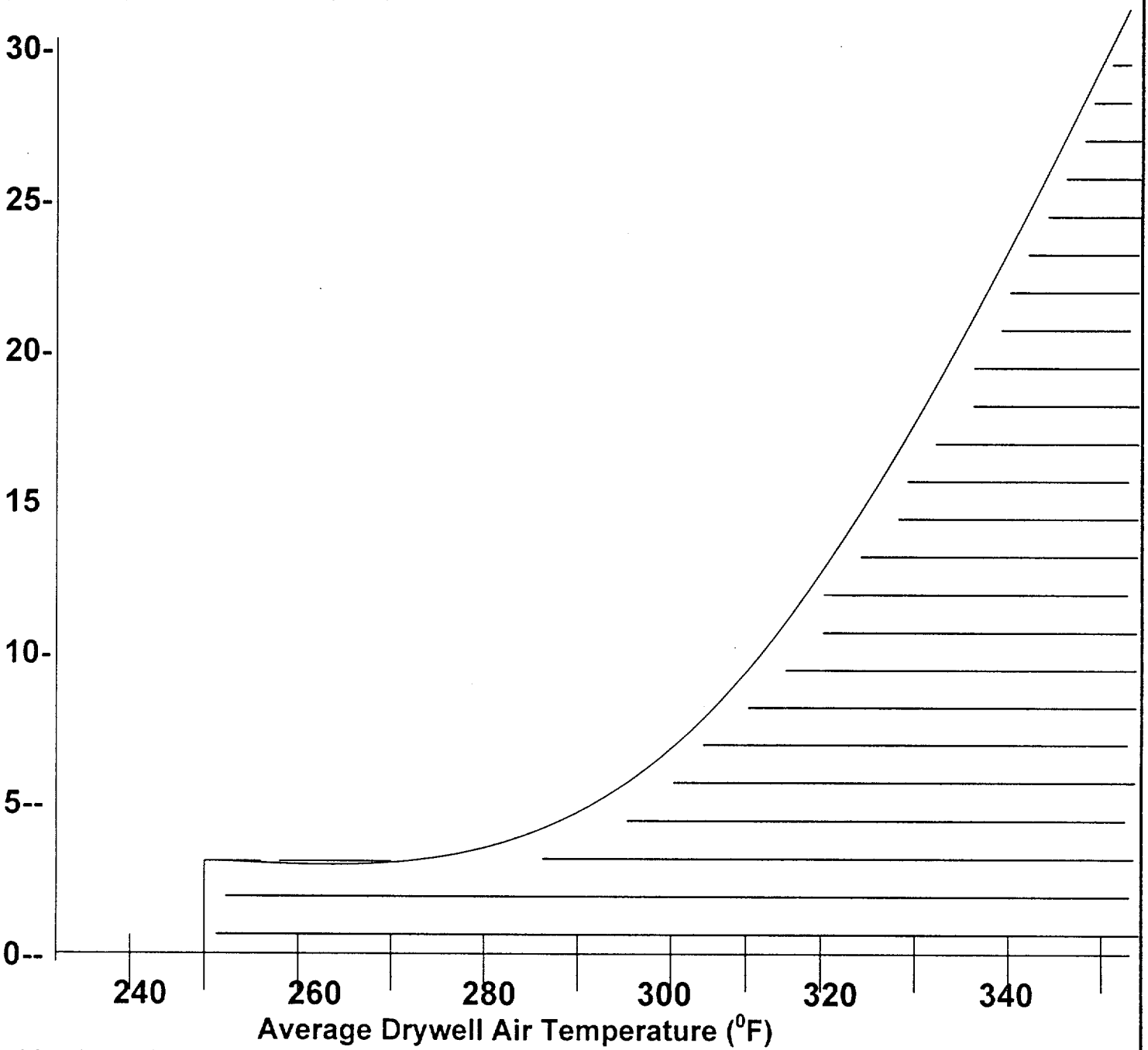
_____	+	_____	=	_____
DAPA Monitor Reading (R/hr)		Bias Value Reading (R/hr)		Corrected DAPA Reading (R/hr)

ATTACHMENT 12

Page 2 of 3

FIGURE 1

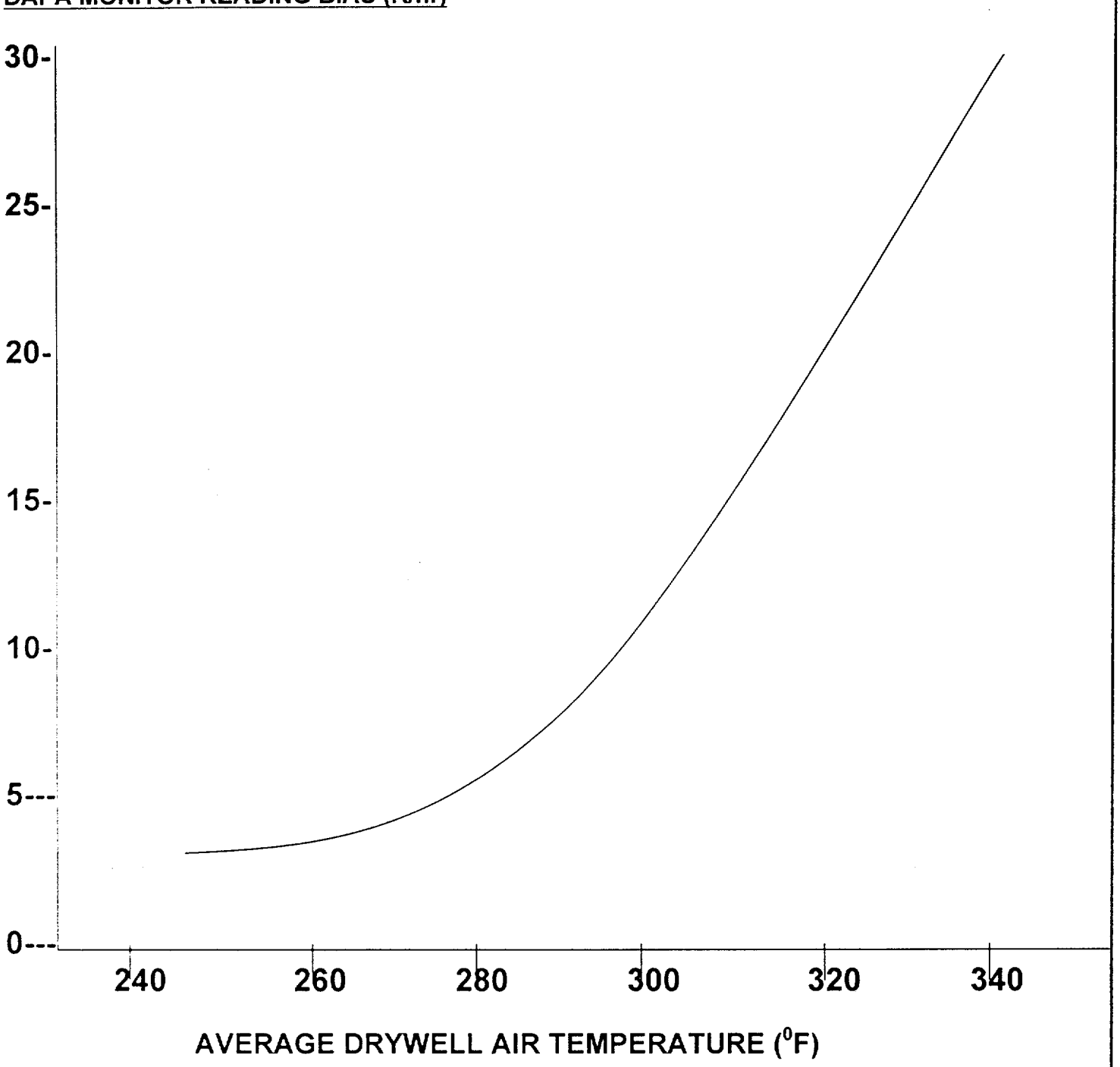
DAPA MONITOR READING vs AVERAGE DRYWELL AIR TEMPERATURE



Lined area indicates DAPA Monitor value at which alternate method for determining estimate of Drywell airborne radiation levels should be used.

ATTACHMENT 12

FIGURE 2
DAPA MONITOR READING BIAS vs AVERAGE DRYWELL AIR TEMPERATURE



ATTACHMENT 13
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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 13

Page 2 of 3

FORM – 1

KI SIDE EFFECTS/ADMINISTRATION SIGN OFF FORM

AUTHORIZED BY: _____

ADMINISTERED BY: _____

My signature indicates that I have read and understand Attachment 13 Package Insert For Thyroid Blocking Tablets.

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

ATTACHMENT 13

Page 3 of 3

FORM – 2

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

ATTACHMENT 14

Page 1 of 3

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(Type In) **M E T** 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 SELECT **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 SELECT **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 **M E T** and depress the **RETURN** key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu). _____

ATTACHMENT 14

1.2.3 SELECT **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 (Type In) **E O F** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD). _____

ATTACHMENT 14

Page 3 of 3

2.1.3 ENTER the letters **E O F U S E R** 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 SELECT **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 **E O F** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD). _____

2.2.3 ENTER **E O F U S E R** 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 **Option 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 15

Page 1 of 4

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 – 1, SPDS RMS Log, of this attachment, (Attachment 15) 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 Attachment 16's, Form - 1, 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. _____

ATTACHMENT 15

FORM – 1

Page 4 of 4

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

FORM – 1
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 – 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 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_____