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Edwin I. Hatch Nuclear Plant
Emergency Implementing Procedure Revisions

Ladies and Gentlemen:

In accordance with 10 CFR 50, Appendix E, Section V, Southern Nuclear Operating Company hereby submits the following revisions to the Plant Hatch Emergency Implementing Procedures (EIP):

<u>EIP No.</u>	<u>Version</u>	<u>Effective Date</u>
73EP-EIP-015-0	6.0	5/16/2003
73EP-EIP-019-0	1.0	5/16/2003
73EP-EIP-064-0	4.1	5/19/2003

These revisions incorporate various changes to the above documents.

By copy of this letter, Mr. L. A. Reyes, NRC Region II Administrator, will receive two copies of the revised procedures.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

H. L. Sumner, Jr.

HLS/ckb/whc

A045

Enclosures: 73EP-EIP-015-0, Offsite Dose Assessment
73EP-EIP-019-0, Rally Point Team Duties
73EP-EIP-064-0, Emergency Operations Facility Activation

cc: Southern Nuclear Operating Company
Mr. J. D. Woodard, Executive Vice President
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U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator (w/2 copies)
Mr. S. D. Bloom, NRR Project Manager – Hatch
Mr. D. S. Simpkins, Senior Resident Inspector – Hatch

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DOCUMENT TITLE: OFFSITE DOSE ASSESSMENT		DOCUMENT NUMBER: 73EP-EIP-015-0	REVISION/VERSION NO: 6.0
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1.0 OBJECTIVE

To provide dose assessments during abnormal (emergency) conditions.

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2.0 APPLICABILITY

This procedure is applicable to the onsite dose assessment activities for assessing offsite radiological releases during emergency conditions. It may NOT be used for assessing normal or routine operating releases. This procedure will be performed as necessary.

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3.0 REFERENCES

- 3.1 Edwin I. Hatch Nuclear Plant, Unit 1 and Unit 2 Emergency Plan
- 3.2 10AC-MGR-006-0, Hatch Emergency Plan
- 3.3 20AC-ADM-002-0, Quality Assurance Records Administration
- 3.4 EPA-400-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents
- 3.5 73EP-EIP-018-0, Prompt Offsite Dose Assessment
- 3.6 73EP-EIP-001-0, Emergency Classification and Initial Actions
- 3.7 73EP-EIP-054-0, Protective Action Recommendations to State and Local Authorities
- 3.8 Forms:
 - TRN-0052, MIDAS Input Data Acquisition
 - TRN-0145, Release Rate Estimates & Dose Projections (Based on Other Plant Instrumentation)

4.0 REQUIREMENTS

4.1 PERSONNEL REQUIREMENTS

Personnel who perform dose assessment activities will receive training in accordance with plant training procedures and be instructed in the use of the dose assessment computer model and this procedure.

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4.2 MATERIAL AND EQUIPMENT

The system requirements for the Meteorological Information and Dispersion Assessment System (MIDAS) dose assessment program are:

Component	Minimum system	Recommended system
CPU	486 DX with math coprocessor	586 DX (Pentium)
Speed	50 MHz	133 MHz (or higher)
RAM	16 MB (greater speed is achieved through use of a RAM disk (8 MB))	32 MB
Hard Disk	240 MB	480 MB
Floppy drive	1.44 MB	1.44 MB
Interface	Mouse	Mouse
Monitor	VGA	VGA
Ports	1 parallel, 2 serial	1 parallel, 2 serial
Keyboard	101	101
Operating system	DOS 5.0 or higher	DOS 6.0 or higher
Printer	HP deskjet 550 C	HP deskjet 550 C

4.3 SPECIAL REQUIREMENTS

N/A - not applicable to this procedure

5.0 PRECAUTIONS/LIMITATIONS

5.1 PRECAUTIONS

N/A - Not applicable to this procedure

5.2 LIMITATIONS

- 5.2.1 This procedure must NOT be used to calculate dose projections for normal releases. The MIDAS code has accident isotopic mixes built in to the support files which will yield a false high value for daily operating releases.
- 5.2.2 This procedure can NOT be used to downgrade the severity of an emergency classification.
- 5.2.3 This procedure is based upon using the Meteorological Information and Dispersion Assessment System (MIDAS) for calculating indications of offsite dose and dose rates. MIDAS utilizes data from radiological and meteorological plant instrumentation. Readings may be obtained from SPDS, Control Room monitors, EOF Met MIDAS computer system and/or locally at the instruments.

NOTE:

Values obtained from MIDAS for the purpose of Protective Action Recommendations are based on the avoided dose concept.

5.2.4 For the purpose of Protective Action Recommendations (PARs), the TEDE and Thyroid CDE values for Site Boundary, 2 miles, 5 miles, and 10 miles from the printed ENN Worksheet provided by MIDAS may be utilized.

6.0 PREREQUISITES

An off-normal plant condition, emergency exercise/drill or declared emergency must exist before using this procedure.

REFERENCE

7.0 PROCEDURE

7.1 SYSTEM START-UP

NOTE:

General instructions for the use of the MIDAS code are found in TRN-0052, MIDAS Data Input Acquisition.

7.1.1 Turn on the computer containing the MIDAS system files.

7.1.2 The computer will automatically "boot" into the MIDAS subdirectory and start the program.

7.1.3 When prompted by the computer, enter the current date (formatted as mm-dd-yyyy) and time (formatted HH:MM:SS.00 a/p). IF the current date and time are correct, press "Enter".

7.2 DATA ACQUISITION

The MIDAS code requires the input of meteorological and radiological data. The data required is listed in TRN-0052, MIDAS Data Input Acquisition. TRN-0052 may be used to gather data for input. Data is to be gathered in accordance with the following steps.

NOTE:

- Record readings from the appropriate computer system or monitors that are listed in TRN-0052.
- Record only valid readings as defined in the sections below.
- Obtaining release and meteorological information from a recorder that does not provide 15-minute averaging is less accurate.
- The data trend and the timeframe required to obtain a number will be considered when determining values from these recorders.
- Use of a visual estimation to perform a projection is acceptable when the data trend is factored into the estimation.

7.2.1 15 Minute Average Meteorological Parameters

- 7.2.1.1 The primary and backup meteorological tower(s) can be read from the Main Control Room recorders, the EOF Met MIDAS computer system, and on SPDS in the "MISCELLANEOUS" screen under "MET DATA" or the "EMERGENCY" screen under "MIDAS REPORTING INFORMATION".
- 7.2.1.2 SPDS and the Met MIDAS computer systems provide a calculated 15 minute average in addition to instantaneous readings and will normally be utilized. The Main Control Room readings that are on recorders require visual averaging (the last 15 minute period).
- 7.2.1.3 Record readings from the appropriate Meteorological Instrumentation listed in TRN-0052 Page 1 of 3, Meteorological Data Entry. IF the primary Meteorological Instrumentation listed is unavailable, THEN use TRN-0052 page 2 of 3, Alternate Meteorological Instrument Designation for Dose Assessment Use, to determine which Meteorological Instrumentation can be utilized.

7.2.2 Release Parameters

- 7.2.2.1 Release monitoring (source term information) for the Unit 1 Rx Bldg Vent Stack, Unit 2 Rx Bldg Vent Stack and Main Stack is accomplished through a normal and accident range (KAMAN) monitor. On a high-high signal of the normal range monitor, the KAMAN auto starts and the normal range sample flow is diverted to the KAMAN. The value indicated on the SPDS "PRIMARY" screen is the corrected source term ($\mu\text{Ci/cc}$) based on normal range activity multiplied by the calibration factor.
- 7.2.2.2 In the event that control room flow instruments are inoperable or unreliable, the default flow values listed on TRN-0052 may be utilized for input.

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7.2.2.3 **IF** it is determined that the normal range effluent monitor is offscale high AND the accident range instrumentation (KAMAN) does not function properly for the Main Stack, Unit 1 Rx Bldg Vent, or Unit 2 Rx Bldg Vent monitors, **THEN** go to TRN-0145, to calculate the release rate based on other plant instrumentation or use field monitoring data for use in the dose projection(s).

7.2.2.4 **IF** there is a difference between the A and B channel readings for the Unit 1 Rx Bldg Stack Vent monitor (1D11-R619 A/B), Unit 2 Rx Bldg Stack Vent Monitors (2D11-R619 A/B) or Main Stack monitor readings (1D11-R600 A/B), **THEN** use the most conservative (higher) reading for input into MIDAS.

7.2.2.5 **IF** the effluent monitors exceeds the value listed below:

- Main Stack Normal Range ≥ 500 cps
- Either Reactor Bldg. Stack Vent $\geq 10,000$ cpm or
- The sum of Unit 1 and Unit 2 Reactor Bldg Stack Vent $\geq 10,000$ cpm

AND an emergency has been declared **THEN** notify the Dose Assessment Manager, Facility Manager(s), and Emergency Director that a radioactive release is in progress and immediately proceed with a dose projection.

7.2.2.6 Record readings from the appropriate effluent monitors. Appropriate effluent monitors are listed in TRN-0052 Page 3 of 3, Radiological Data Entry. Record only valid readings. Record either Normal Range or Accident Range Effluent Monitor (KAMAN) value and the flow associated with that value. Do **NOT** record or enter both monitors or both flows. MIDAS will sum the releases and significantly overestimate the dose rate and projected dose outputs.

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7.3 SELECTION OF THE MIDAS DOSE ASSESSMENT OPTIONS

NOTE:

The MIDAS software contains multiple options for performing Dose Assessment activities. These options are described in Attachment 2, Description of MIDAS Menu Options. If performing non-routine projections or other dose assessment activities, use Attachment 2 to determine the menu option appropriate to the activity being performed or abnormal plant conditions under which projections must be performed.

7.3.1 There are three (3) basic options normally utilized for routine activities.

7.3.1.1 The normal dose assessment option for performing routine dose rate and dose projections from available plant effluent monitors is Menu B, Enhanced Dose Projection. To run this menu option, proceed to 7.4, Enhanced Dose Projection Menu "B".

7.3.1.2 The normal dose assessment option for performing routine dose rate and dose projections from available in-plant monitors or performing comparisons with the State's dose assessment model is the "PLANT HATCH GROSS ACTIVITY RELEASE RATE" option. To run this menu option, proceed to Section 7.5, Plant Hatch Gross Activity Release Rate Option.

7.3.1.3 The normal dose assessment option for performing routine dose rate and dose projections from an unmonitored release or validation of other projections menus using Field Team data is Menu E-W, Back Calculations. To run this menu option, proceed to Section 7.6, Back Calculation (Menu E-W).

7.3.1.4 Several other options are available to perform other dose assessment activities and perform projections from extreme plant condition. These options are described in Attachment 2 and Section 7.7, Other Options.

7.3.1.5 Review the description of the menu options detailed in Attachment 2. Determine which option is required or best fits the current conditions.

7.3.2 Inform the Dose Assessment Manager which menu option is being utilized and the conditions that required the selection before proceeding. These options can be run as follows.

7.3.2.1 Review the descriptions of the menu options detailed in Attachment 2. Determine which option is required or best fits the current conditions.

7.4 ENHANCED DOSE PROJECTION MENU "B"

7.4.1 From the "SITE SELECTION" menu screen, select "PLANT HATCH". The selection will illuminate.

7.4.1.1 Select "CONFIRM".

NOTE:

The FUNCTION SELECTION menu screen contains two options. The "RECAP DOSE CALCULATIONS" option allows the user to recap a dose projection following an inadvertent error. The normal choice from the function selection menu will be the "ACCIDENT DOSE CALCULATIONS" option.

7.4.1.2 From the "FUNCTION SELECTION" menu screen, select "ACCIDENT DOSE CALCULATIONS". The selection will illuminate.

7.4.1.3 Select "CONFIRM".

NOTE:

The "ACCIDENT DOSE CALCULATIONS" menu screen contains several menu options. Normal dose assessment routines will be run utilizing "ENHANCED DOSE PROJECTION MENU B". The remaining options will be reserved for special circumstances as outlined in subsection 7.6, BACK CALCULATION (MENU E-W) AND 7.7, OTHER OPTIONS.

7.4.1.4 From the "ACCIDENT DOSE CALCULATIONS" menu screen select "ENHANCED DOSE PROJECTION MENU B". The selection will illuminate.

7.4.1.5 Select "CONFIRM".

NOTE:

The selection of a specific release point will define how the METEOROLOGICAL DATA spreadsheet and GASEOUS VENT AND FLOW spreadsheet are built. If only elevated or ground level is selected the spreadsheet will NOT have data input fields for the other release point. This will require the user to restart MIDAS, re-initialize the spreadsheets, and input the data again if the non-selected release point becomes active later in the event. IF both release points are selected, data can be entered for only one release point on the spreadsheets. This will cause a warning to be displayed which can be bypassed. The program will run without adversely affecting the output.

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7.4.1.6 The "MISCELLANEOUS PARAMETER" menu screen will appear. Release points may be selected as appropriate.

7.4.1.7 Select "CONFIRM".

7.4.1.8 The "SCENARIO DATA TABLE CONTROL" menu screen will appear. You may perform an initial projection or an update projection.

7.4.1.8.1 To perform an initial projection, select "START NEW SCENARIO" to initialize the dose projection spreadsheets. A warning will appear to verify that you wish to initialize. Select "CONFIRM" to continue.

7.4.1.8.2 To perform an update projection, select "CURRENT SCENARIO EDIT". Select "CONFIRM" to continue.

7.4.2 The "METEOROLOGICAL DATA" spreadsheet will appear. Enter meteorological data from TRN-0052 as required by the spreadsheet at the current time. The current time frame will be illuminated. If performing an update, data previously entered will be displayed. The meteorological data previously entered will "persist" for the current time if no current data is available or insignificant change has occurred.

7.4.3 Depress the "X" key to save the data on the spreadsheet and exit to the remainder of the program.

7.4.4 The "DBA ACCIDENT TYPE SELECTION" menu screen will appear. Select the appropriate accident type, select "CONFIRM" to continue. Guidance for selecting the appropriate accident type is found in Attachment 3.

CAUTION:

RELEASE POINT MONITOR DATA MAY BE DISPLAYED ON SPDS IN UNITS OTHER THAN THOSE REQUIRED BY MIDAS. IF USING SPDS FOR DATA AQUISITION, CHECK ALL UNITS TO ENSURE THAT THE UNITS MATCH THOSE REQUIRED BY MIDAS. SPDS MAY DISPLAY THE SAME MONITOR ON DIFFERENT SCREENS IN THE APPROPRIATE UNIT.

7.4.5 The "GASEOUS VENT AND FLOW" spreadsheet will appear. Enter the data from TRN-0052, Page 3 of 3, as required by the spreadsheet at the current time. The current time frame will be illuminated. Radiological data will NOT "persist", failure to enter data for the current 15 minute time period will be interpreted as a termination of the release. If performing an update, data previously entered will be displayed.

CAUTION: THE GASEOUS VENT AND FLOW SPREADSHEET CONTAINS (13) DATA COLUMNS OF WHICH (8) DATA COLUMNS ARE INITIALLY DISPLAYED. THE ADDITIONAL (5) DATA COLUMNS CAN BE DISPLAYED BY USING THE "RIGHT" ARROW KEY ONCE DATA HAS BEEN ENTERED IN THE FIRST (8) DATA COLUMNS SHOWN ON THE SCREEN. FAILURE TO ENTER DATA FOR EACH RELEASE POINT WILL RESULT IN A POTENTIAL UNDERESTIMATE OF THE OFFSITE DOSE RATE AND DOSE PROJECTION.

7.4.6 Depress the "X" key to save the data on the spreadsheet and exit to the remainder of the program.

CAUTION: IF THE REMAINING DURATION OF THE RELEASE IS UNKNOWN, the DEFAULT REMAINING DURATION OF 240 MINUTES (4 HOURS) will BE UTILIZED.

7.4.7 The "RELEASE TIMING SELECTION" menu screen will appear. The "DURATION" field will display the total number of minutes from the onset of the release to the end of the estimated remaining duration of the release. The "REMAINING DURATION" field will display the default release duration of 240 minutes.

7.4.7.1 IF the "REMAINING DURATION" is acceptable, select "CONFIRM" to continue.

7.4.7.2 IF the "REMAINING DURATION" is determined to be some time period other than 240 minutes, enter the remaining duration in minutes and select "CONFIRM" to continue. IF an alternate release duration is entered, ensure that offsite (State of Ga or NRC) Dose Assessment Staffs that are evaluating the release are informed of the change.

7.4.8 MIDAS will display a plot of the Total Effective Dose Equivalent (TEDE) rate based on a 0.25 hour (15 minute) projection. The display gives an estimated peak TEDE Dose Rate value at or beyond the site boundary. The display also includes the direction and distance for this value.

NOTE:

- The current calculated daily average site dose rate is $\approx E - 03$ mR/hr.
- A peak TEDE dose rate of an order of magnitude (10 times) higher than the current calculated daily average site dose rate indicates a radiological release is in progress.

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7.4.8.1 Notify the Dose Assessment Manager and the Emergency Director that a radiological release is in progress IF the peak TEDE dose rate (mR/hr) value is greater than or equal to $\approx E - 02$ mR/hr AND an emergency has been declared.

7.4.8.2 Additionally, IF the peak TEDE Dose Rate value is greater than or equal to .057 mR/hr. (5.7 E-2 mR/hr), THEN notify the Dose Assessment Manager and Emergency Director for emergency classification purposes AND notify the affected Unit Shift Supervisor for possible EOP Actions.

7.4.9 MIDAS will print a working copy of the ENN Form. The values listed on line 13 of the working copy of the ENN Form will be utilized for the purpose of making Protective Action Recommendations (PARs) to state and local authorities based on dose projections. IF required, PARs will be made in accordance with 73EP-EIP-054-0, Protective Action Recommendations.

7.4.9.1 IF additional printouts of the working copy of the Emergency Notification Form are needed or it does not print properly, attempt to correct the problem with the printer, if appropriate.

7.4.9.2 Select "CONTINUE" from the "TEDE RATE PLOT" screen, then select "NEXT REPORT", then "MORE REPORTS" which will display the available report selections. Select the option "SEND STATE REPORT TO PRINTER", then select "CONFIRM". This will send the working copy of the ENN Form to the printer.

7.4.10 Report the TEDE and Thyroid CDE values from line 13 of the working copy of the ENN Form to the Dose Assessment Manager and Emergency Director. IF this printout is not available, the information may be obtained from the TEDE 4-day and Thyroid CDE report options under more reports. Values will be based on the 4 hour projection period.

NOTE:

You may elect to continue your evaluation of this projection or exit to perform an update projection.

7.4.11 To view additional reports, select "CONTINUE", then "NEXT REPORT", then "MORE REPORTS" and select the report required and "CONFIRM" to continue.

7.4.12 To exit, select "CONTINUE", then "NEXT REPORT", then "MORE REPORTS" and then select "EXIT". This will return you to the "FUNCTION SELECTION" menu screen.

7.4.13 Perform additional dose projections in accordance with subsections 7.2, Data Acquisition and 7.3, Selection of MIDAS Dose Assessment Options, as required. Dose projections will be performed until the event is terminated or until such time that the Emergency Director, in consultation with Federal, State and Local authorities, determines that dose projections are no longer required.

7.4.14 When directed to terminate dose projections, proceed to section 7.8 to complete documentation.

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7.5 PLANT HATCH GROSS ACTIVITY RELEASE RATE OPTION

NOTE:

The Plant Hatch Gross Activity Release Rate option is utilized to perform comparison calculations with the State of Georgia and dose projections based on in-plant instrumentation. It accepts source term input for either a Main Stack (elevated) or Reactor Building (ground) release rate for noble gases, iodines, and particulates. Projections are performed using the standard Class B model and allow the user to select the Isotopic Mix to apply to the calculations.

- 7.5.1 From the "SITE SELECTION" menu screen, select "PLANT HATCH GROSS ACTIVITY RELEASE RATE". The selection will illuminate, select "CONFIRM" to continue.
- 7.5.2 From the "FUNCTION SELECTION" menu screen, select "ACCIDENT DOSE CALCULATIONS". The selection will illuminate, select "CONFIRM" to continue.
- 7.5.3 The "SCENARIO DATA TABLE CONTROL" menu screen will appear. You may perform an initial projection or an update projection.
 - 7.5.3.1 To perform an initial projection, select "START NEW SCENARIO" to initialize the dose projection spreadsheets. A warning will appear to verify that you wish to initialize. Select "CONFIRM" to continue.
 - 7.5.3.2 To perform an update projection, select "CURRENT SCENARIO EDIT" to perform an update calculation.
- 7.5.4 The "METEOROLOGICAL DATA" spreadsheet will appear. Enter meteorological data from TRN-0052 as required by the spreadsheet at the current time. The data will normally be collected as described in Section 7.2.7, 15 Minute Average Meteorological Parameters. The current time frame will be illuminated. If performing an update, data previously entered will be displayed. The meteorological data previously entered will "persist" for the current time if no current data is available or insignificant change has occurred. Depress the "X" key to save the data on the spreadsheet and exit to the remainder of the program.
- 7.5.5 The "DBA ACCIDENT TYPE SELECTION" menu screen will appear. Select the appropriate accident type, select "CONFIRM" to continue. Guidance for selecting the appropriate accident type may be found in Attachment 3.
- 7.5.6 The "GASEOUS VENT AND FLOW" spreadsheet will appear. Enter the data as required by the spreadsheet at the current time. The data may be obtained from line 12 on a MIDAS working copy of the ENN form or an actual ENN form if a comparison to the State of Georgia is being performed or from TRN-0145 in using in-plant monitors to perform dose and dose rate estimates. The current time frame will be illuminated. If performing an update, data previously entered will be displayed. Depress the "X" key to save the data on the spreadsheet and exit to the remainder of the program.

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NOTE:

The "GASEOUS VENT AND FLOW" spreadsheet for this program option contains (6) data columns. The first three labeled STK-NG release, STK-I release, and STK-P release are for inputting gross activity release rate (Ci/sec) from an elevated release. The second three labeled GND-NG release, GND-I release, and GND-P release are for inputting gross activity release rate (Ci/sec) from a ground level release.

7.5.7 The "RELEASE TIMING" menu screen will appear. The "DURATION" and "REMAINING DURATION" fields will display the default release duration of 240 minutes displayed. If performing an update the "DURATION" field will display a value equal to 240 minutes plus the previous release times.

7.5.7.1 Enter the "REMAINING DURATION" if different from the default time and select "CONFIRM" to continue. IF an alternate release duration is entered, ensure that offsite (State of Georgia or NRC) Dose Assessment Staffs that are evaluating the release are informed of the change.

7.5.8 The "RELEASE POINT DATA" summary and "SUMMARY OF METEOROLOGICAL DATA" reports will appear, after reviewing the data select "CONTINUE" for each screen to proceed.

7.5.9 The output options for the projection are similar to those found in the Enhanced Dose Projection Menu B found in Section 7.4.8 and 7.4.9.

7.5.10 To exit, select "CONTINUE", then "NEXT REPORT", then "MORE REPORTS" and then select "EXIT". This will return you to the "FUNCTION SELECTION" menu screen.

7.5.11 Perform additional dose projections in accordance with subsections 7.2, Data Acquisition and 7.3, Selection of MIDAS MENU Options, as required. Dose projections will be performed until the event is terminated or until such time that the Emergency Director, in consultation with Federal, State and Local authorities, determines that dose projections are no longer required.

7.5.12 When directed to terminate dose projections, proceed to section 7.8 to complete documentation.

7.6 BACK CALCULATION (MENU E-W)

NOTE:

This option will be utilized when field monitoring dose rate projections from the Menu B model differ significantly from actual field measurements, when evaluation of projections based on actual field monitoring data are appropriate, when effluent monitors are NOT available, or when an unmonitored release is occurring. This calculation uses input of a centerline field monitor Effective Dose Equivalent (EDE) (closed window gamma) reading, the distance of the reading from the plant, Time from release start to sample time, and an accident type in a straight line projection model to make a back calculation to estimate the source term and release rate for the specified isotopic mix. The release rate is applied to the standard Class B puff model to perform projections.

7.6.1 From the "SITE SELECTION" menu screen, select "PLANT HATCH". The selection will illuminate, select "CONFIRM" to continue.

7.6.2 From the FUNCTION SELECTION menu screen, select "ACCIDENT DOSE CALCULATIONS". The selection will illuminate. Select "Confirm" to continue.

7.6.2.1 From the "ACCIDENT DOSE CALCULATIONS" menu screen, select "BACK CALCULATION MENU E-W". The selection will illuminate. Select "CONFIRM" to continue.

7.6.2.2 The "SCENARIO DATA TABLE CONTROL" menu screen will appear. You may perform an initial projection or an update projection.

7.6.2.2.1 To perform an initial projection, select "START NEW SCENARIO" to initialize the dose projection spreadsheets. A warning will appear to verify that you wish to initialize. Select "CONFIRM" to continue.

7.6.2.2.2 To perform an update projection, select "CURRENT SCENARIO EDIT" to perform an update calculation. Select "CONFIRM" to continue.

CAUTION:

METEOROLOGICAL DATA MUST BE ENTERED FOR THE EARLIEST 15 MINUTE TIME PERIOD INDICATED ON THE FIELD MONITOR PARAMETER SELECTION MENU SCREEN (SECTION 7.6.2.5). IF DATA IS NOT AVAILABLE FOR THE TIME CALCULATED FROM THE "TIME FROM THE START TO CURRENT" INPUT MIDAS WILL GIVE AN ERROR MESSAGE.

7.6.2.3 The "METEOROLOGICAL DATA" spreadsheet will appear. Enter the meteorological data from TRN-0052 as required by the spreadsheet at the current time. The data should be collected as described in Section 7.2.1, 15 Minute Average Meteorological

Parameters. The current time frame will be illuminated. If performing an update, data previously entered will be displayed. The meteorological data previously entered will "persist" for the current time if no current data is available or insignificant change has occurred. Depress the "X" key to save the data on the spreadsheet and exit to the remainder of the program.

- 7.6.2.4 The "DBA ACCIDENT TYPE SELECTION" menu screen will appear. Select the appropriate accident type and "CONFIRM" to continue. Guidance for selecting the appropriate accident type may be found in Attachment 3.

<u>CAUTION:</u>	DATA ENTERED ON THE FIELD MONITOR PARAMETER SELECTION MENU SCREEN MUST BE LOGICAL. FOR EXAMPLE, THE "DISTANCE FROM PLANT" AND THE "TIME FROM THE START TO CURRENT" INPUTS MUST BE SUPPORTED BY THE WIND SPEED DATA PROVIDED ON THE METEOROLOGICAL DATA SPREADSHEET. MIDAS WILL GIVE AN ERROR MESSAGE IF THESE INPUTS DO NOT REASONABLY ALLOW FOR THE INDICATED CONDITIONS.
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- 7.6.2.5 The "FIELD MONITOR PARAMETER SELECTION" menu screen will appear. Select the release point, either "STACK" or "GROUND". Enter the "FIELD MONITOR READING" (Centerline closed window reading from the External RETs) in mR/Hr and the "DISTANCE FROM PLANT" in miles. Enter the "TIME FROM THE START TO CURRENT", which is the start of the release to the time of the reading. Enter the "DIRECTION OF FIELD SAMPLE", which is the direction of the sample point. Select "CONFIRM" to continue.

<u>NOTE:</u>	"DIRECTION OF FIELD SAMPLE" is a reference data point only and NOT used for performing dose projections. If the reported conditions from external RETs warrant changing the wind direction indicated by plant instrumentation it must be done on the meteorological spreadsheet. Multiple field team readings will normally be obtained and confirmed before changing the wind direction
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- 7.6.2.6 The "RELEASE TIMING" menu screen will appear. The "DURATION" field will display the total number of minutes from onset to the end of the estimated duration of the release. The "REMAINING DURATION" field will display the default release duration of 240 minutes.

- 7.6.2.6.1 IF the default "REMAINING DURATION" of 240 minutes is acceptable select "CONFIRM" to continue.

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7.6.2.6.2 IF the "REMAINING DURATION" is determined to be some time period other than 240 minutes, enter the remaining duration time in minutes and select "CONFIRM" to continue. If an alternate release duration is entered, ensure that offsite (State of Georgia or NRC) Dose Assessment Staffs that are evaluating the release are informed of the change.

7.6.2.7 The "RELEASE POINT DATA" summary report and "SUMMARY OF METEOROLOGICAL DATA" will appear, after reviewing the data, select "CONTINUE" for each screen to proceed.

7.6.2.8 The output options for the projection are similar to those found in the Enhanced Dose Projection Menu B found in Section 7.4.8 through 7.4.11.

7.6.3 To exit, select "CONTINUE", then "NEXT REPORT", then "MORE REPORTS" and then select "EXIT". This will return you to the "FUNCTION SELECTION" menu screen.

7.6.4 Perform additional dose projections in accordance with subsections 7.2, Data Acquisition and 7.3 Selection of MIDAS MENU Options, as required. Dose projections will be performed until the event is terminated or until such time that the Emergency Director, in consultation with Federal, State and Local authorities, determines that dose projections are no longer required.

7.6.5 When directed to terminate dose projections, proceed to section 7.8 to complete documentation.

NOTE:

Section 7.7 should be utilized in the event other dose projection methods listed in section 7.4, 7.5 and/or 7.6 are either not available, do not apply to the current plant conditions, or direction is given from the Dose Assessment Manager to utilize these options.

7.7 OTHER OPTIONS

NOTE:

The menus available in section 7.7 have different input screens and output options than the normal menu options utilized. The general program conventions from Attachment 1 will still apply. General guidance is provided in section 7.7 for each option to direct the user in running the selected option.

7.7.1 Prompt Offsite Dose (Menu A)

This menu option emulates the model utilized by the Control Room staff. Instructions for running the prompt offsite dose model of MIDAS are found in 73EP-EIP-018-0, Prompt Offsite Dose Assessment.

CAUTION:

THE MIDAS PROGRAM OPTIONS DESCRIBED IN SECTIONS 7.7.2 AND 7.7.3 ARE BASED ON REFERENCE PLANTS. THESE MODELS USE CONSERVATIVE ASSUMPTIONS, GROSS ESTIMATES OF INITIAL SOURCE TERM, AND VERY SIMPLISTIC DISPERSION MODELS. THEY WILL NOT BE USED UNLESS OTHER MORE RELIABLE METHODS USING ACTUAL PLANT MONITORS OR FIELD TEAM DATA ARE UNAVAILABLE.

7.7.2 Event Tree NUREG 1228 (Menu C)

This menu option will step the user through the event tree outlined in NUREG 1228. This option is utilized when source terms are not readily available. The functions and assumptions are taken from NUREG 1228 and RTM-92. Options are selected from the screen following "top down" logic. The user will select the release type from the currently displayed row of options, then the next row of options will be displayed. Release fractions are read from a data file after all release conditions are selected. This model makes the assumption that all releases are ground level.

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7.7.3 Class 9 Accidents (Menu D)

This menu option lists the BWR types default assumptions for a severe degraded core. Containment failure accidents based on the WASH-1400 study are available in this option. This option is utilized when source terms are not readily available. Assumptions for the default class 9 accidents are listed in Attachment 4.

7.7.4 Total Dose (Menu F)

This menu option calculates the total committed integrated dose for the accident. Calculations are made by combining doses from the three basic pathways (direct exposure from the plume, direct exposure from the ground contamination, and inhalation from immersion in the plume). The plume dose is computed by a finite plumesine dose model. Calculations of TEDE, thyroid CDE and 1 year skin dose equivalents are made utilizing the dose factors provided in EPA-400. The finite plume model is utilized for off centerline "sideshine" calculations and for elevated releases. It is important to note that the system accounts for plume depletion.

7.7.5 Advanced Calculations (Menu X)

This option allows the user to enter isotopes from actual grab samples. This menu option contains all options from other menu choices. Due to the complexity of the model and the time required to perform projections, this option should **NOT** be used for routine projections. The number of isotopes programmed into MIDAS is limited. The MIDAS system manager should be contacted to modify the preprogrammed isotope list prior to running this option.

7.7.5.1 From the "SITE SELECTION" menu screen, select "PLANT HATCH". The selection will illuminate.

7.7.5.2 Select "CONFIRM". The FUNCTION SELECTION menu screen will be displayed.

NOTE:

The FUNCTION SELECTION menu screen contains two options. The normal choice from this menu screen will be the "ACCIDENT DOSE CALCULATIONS" option. The "RECAP DOSE CALCULATIONS" option allows the user to recap a dose projection following an inadvertent error.

7.7.5.3 From the "FUNCTION SELECTION" menu screen, select "ACCIDENT DOSE CALCULATIONS". The selection will illuminate.

7.7.5.4 Select "CONFIRM". The "ACCIDENT DOSE CALCULATIONS" menu screen will be displayed.

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7.7.5.5 From the "ACCIDENT DOSE CALCULATIONS" menu screen, choose the menu option selected from Attachment 2. The selection will illuminate.

7.7.5.6 Perform additional dose projections in accordance with subsections 7.2, Data Acquisition and 7.3, Selection of MIDAS Dose Assessment Options, as required. Dose projections will be performed until the event is terminated or until such time that the Emergency Director, in consultation with Federal, State and Local authorities, determines that dose projections are no longer required.

7.7.5.7 When directed to terminate dose projections, proceed to section 7.8 to complete documentation.

7.8 DOCUMENTATION AND RECORDS

Records generated during actual emergencies will be maintained in accordance with 20AC-ADM-002-0, Quality Assurance Records Administration.

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ATTACHMENT <u>1</u>		Att. Pg. 1 of 1
TITLE: GENERIC SCREEN GUIDELINES		

GENERIC SCREEN GUIDELINES

This set of general instructions applies to all methods of dose projection utilizing MIDAS.

- MIDAS utilizes a "point and click" feature for all menu applications.
- Menu choices will illuminate when selected. Invalid choices will not illuminate.
- Menu choices backlit in red indicate important selectors
- All menu selections must be "confirmed". This is accomplished by selecting the "CONFIRM" option on the screen.
- The NUMPAD is used to enter data which may be required as a result of selecting a box on the screen.
- "EXIT" is used to stop processing and return to the function menu. A double click is required.
- "CONFIRM" is used to save selections and display the next screen.
- "RESET" will clear box selections if "clicked" once and will reset the user to the previous screen(s) if "clicked" twice. On the first screen (Accident Run Menu) reset has no effect.
- Selecting "CONFIRM" before selecting the required boxes will result in a beep and no changes will be made.

NUMPAD DATA ENTRY

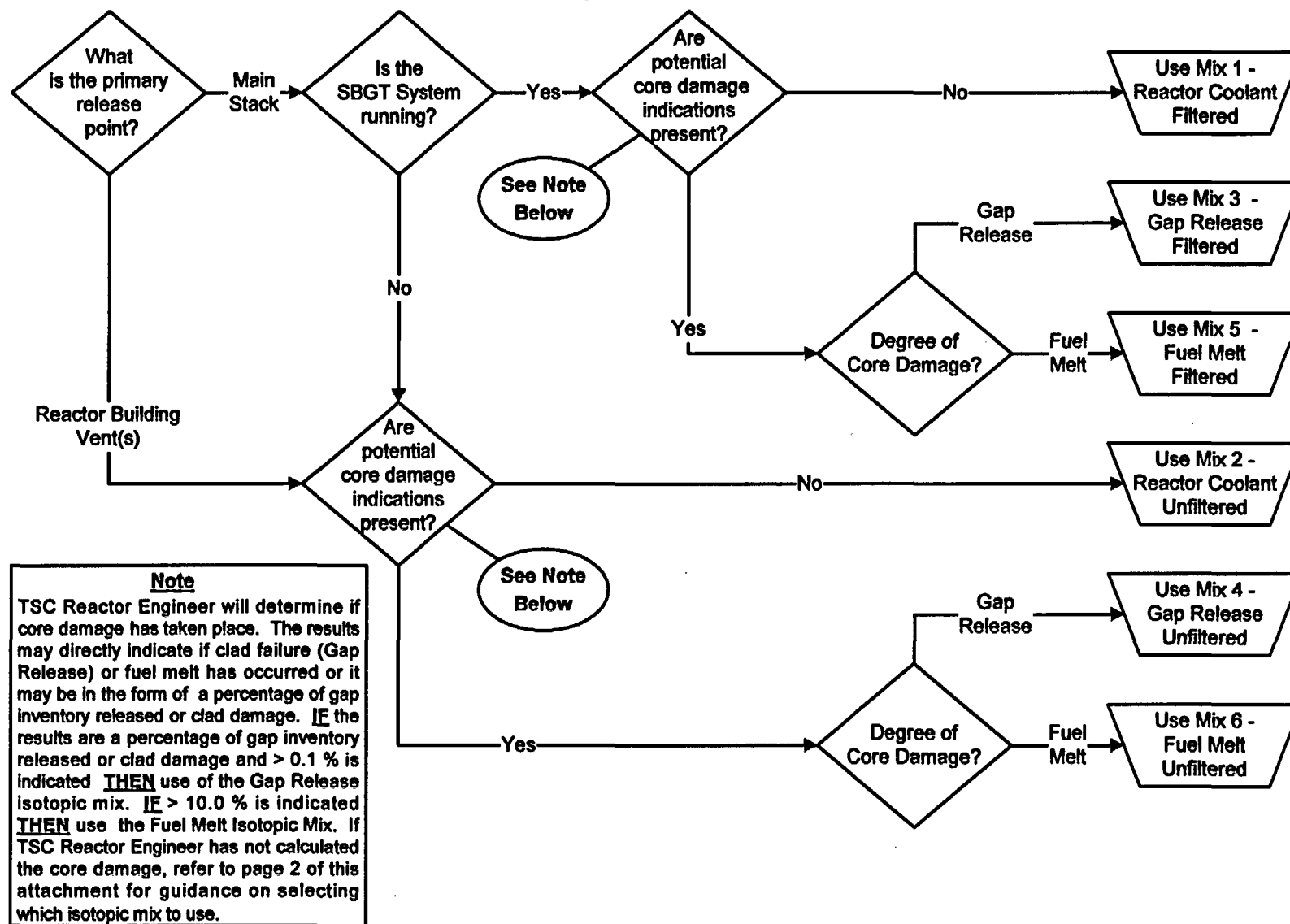
- IF the NUMPAD is selected by mistake, select "EN" to return to the main screen.
- IF the entry is NOT complete or NOT valid, selecting "EN" will NOT be accepted.
- To correct an erroneous entry into the NUMPAD, select "EN" with the display box empty.
- IF reset is selected after a NUMPAD entry has been completed ("EN" is selected), THEN all of the data for every screen box will be cleared.
- To clear data for any one screen box, select the box and redefine the data value (do not use reset since all boxes will be cleared).
- Plus signs are not necessary but minus signs are required for negative numbers including exponential notation (e.g., 1E-6).
- On the meteorological screen, stability class may be entered as a letter between A and G. In this case the NUMPAD will contain each letter.
- Red warning message will appear when there is a problem with data that makes it impossible to continue the calculations. Selecting "CONTINUE" will allow you to correct the erroneous data. Selecting "EXIT" will return you to the menu selection screen.

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ATTACHMENT <u>2</u>		Att. Pg. 1 of 1
TITLE: DESCRIPTION OF MIDAS MENU OPTIONS		

Description of MIDAS Menu Options

Available Options					
Site Selection	Menu	Procedure/ Section	Used By	Purpose	Special Instructions & Limitations
Plant Hatch	Menu A Prompt Offsite Dose Assessment	73-EP-EIP-018-0	Control Room Operators	Primary Menu for <u>Prompt</u> Dose Assessment	This menu is primarily used in the Control Room. It has limited capabilities and does <u>NOT</u> allow for changes to the Isotopic Mix. It is designed to allow dose projections with minimum operator input and training. It should <u>NOT</u> normally be used if the TSC or EOF are available to perform Dose Assessment activities.
	Menu B Enhanced Dose Projection	73EP-EIP-015-0 Section 7.4	TSC & EOF Dose Assessment (DA) personnel	<u>Primary</u> Menu for TSC/EOF Dose Assessment	This menu is the normally used to perform dose projection when release information is available and FMT data is more conservative than or supports the routine projections.
	Menu C NUREG 1228 Event Tree	73EP-EIP-015-0 Section 7.7	EOF DA personnel	Provides estimated offsite dose when <u>ALL</u> release monitors and in-plant data is unavailable and Field Monitoring Teams (FMT) <u>CANNOT</u> be dispatched	This menu uses grossly conservative estimates based on a reference plant and should <u>NOT</u> be used unless <u>ALL</u> release monitors and in-plant monitors are <u>NOT</u> available <u>AND</u> FMTs cannot be dispatched.
	Menu D Class 9 Accidents	73EP-EIP-015-0 Section 7.7	EOF DA personnel	Provides estimated offsite dose when <u>ALL</u> release monitor and in-plant data is unavailable and FMT <u>CANNOT</u> be dispatched	This menu uses grossly conservative estimates based on a reference plant and should <u>NOT</u> be used unless <u>ALL</u> release monitors and in-plant monitors are <u>NOT</u> available <u>AND</u> FMTs cannot be dispatched.
	Menu E-W Back Calculation	73EP-EIP-015-0 Section 7.6	TSC & EOF DA personnel	Verification of other menu projections and Evaluation of Field Team Data	This menu is normally used to perform dose projection utilizing FMT data to validate the routine projections or if the release path is unmonitored.
	Menu F Total Population Dose	73EP-EIP-015-0 Section 7.7	Recovery Organization	Used to evaluate the total dose to the public	This menu estimates population dose for the entire release and will be used for evaluations and recovery. It is <u>NOT</u> appropriate for early dose assessment activities.
	Menu X Advanced Calculation	73EP-EIP-015-0 Section 7.7	EOF DA personnel (with support from EP Staff)	Used when detailed isotopic data is available; performs more detailed evaluations	This menu utilizes screens and options which are not routinely used by Dose Assessment personnel. The time and data required make it more appropriate for longer term evaluations and recovery use. It is <u>NOT</u> appropriate for early dose assessment activities.. . Do <u>NOT</u> attempt to run this model without assistance from the Emergency Preparedness Staff.
Plant Hatch Gross Activity Release Rate	N/A	73EP-EIP-015-0 Section 7.5	State of Ga., TSC & EOF DA personnel	<u>Primary</u> State model & for projections using in-plant instrument source term estimates	This menu is normally utilized to perform dose projections from in-plant monitors and run comparisons with the State of Ga. dose projections.

MIDAS Isotopic Mix Selection Guide



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Indications of Possible Core Damage ¹

Indications of possible Core Damage using Reactor Level

- ☐ Reactor Water Level < -158" for > 3.5 mins. - possible Gap Release
- ☐ Reactor Water Level < -158" for > 30 mins. - possible Fuel Melt

Indications of possible Core Damage using Reactor Coolant Analysis

- ☐ Reactor Coolant Activity DEI > 100 µCi/gm - possible Gap Release or Fuel Melt
- ☐ I-131 concentration > 5 µCi/gm - possible Gap Release
- ☐ I-131 concentration > 300 µCi/gm - possible Fuel Melt
- ☐ Cs-137 concentration > 3 µCi/gm - possible Gap Release
- ☐ Cs-137 concentration > 30 µCi/gm - possible Fuel Melt

Indications of possible Core Damage using Containment Atmosphere Analysis

- ☐ Xe-133 concentration > 10 µCi/cc - possible Gap Release
- ☐ Xe-133 concentration > 200 µCi/cc - possible Fuel Melt
- ☐ Kr-85 concentration > .05 µCi/cc - possible Gap Release
- ☐ Kr-85 concentration > 1.25 µCi/cc - possible Fuel Melt

Indications of possible Core Damage using DBA LOCA Instrumentation

- ☐ Measurable Hydrogen present in the Containment - possible Gap Release or Fuel Melt
- ☐ DWRRM > 500 Rem/hr - possible Gap Release
- ☐ DWRRM > 4.8 E + 5 Rem/hr - possible Fuel Melt
- ☐ Containment Post LOCA Monitor > 138 Rem/hr - possible Gap Release
- ☐ Pretreatment Monitor > 500,000 µCi/sec - possible Gap Release
- ☐ Pretreatment Monitor > 100,000 µCi/sec increase over 30 min. - possible Gap Release

Indications of possible Core Damage using Reactor or Turbine Bldg. Effluent Monitors

- ☐ Reactor Bldg. Vent Normal Range > 1.0 E+5 cpm or KAMAN Initiated
- ☐ Main Stack Normal Range > 1.0 E + 5 cps or KAMAN Initiated

Indications of possible Core Damage using Reactor or Turbine Bldg. Surveys or ARMs ²

- ☐ Multiple Turbine Building Arms offscale high
- ☐ Multiple Reactor Building Arms offscale high
- ☐ High radiation conditions in multiple accessible areas of the Reactor or Turbine Building
- ☐ In-plant survey air samples indicating the presence of significant levels of Iodides or Particulates

Indications of possible Core Damage using Field Monitoring Surveys ³

- ☐ Field Monitoring Team (FMT) air samples indicating the presence of measurable levels of Iodides or Particulates
- ☐ FMT dose rates project TEDE or CDE Thyroid exposures approaching the PAGs

1. Any possible indication should be supported by plant conditions which could result in core damage. These include indications of RWL below TAF, significant ATWS, or possible mechanical damage to the core. Indications not designated as GAP Release or Fuel Melt can indicate either condition.
2. Use these indications when primary containment breach has occurred and other indications support the potential for core damage being present. Most TB ARMs range is limited to 100 mR/hr and shine from the Drywell can cause ARMs offscale in the Rx Bldg., verify High Radiation level (1000 mR/hr).
3. Field Monitoring information should be based on multiple surveys. Direct readings should be entered into MIDAS to obtain projections before comparing them to PARs.

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**DEFAULT ISOTOPIC MIX 00 BASED ON ANSI 18.1
REACTOR COOLANT UNFILTERED NO DECAY**

ISOTOPE	Main Stack Release Fraction (20 min. holdup applied)	Reactor Building Vent Release Fraction (no holdup)
Kr-83m	2.49 E-2	7.25 E-3
Kr-85m	4.51 E-2	1.23 E-2
Kr-87	1.30 E-1	4.05 E-2
Kr-88	1.49 E-1	4.05 E-2
Kr-89	1.27 E-2	2.58 E-1
Xe-133	6.63 E-2	1.72 E-2
Xe-133m	2.31 E-3	6.02 E-4
Xe-135	1.76 E-1	4.67 E-2
Xe-135m	8.58 E-2	5.40 E-2
Xe-137	3.27 E-2	3.19 E-1
Xe-138	2.68 E-1	1.84 E-1
I-131	1.56 E-3	4.05 E-3
I-133	1.08 E-2	2.83 E-3

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**ISOTOPIC MIX 01 BASED ON ANSI 18.1
REACTOR COOLANT FILTERED**

ISOTOPE	Main Stack Release Fraction (20 min. holdup applied)	Reactor Building Vent Release Fraction (no holdup)
Kr-83m	2.51 E-2	7.39 E-3
Kr-85m	4.56 E-2	1.25 E-2
Kr-87	1.31 E-1	4.13 E-2
Kr-88	1.45 E-1	4.13 E-2
Kr-89	1.29 E-2	2.63 E-1
Xe-133	6.71 E-2	1.75 E-2
Xe-133m	2.35 E-2	6.14 E-4
Xe-135	1.78 E-1	4.76 E-2
Xe-135m	8.70 E-2	5.51 E-2
Xe-137	3.33 E-2	3.26 E-1
Xe-138	2.72 E-1	1.88 E-1
I-131	7.94 E-6	2.07 E-6
I-133	5.36 E-5	1.41 E-5

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**ISOTOPIC MIX 02 BASED ON ANSI 18.1
REACTOR COOLANT UNFILTERED**

Kr-83m	2.49 E-2	7.25 E-3
Kr-85m	4.51 E-2	1.23 E-2
Kr-87	1.30 E1	4.05 E-2
Kr-88	1.44 E-1	4.05 E-2
Kr-89	1.27 E-2	2.58 E-1
Xe-133	6.63 E-2	1.72 E-2
Xe-133m	2.31 E-2	6.02 E-4
Xe-135	1.76 E-1	4.67 E-2
Xe-135m	8.58 E-2	5.40 E-2
Xe-137	3.27 E-2	3.19 E-1
Xe-138	2.68 E-1	1.84 E-1
I-131	1.56 E-3	4.05 E-4
I-133	1.08 E-2	2.83 E-3

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**ISOTOPIC MIX 03 BASED ON WASH 1400 ACCIDENT MIX AND NUREG-1228 RELEASE
FRACTIONS
GAP RELEASE FILTERED**

Kr-85	1.0706 E-3
Kr-85m	4.5882 E-2
Kr-87	8.9584 E-2
Kr-88	1.0333 E-1
I-131	5.4167 E-4
I-133	1.0833 E-3
Xe-131m	1.9118 E-3
Xe-133	3.2500 E-1
Xe-133m	1.1470 E-2
Xe-135	6.5000 E-2
Xe-138	3.2500 E-1
Cs-134	1.1949 E-4
Cs-136	4.7794 E-5
Cs-137	7.4878 E-5

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**ISOTOPIC MIX 04 BASED ON WASH 1400 ACCIDENT MIX AND NUREG-1228 RELEASE
FRACTIONS
GAP RELEASE UNFILTERED**

Kr-85	5.4733 E-4
Kr-85m	2.3457 E-2
Kr-87	4.5937 E-2
Kr-88	6.6461 E-2
I-131	5.5384 E-2
I-133	1.1077 E-1
Xe-131m	9.7737 E-4
Xe-133	1.6615 E-1
Xe-133m	5.8642 E-3
Xe-135	3.3231 E-2
Xe-138	1.6615 E-1
Cs-134	1.2217 E-2
Cs-136	4.8869 E-3
Cs-137	7.6561 E-3

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**ISOTOPIC MIX 05 BASED ON WASH 1400 ACCIDENT MIX AND NUREG-1228 RELEASE
FRACTIONS
FUEL MELT FILTERED**

Kr-85	1.0671 E-3
Kr-85m	4.5732 E-2
Kr-87	8.9558 E-2
Kr-88	1.2957 E-1
Sr-89	6.269 E-5
Sr-90	2.468 E-6
I-131	8.0983 E-4
I-133	1.6196 E-3
Xe-131m	1.9055 E-3
Xe-133	3.2393 E-1
Xe-133m	1.1433 E-2
Xe-135	6.4786 E-2
Xe-138	3.2393 E-1
Cs-134	7.1456 E-5
Cs-136	2.8582 E-5
Cs-137	4.4779 E-5
Ba-140	3.0488 E-4
Ce-144	8.1 E-8

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**ISOTOPIC MIX 06 BASED ON WASH 1400 ACCIDENT MIX AND NUREG-1228 RELEASE
FRACTIONS
FUEL MELT UNFILTERED**

Kr-85	4.1276 E-4
Kr-85m	1.7690 E-2
Kr-87	3.4625 E-2
Kr-88	5.0121 E-2
Sr-89	4.8499 E-3
Sr-90	1.9090 E-4
I-131	6.2651 E-2
I-133	1.2530 E-1
Xe-131m	7.3707 E-4
Xe-133	1.2350 E-1
Xe-133m	4.4224 E-3
Xe-135	2.5061 E-2
Xe-138	1.2530 E-1
Cs-134	5.5231 E-3
Cs-136	2.2112 E-3
Cs-137	3.4642 E-3
Ba-140	2.3586 E-2
Ce-144	6.2650 E-6
Np-239	1.2088 E-4

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ATTACHMENT <u>4</u>		Att. Pg. 1 of 1
TITLE: CLASS 9 ASSUMPTIONS		

CLASS 9 ASSUMPTIONS

Category	Time since shutdown (hr)	duration of release (hr)	elevation of release (meters)	energy of release (10-5 Btu/hR)	Fraction of core inventory released							
					Xe-Kr	Organic I	I	Cs/Rb	Te-Sb	Ba-Sr	Ru	La
BWR-1	2.0	0.5	25	130	1.0E-1	7.0E-3	40E-2	40.0E-2	70E-2	5.0E-2	5.0E-1	5.0E-3
BWR-2	30.0	3.0	0	30	1.0E-1	7.0 E-3	90E-2	50.0E-2	30.0E-2	10.0E-2	3.0E-2	4..0E-3
BWR-3	30.0	3.0	25	20	1.0E-1	7.0E-3	10E-2	10.0E-2	30.0E-2	1.0E-2	2.0E-2	4.0E-3
BWR-4	5.0	2.0	25	N/A	6.0E-1	7.0E-4	8.0E-4	5.0E-3	4.0E-3	6.0E-10	6.0E-4	1.0E-4
BWR-5	3.5	5.0	150	N/A	5.0E-4	2.0E-9	6.0E-11	4.0E-9	8.0E-12	8.0E-14	0	0

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1.0 OBJECTIVE

The objective of this procedure is to provide instructions for establishing and operating rally points where personnel contamination monitoring may be performed in the event of dismissal of personnel from the plant site in a declared emergency.

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2.0 APPLICABILITY

This procedure is applicable to establishing and operating Rally Points where radiological controls would be established for personnel dismissed from the plant site during a declared emergency. Procedure frequency is as necessary.

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3.0 REFERENCES

- 3.1 10AC-MGR-006-0, Hatch Emergency Plan
- 3.2 62RP-RAD-008-0, Radiation and Contamination Surveys
- 3.3 62RP-RAD-004-0, Personnel Decontamination
- 3.4 FORMS:

- TRN-0159 – Directions to State Reception Centers

4.0 REQUIREMENTS

4.1 PERSONNEL REQUIREMENTS

The Rally Point Team will normally be comprised of HP Technicians. Other emergency responders may be utilized, as necessary.

4.2 MATERIAL AND EQUIPMENT

- 4.2.1 Portable Count Rate Meters
- 4.2.2 Portable Dose Rate Meters
- 4.2.3 Decontamination materials (e.g., cloths, soaps, water, yellow poly bags, etc.)

4.3 SPECIAL REQUIREMENTS

N/A - not applicable to this procedure

5.0 PRECAUTIONS/LIMITATIONS

5.1 PRECAUTIONS

N/A - not applicable to this procedure

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5.2 LIMITATIONS

N/A - not applicable to this procedure

6.0 PREREQUISITES

A declared emergency or an emergency drill/exercise must exist before using this procedure.

REFERENCE

7.0 PROCEDURE

7.1 RALLY POINTS

7.1.1 The primary rally point for personnel inside the protected area is the Plant Entry Security Building (PESB). Gate 17 (northwest section of the protected area or other suitable gate) may be used instead of the PESB if unforeseen radiological/weather conditions preclude evacuation through the PESB.

7.1.2 The habitability criteria for the rally points are as follows:

7.1.2.1 Loose surface contamination levels < 1,000 dpm/100cm².

7.1.2.2 The ability to detect and measure personnel contamination.

7.1.2.2.1 Friskers must not be used for measurement of contamination in areas where the background count rate is > 200 cpm.

7.1.2.2.2 Portal monitors located at the PESB exit, (i.e., PM-6) may not be used if a high background count rate results in an instrument TROUBLE LIGHT or if HP technicians determine that use of the instrument would provide inaccurate results.

7.2 RALLY POINT ASSEMBLY

7.2.1 A senior HP/Chem Department representative will appoint a Rally Point Team and Team Leader at an ALERT or higher emergency and direct the team to perform radiological surveys of the rally point to determine if it is habitable. The criteria for rally point habitability are listed in subsection 7.1.2.

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- 7.2.2 **IF** the primary rally point is determined habitable, the rally point team leader will inform the senior HP/Chem department representative of the habitability survey results and ensure contamination monitoring is performed in accordance with subsection 7.3, Contamination Monitoring.
- 7.2.3 **IF** the primary rally point is determined not habitable, the rally point team leader will inform the senior HP/Chem department representative of the habitability survey results so that an appropriate alternate location can be determined (e.g., Gate 17 or other suitable gate).
- 7.2.3.1 The Rally Point Team will proceed to the location designated as the alternate rally point and perform radiological surveys to determine if it is habitable. The criteria for rally point habitability are listed in subsection 7.1.2.
- 7.2.3.2 The Rally Point Team Leader will inform the senior HP/Chem department representative of the habitability survey results at the alternate rally point. The senior HP/Chem department representative will then inform the OSC Manager (or Emergency Director, if the OSC is not activated) of these results. The Emergency Director will then have the Control Room make a PA announcement directing personnel to the alternate rally point location.
- 7.2.4 The Rally Point team must periodically confirm that habitability conditions at the rally point are still acceptable. Any changes in radiological conditions at the rally point must be reported to the OSC Manager (or Emergency Director, if the OSC is not activated) so that it is forwarded to the Control Room so that the appropriate instructions are given over the Site PA System, as necessary.

7.3 CONTAMINATION MONITORING

- 7.3.1 Contamination monitoring of personnel leaving the protected area will normally be conducted utilizing portal monitors in the PESB.
- 7.3.2 Upon the declaration of a Site Area or General Emergency, monitoring may be performed by either portal monitors or, by both portal monitors and portable frisking equipment, if it is necessary to expedite the large numbers of personnel through the PESB. Additionally, the Rally Point Team leader should ensure the following is performed:
- 7.3.2.1 Attempt to separate from other personnel, those individuals who are potentially contaminated, e.g., they were involved in the incident or were working in contaminated areas at the time of evacuation.

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7.3.2.2 Collect all dosimetry from personnel at the rally point. Attempt to maintain segregated the dosimetry of personnel who report that they were involved in the accident and the dosimetry of any personnel who report that their dosimeter is off scale. This will expedite dose evaluation.

7.3.2.3 Assign priority to the survey of individuals with emergency response assignments.

7.3.2.4 Perform personnel monitoring in accordance with approved HP/Chem Department procedures.

7.3.2.4.1 Personnel who are potentially contaminated per step 7.3.2.1 will receive a whole body frisk.

7.3.2.4.2 Personnel who are not potentially contaminated will receive a frisk of their hands and feet.

7.3.2.5 Notify the senior HP/Chem department representative of personnel found to be contaminated.

7.3.2.6 Decontaminate personnel found to be contaminated in accordance with subsection 7.4, Decontamination.

7.3.2.7 Maintain records of personnel contamination in accordance with approved HP/Chem Department procedures.

7.3.2.8 Notify the senior HP/Chem department representative of persons who have received a potentially high exposure (e.g., those involved in the incident and/or those whose dosimetry has alarmed). Instruct these individuals to remain at the rally point until further instructions are received from the OSC on actions to be taken.

7.3.3 IF during a declared emergency, a radiological release is occurring at the time personnel are leaving the protected area, all personnel released from inside the protected area and those evacuated from outside the protected area will be directed to report to the state reception center(s) for contamination monitoring.

7.3.3.1 Applying County High School in Baxley is the location of the state reception center to be used when evacuating to the south. See form TRN-0159 for directions to this reception center.

7.3.3.2 Toombs County High School in Lyons is the location of the state reception center to be used when evacuating to the north. See form TRN-0159 for directions to this reception center.

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- 7.3.4 If requested by offsite officials, Rally Point team members should be prepared to proceed to the state reception area to perform personnel contamination monitoring of Plant Hatch employees.

7.4 DECONTAMINATION

- 7.4.1 Personnel decontamination will be performed preferably on plant site. Decontamination showers and decontamination materials are located in Building 10 and in the PACE Building (Environmental Building). Keys for these areas are located in the EOF key box.
- 7.4.2 If necessary, temporary decontamination facilities will be established at the state reception center(s) by Rally Point Team members using decontamination materials obtained from the plant site.
- 7.4.3 Decontamination will be performed in accordance with approved HP/Chem Department procedures.
- 7.4.4 Potentially contaminated liquids and solid waste from decontamination efforts must be disposed of as radioactive material.

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1.0 OBJECTIVE

This procedure addresses and delineates the actions required to bring the Emergency Operations Facility (EOF) to a state of readiness and provides guidelines for manning the facility. The Emergency Operations Facility (EOF) is an onsite facility for the management of overall licensee emergency response (including coordination with federal, state, and local officials, coordination of radiological and environmental assessments, and determination of recommended public protective actions).

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2.0 APPLICABILITY

This procedure is applicable to all personnel who would respond to the EOF during an emergency condition, drill, AND/OR exercises.

3.0 REFERENCES

- 3.1 Edwin I. Hatch Nuclear Plant, Unit 1 and 2 Emergency Plan
- 3.2 10AC-MGR-006-0, Hatch Emergency Plan
- 3.3 73EP-EIP-015-0, Offsite Dose Assessment
- 3.4 60AC-HPX-001-0, Radiation Exposure Limits
- 3.5 Emergency Response Position Matrix

3.6 FULL SIZE FORMS

- TRN-0072, Plant Parameters
- TRN-0073, Major Events/Inop Equipment
- TRN-0085, Field Team Data
- TRN-0086, Meteorological/Radiological Data
- TRN-0088, EOF Communications Checks
- TRN-0153, Emergency Response Facility Sign-In Sheet
- TRN-0154, Protective Action Status

4.0 REQUIREMENTS

4.1 PERSONNEL REQUIREMENTS

The first person responding to the EOF will be responsible for initiating this procedure. The EOF Manager OR his/her designee, upon arrival, will be responsible for ensuring completion of this procedure.

4.2 MATERIAL AND EQUIPMENT

N/A – Not applicable to this procedure.

4.3 SPECIAL REQUIREMENTS

The EOF will be placed in a standby status at an Alert. Standby means the EOF is ready to be activated and personnel and equipment are ready to function. The EOF must be activated at a Site Area Emergency or General Emergency. The EOF is operational as soon as possible but not later than approximately one hour following the initial notification.

5.0 PRECAUTIONS/LIMITATIONS

N/A - Not applicable to this procedure

6.0 PREREQUISITES

Adequate resources shall be in place for the EOF to perform its intended function PRIOR to activation. Adequate resources are defined as minimum staffing per Table B-1 of the Emergency Plan and as described in step 7.3 of this procedure.

REFERENCE

7.0 PROCEDURE**NOTE:**

This procedure is intended to be guidance for activating the EOF in emergency situations. Deviations from the listed sequence are permitted WHEN plant conditions warrant a more expedient order of completion.

- 7.1 Obtain the necessary keys from the EOF key box to open the EOF doors and cabinets.
- 7.2 Establish personnel accountability of EOF emergency responders. Sign-in will be established at the west entrance of the EOF and all personnel will sign in/out on form TRN-0153, Emergency Response Facility Sign-In Sheet. Emergency response position badges may be obtained and worn by EOF emergency responders to identify their emergency response position. The badges may be obtained from the EOF badge cabinet located at the west entrance to the EOF, if available.
- 7.3 The minimum functions and staffing required for EOF activation are listed below. The EOF Manager may activate the EOF WHEN these functions and personnel are available (minimum staffing as defined in Table B-1 of the Hatch Emergency Plan):

<u>TASK/FUNCTION</u>	<u>PERSONNEL</u>	<u># REQ'D.</u>
Offsite interface in the EOF	EOF Manager	(1)
Dose Assessment support to Emergency Director	Dose Assessment Manager/Dose Analyst	(2)
Offsite monitoring	Health Physics or Chemistry Technicians (sent from OSC)	(4)

- 7.4 Set up Dose Assessment computer in accordance with 73EP-EIP-015-0.**
- 7.5 Ensure the HVAC filter system is activated by pushing the red button located on the EOF HVAC panel located in the Simulator Building (2nd floor) HVAC room.**
- 7.6 Synchronize all clocks with Control Room time.**
- 7.7 Upon completion of the above steps, the EOF Manager will declare the EOF activated and inform the Control Room, Emergency Director, OSC Manager, TSC Manager and Corporate Emergency Operations Center (CEOC) of the activation status. Note any exceptions in staffing and resources, as appropriate.**

7.8 Additional support staff personnel may be utilized as necessary to support the EOF. Refer to the Emergency Response Position Matrix for a listing of qualified emergency responders for all positions. The following is a listing of the EOF support positions:

- **Operations Advisor**
- **Support Coordinator**
- **Dose Analyst**
- **Administrative Support**
- **General Support**
- **License Support**
- **Facility Communicators**

7.9 The following additional steps may be performed after EOF activation:

7.9.1 Ensure the physical arrangement of the facility is similar to the typical EOF layout posted in the EOF. This activity includes arrangement of facility status boards, set-up of facility telephones, fax machines, copy machines and ensuring the P.A. system is on and audible. The items for arrangement in the EOF are located in the following areas:

<u>ITEM</u>	<u>LOCATION</u>
Status boards	Behind the false walls in classrooms 174 and 182 of the EOF
EOF Telephones	Cabinets on north wall of EOF rooms
Mats (to cover telephone cords)	Top of cabinets on north wall of EOF rooms
Fax Machines (2)	EP office (adjacent to the EOF)
Copy Machine	Training & EP Manager's office

7.9.2 Ensure communications checks are performed in accordance with form TRN-0088, EOF Communications Checks, THEN establish communications loops as applicable personnel become available.

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- 7.9.3 Check the status boards for similarity to TRN-0072, Plant Parameters, TRN-0073, Major Events/INOP Equipment, TRN-0085, Field Team Data, TRN-0086, Meteorological/Radiological Data and TRN-0154, Protective Action Status. Additional copies of the status board sheets are available in the EOF Storage Room.
- 7.9.4 Ensure that supervisory emergency response personnel are starting a log.
- 7.9.5 Assess the adequacy of supplies, equipment AND documents. IF additional supplies/equipment/documents are needed, notify the EOF Support Coordinator Supervisor for assistance.
- 7.9.6 Ensure that Health Physics (HP) personnel conduct habitability surveys upon facility setup, as necessary AND as conditions warrant.
- 7.9.7 Ensure radiological monitoring is established for the EOF, as necessary. Radiological monitoring for EOF responders will be established at the EOF entrance by Health Physics, as necessary.
- 7.10 Radiological precautions for the EOF will be consistent with normal plant procedures. Habitability of the facility will be based on the ability to maintain exposures of individuals within the Federal limits for Total Effective Dose Equivalent (TEDE) and Total Organ Dose Equivalent (TODE) as described in 60AC-HPX-007-0, Radiation Exposure Limits.
- 7.11 Restrictions on eating, drinking AND smoking will be implemented whenever radiological conditions warrant (e.g., airborne radioactivity, surface contamination, abnormal radiation levels OR significant potential for such conditions exists).
- 7.12 The decision to evacuate the EOF will be based on the following factors:
- 7.12.1 Facility dose rates versus available dose margins (TEDE and TODE) of EOF emergency responders.
- 7.12.2 Concentration of airborne activity versus type of radiological protection taken (i.e., respirators, tracking of DAC - hours, etc).
- 7.12.3 Duration of the event.
- 7.12.4 Length of time needed to re-establish activities at the alternate EOF versus the importance of EOF activities currently in progress.
- 7.13 IF the decision is made to evacuate the EOF, the EOF Manager will determine those personnel needed to continue the performance of EOF activities AND relocate to the alternate EOF as outlined in 73EP-EIP-022-0, Alternate EOF Activation. Other EOF personnel may be directed to another emergency facility, rescheduled to return at a later time AND/OR evacuated from plant site.