



ENERGY NORTHWEST

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397;
INDEPENDENT SPENT FUEL STORAGE INSTALLATION, DOCKET NO. 72-35;
EMERGENCY PLAN IMPLEMENTING PROCEDURE (EPIP)**

Dear Sir or Madam:

Revision 19 of Emergency Preparedness Implementing Procedure (EPIP) PPM 13.2.2, "Determining Protective Action Recommendations" was issued on January 5, 2016. The changes to the procedure have been evaluated in accordance with 10 CFR 50.54(q). The enclosed contains a summary of changes and evaluations performed. These changes do not create a reduction in effectiveness of the approved emergency plan.

This submittal contains no new or revised regulatory commitments. Should you have any questions or desire additional information regarding these matters, please contact Sean E. Clizbe at (509) 377-4398.

Respectfully,

D. W. Gregoire
Manager, Regulatory Affairs

Executed on: February 2, 2016

Enclosure: 1. Summary of Changes

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Sr. Resident Inspector / 988C
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AX45
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EMERGENCY PLAN IMPLEMENTING PROCEDURES (EIPs)

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Detail of changes made in Rev 19 of 13.2.2, Determining Protective Action Recommendations (PARs)

Summary of Changes

The Columbia Generating Station Emergency Plan and EPA-400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" continues to be met with revision 19 of PPM 13.2.2, Determining Protective Action Recommendations.

PARs determination beyond 10 miles increases overall effectiveness from the previous revision. The procedure continues to meet the Columbia Generating Station Emergency Plan for use of field team data if available and provides explicit direction to the Main Control Room (MCR), Technical Support Center (TSC), and Emergency Operations Facility (EOF) on how to perform PARs greater than (GT) 10 miles using dose projection. There is no change in timeliness, capability, or functionality in relation to NUREG 0654 Supplement 3 which would lead to a planning standard reduction in effectiveness for this procedure revision.

Table of revision comparisons with evaluation for potential Reduction in Effectiveness (RIE)

Rev 18 Section / Wording	Rev 19 Change	Comment / Evaluation
1.0 The purpose of this procedure is to provide instructions and guidance for the formulation of onsite protective action decisions and offsite Protective Action Recommendations (PARs) based on plant conditions or radiological releases.	1.0 The purpose of this procedure is to provide instructions and guidance for the formulation of offsite Protective Action Recommendations (PARs) based on plant or radiological conditions and determining onsite protective action decisions.	Purpose changed to meet purpose of procedure with no intent, commitment, or standard changed. Not a RIE.

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Rev 18 Section / Wording	Rev 19 Change	Comment / Evaluation
<p>2.1 The responsibility for making Protective Action Recommendations resides with the individual who has responsibility for Emergency Direction and Control, the Emergency Director. The Emergency Director should obtain input from the Radiation Protection Manager (RPM) in the TSC for and recommendations for onsite protective actions, and from the Radiological Emergency Manager (REM) in the EOF for and recommendations for offsite protective actions if possible.</p>	<p>2.1 The responsibility for making PARs resides with the individual who has the responsibility of the Emergency Director. If the ERO is manned, The Emergency Director (ED) should obtain input from the Radiological Emergency Manager (REM) in the EOF for offsite PARs, and from the Radiation Protection Manager (RPM) in the TSC for recommendations for onsite protective actions, if possible.</p>	<p>No change in content, editorial rewrite. Not a RIE.</p> <p>Emergency Response Organization (ERO)</p>
<p>2.2 PARs are based on radiological conditions or plant conditions. Recommendations based on plant conditions may result in more conservative PARs. The downwind sections evacuated for a plant based PAR (see table in Attachment 7.1) are taken from the CGS Evacuation Time Estimate study.</p> <p>2.3 For Plant Based PARS a table is used to select the Downwind Sections. The table was developed from information Tables 6.1 and 7.1 of the ETE.</p>	<p>2.2 PARs are based on plant or radiological conditions.</p> <p>Recommendations for sections impacted are based on the following;</p> <ul style="list-style-type: none"> • Plant Conditions – use attachment 7.1 note 5 “Downwind Section” table to define/select the downwind section(s) impacted. • Radiological Conditions – use dose projection program to define/select the downwind section(s) impacted. 	<p>Deleted description for Plant based PARs and Aligns step 2.2 with Attachment 7.1. No functional change. Not a RIE.</p> <p>Evacuation Time Estimate (ETE)</p>

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<p>2.4 PARs are conservatively based on plant, radiological, and meteorological conditions. Additional sectors should not be evacuated unless conditions make it necessary to do so. Expanding the evacuation zone when conditions do not require this action presents a greater hazard to evacuees than allowing them to remain sheltered in place. Needless evacuation also reduces the effectiveness of the offsite resources used to accommodate the evacuation.</p>	<p>2.3 Additional EPZ sections should not be recommended for evacuation unless conditions make it necessary to do so. Expanding the evacuation zone when conditions do not require this action could present a greater hazard to evacuees than allowing them to remain in place. Needless evacuation also reduces the effectiveness of the offsite resources used to accommodate the evacuation.</p>	<p>Deleted description. Rewording with no change in intent. Not a RIE.</p> <p>Emergency Planning Zone (EPZ)</p>
<p>2.6 Industrial Development complex personnel are evacuated at the Site Area Emergency classification per PPM 13.5.1. Part C Notifications implemented by the SCC and PA announcements made by either SAS or the Security Manager meets this requirement.</p>	<p>2.5 Industrial Development Complex personnel are evacuated at the Site Area Emergency classification per PPM 13.5.1.</p>	<p>Deleted how part C notifications are implemented. This is a PAR procedure and how notifications are performed does not meet purpose. IDC notification is still provided by PPM 13.4.1.043 step 4.1.5 Notifications procedure with Part C notification under the EP Phone Directory EPD-01. No reduction in intent, commitment, or standard changed. Not a RIE.</p> <p>Industrial Development Complex (IDC) Security Communication Center (SCC) Public Announcement (PA) Secondary Alarm Station (SAS)</p>

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<p>2.7 Implementation of protective actions for offsite areas within the 10 mile EPZ is the responsibility of Benton and Franklin Counties. There are precautionary offsite protective actions that are implemented automatically at Site Area Emergency and General Emergency classifications. These are specified under the Site Area Emergency and General Emergency boxes (Item #5) on the Classification Notification Form (CNF) (Form 24075). If there are PARs in addition to those that are automatic, they are addressed in Item # 6 for the General Emergency.</p>	<p>2.6 There are precautionary offsite protective actions that are recommended automatically at the Site Area Emergency and General Emergency classifications. These are specified under the Site Area Emergency and General Emergency boxes on the Classification Notification Form (CNF) (Form 24075). If there are PARs in addition to those that are automatic, they are addressed for the General Emergency in box # 6a. Implementation of protective actions for offsite areas within the 10 mile EPZ is the responsibility of Benton and Franklin Counties and DOE-RL officials.</p>	<p>Reformatted paragraph with no substantial change. Not a RIE.</p>
<p>2.8 The protective actions outlined in this procedure are limited to actions for minimizing the exposure of the public within the 10 mile EPZ to external and internal radiation exposure from plume passage or inhalation of the radioactive plume. Other protective actions for minimizing public exposure via the ingestion pathway will be determined and implemented by Energy Northwest and Washington State in accordance with EPIP 13.8.1.</p>	<p>2.7 The protective actions outlined in this procedure are limited to actions for minimizing the exposure of the public within the 10 mile EPZ to external and internal radiation exposure from plume passage or inhalation of the radioactive plume and actions to determine PARs beyond the 10 mile EPZ. Other protective actions for minimizing public exposure via the ingestion pathway will be determined and implemented by Energy Northwest and Washington State.</p>	<p>Added statement "and actions to determine PARs beyond 10 mile EPZ" which is in accordance with step 4.5. Deleted procedure reference and added PARs beyond 10 mile EPZ. No reduction in intent, commitment, or standard was changed. Not a RIE.</p>

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<p>2.9 Plant and offsite officials should continue assessment actions based on additional plant information, dose projections, and field monitoring results. After performing the initial early evacuation actions near the plant, licensee and offsite officials should modify their protective action recommendations as necessary based on (1) field monitoring to locate areas with high levels of contamination (hot spots) and (2) dose projections which indicate that EPA protective action guide doses may be exceeded in areas beyond those that have been evacuated. On the basis of this information, plant and offsite officials may expand the evacuations to encompass other areas in the plume EPZ and, for the worst case accidents, protective actions may be required beyond the plume EPZ.</p>	<p>2.8 Plant and offsite officials should continue assessment actions based on additional plant information, dose projections, and field monitoring results. After performing the initial early evacuation actions near the plant, licensee and offsite officials should modify their protective action recommendations as necessary based on field monitoring and dose projections, which indicate that EPA protective action guide doses may be exceeded in areas beyond those that have been evacuated. On the basis of this information, plant and offsite officials may expand the evacuations to encompass other areas in the plume EPZ and, for the worst case accidents; protective actions may be required beyond the plume EPZ.</p>	<p>Deleted "...to locate areas with high levels of contamination (hot spots)." The purpose of the field teams is to map the plume and minimize individual exposure (ALARA) within the plume. The existence of hot spots will be provided and mapped as part of defining the plume pathway. This change does not reduce intent, commitments, or standards but clarifies field team responsibilities for plume identification. Not a RIE.</p>
<p>3.2.1 Providing radiological expertise to determine appropriate PAR based on onsite radiological conditions and/or offsite conditions if the REM is unavailable.</p>	<p>3.2.1 Assess offsite doses and make recommendations concerning protective actions to the TSC Manager until the Radiological Emergency Manager at the EOF takes over this function.</p>	<p>Radiation Protection Manager (RPM) responsibilities are not changed, the procedure update is explicit to who he reports. No functional change. Not a RIE.</p>
<p>3.3.1 Providing radiological expertise to determine appropriate PAR based on offsite radiological conditions.</p>	<p>3.3.1 Managing radiological dose assessment and field monitoring activities. 3.3.2 Assists in development of PARs and, during the late phases of the response, coordinates this activity with the States of Washington and Oregon and the US DOE and provides offsite radiological PARs to the EOF Manager.</p>	<p>Better delineation of responsibilities for the Radiological Emergency Manager (REM) in the EOF; the function does not change. Not a RIE.</p>

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	<p>4.2 <u>NOTE</u>: Do not delay recommending offsite protective actions for areas <u>within the EPZ</u>, while waiting for field monitoring results to verify the accuracy of the dose projection results.</p>	<p>Added note. This is in agreement with current Attachment 7.1 and is informational only. Not a RIE.</p>
<p>4.2 Initial Plant Based PARs for General Emergency Classifications 4.2.1 REFER to Attachment 7.1, Decision Guide for Offsite Protective Action Recommendations to ensure appropriate PAR is determined. a. IF a dose projection has been made, THEN DETERMINE appropriate downwind section(s) based on the dose projection program output. b. IF NO dose projection is made, THEN USE the "Downwind Sections Table" in attachment to determine appropriate sections.</p>	<p>4.2 <u>Initial PARs for General Emergency Classifications</u> 4.2.1 REFER to Attachment 7.1, Decision Guide for Offsite Protective Action Recommendations at a GE, to ensure appropriate PAR is determined. a. <u>IF</u> a dose projection has been made, and indicate either; ≥ 1000 mRem TEDE or ≥ 5000 mRem CDE Thyroid (PAGs), <u>THEN</u> DETERMINE appropriate downwind section(s) based on the dose projection program output. b. <u>IF</u> a dose projection has been made, and indicate both; < 1000 mRem TEDE and < 5000 mRem CDE Thyroid (PAGs), <u>THEN</u> DETERMINE the appropriate downwind section(s) based on attachment 7.1 note 5 "Downwind Section" table. c. <u>IF</u> NO dose projection has been made, <u>THEN</u> DETERMINE the appropriate downwind section(s) based on attachment 7.1 note 5 "Downwind Section" table.</p>	<p>Unified RASCAL Interface (URI) automatically provides sector evacuation information at the GE based upon Meteorological conditions. With a release below PAG limits, the program will not identify evacuation sectors so table in attachment 7.1 will be used. This is not a change from Rev 18 attachment 7.1 guidance to Rev 19 guidance. Not a RIE.</p> <p>Total Effective Dose Equivalent (TEDE) Committed Effective Dose Equivalent (CEDE)</p>

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4.2.2 INDICATE the PAR on the Classification Notification Form (CNF), Form 24075, AND MAKE the required offsite notifications in accordance with PPM 13.4.1, Emergency Notifications.	4.2.2 INDICATE the PAR on the Classification Notification Form, Form 24075 (CNF). 4.2.5 COMPLETE the appropriate parts of the CNF, and PERFORM the required notifications in accordance with PPM 13.4.1, Emergency Notifications.	Reformatted the procedure. Not a RIE.
4.4.4 IF there is to be a planned Release (containment venting), THEN DISCUSS proposed activity with offsite authorities to assist them with Protective Action implementation.	4.2.3 IF there is to be a Controlled Release (such as containment venting), THEN DISCUSS activity with offsite authorities to inform them of the intent to vent the containment.	Format change only. Not a RIE.
4.4.5 WHEN circumstances such as weather, distance or concurrent emergencies may impact specific areas for which PARs are being proposed, THEN INFORM the Benton and Franklin County EOCs which sections are most affected so that routes to be taken or avoided may be identified, or other special considerations in the notification to offsite agencies.	4.2.4 WHEN aware of circumstances such as severe weather, or concurrent emergencies that may impact specific areas for which PARs are being proposed, THEN INFORM the Benton and Franklin County EOCs which sections are most affected (so that routes to be taken or avoided may be identified), or provide other special considerations in the notification to offsite agencies.	Format change only. Not a RIE. Emergency Operating Center (EOC)

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<p>4.3.2 CONTINUE event assessment after making the initial PAR for the General Emergency classification based on:</p> <ul style="list-style-type: none"> • available plant data, • meteorological data • dose projections • field monitoring data 	<p>4.2.6 CONTINUE event assessment after making the initial PAR for the General Emergency classification based on:</p> <ul style="list-style-type: none"> • available plant data, • meteorological data • dose projections • field monitoring data 	<p>Format change only. For remaining of table, will not show format only changes due to step updates in new procedure. Not a RIE.</p>
<p>4.3 Monitor Conditions for Possible PAR Changes</p> <p>a. ENSURE PARs are indicated on the PAR Status Board by the use of colored marker.</p>		<p>Deleted this step. EOF is in the process of going from status boards to computer screens. WebEOC will track important items. This is information only and the new system is an increase in effectiveness. Not a RIE.</p>
<p>4.4 Updating Offsite PARs Based on Projected Doses or Offsite Survey Results</p>	<p><u>4.3 Updating Offsite PARs Based on Projected Doses or Offsite Field Monitoring Data</u></p>	<p>Format change only, no RIE.</p>
<p>4.4.2 DETERMINE the appropriate offsite PAR by comparing the plume projected dose and/or Field Monitoring Team data with the Protective Action Guidelines (PAGs) and guidance provided in Attachment 7.1, PAGs for the Early Phase of a Nuclear Incident.</p> <p>a. IF review of dose projections or survey results indicate a PAG has been exceeded in any Sections not already evacuated, THEN ISSUE a new PAR for additional affected Sections</p>	<p>4.3.2 DETERMINE if the dose projection or survey data indicates either; ≥ 1000 mRem TEDE or ≥ 5000 mRem CDE Thyroid (PAGs).</p> <p>a. <u>IF</u> review of dose projections or survey results indicate the limit has been exceeded in any sections not already evacuated, and evacuation is determined to be warranted, <u>THEN ISSUE</u> a new PAR for additional affected section(s).</p>	<p>Procedure defines PAGs instead of referencing an attachment; brings statement in compliance with step 4.3.3 and as such, is not a new commitment, requirement, or changes the intent of the step. Not a RIE.</p>

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4.4.6 IF any of the above actions result in a change to established PARs, THEN COMPLETE the appropriate parts of the CNF, and make the required notifications in accordance with PPM 13.4.1, Emergency Notifications.	4.3.4 <u>IF</u> any of the above actions result in a change to established PARs; COMPLETE the appropriate parts of the CNF. PERFORM the required notifications in accordance with PPM 13.4.1, Emergency Notifications.	No substantive change, only reformatting. Not a RIE.
	4.4 Updating Offsite PARs Based on Change of Wind Direction with No PAG exceeded	Format procedure update, no new information provided. Not a RIE.
	4.5 NOTE: If downwind field monitoring data is not available, base PAR on dose projection results.	Added note to PARs GT 10 miles, emphasizes that dose assessment results should still be used to communicate with offsites. In agreement with EPlan, no change in capability or timeliness. Not a RIE.

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<p data-bbox="140 257 719 365"><u>4.5.1 CONSIDER plume PARs beyond 10 miles if dose projections indicate PAGs at 10 miles may be exceeded.</u></p> <ul data-bbox="108 376 740 591" style="list-style-type: none">• For the Control Room, NOTIFY the offsite agencies via the Crash Phone that dose projections indicate that PAGs beyond 10 miles may be exceeded. Indicate that the TSC or EOF will formulate PARs for affected areas.	<p data-bbox="772 257 1385 439">4.5.1 CONSIDER plume PARs beyond 10 miles if dose projections indicate either; ≥ 1000 mRem TEDE or ≥ 5000 mRem CDE Thyroid (PAGs), may be exceeded beyond 10 miles.</p> <ul data-bbox="772 455 1410 1384" style="list-style-type: none">• For the Control Room, (Shift Manager as Emergency Director):<ol data-bbox="825 530 1395 1384" style="list-style-type: none">a. <u>IF</u> dose projections exceed PAGs beyond 10 miles, THEN OBTAIN downwind field monitoring data to verify dose projection results.b. USE dose projection program 50 mile map to determine extent (distance) of the GE plume.<ol data-bbox="874 811 1395 1037" style="list-style-type: none">1. Determine the distance to the leading edge of the GE portion of the plume, then round up to the next whole mile.2. Select the extended quadrant section(s).c. MAKE Evacuation PAR to include the previously affected downwind section(s) and to the additional extent (distance beyond 10 miles) indicated for the extended quadrant section(s).d. COMPLETE the appropriate parts of the CNF, and PERFORM the required notifications in accordance with PPM 13.4.1, Emergency Notifications.	<p data-bbox="1453 257 2006 555">The procedure continues to meet the EPlan for use of field team data if available and provides explicit direction to the Main Control Room (MCR) on how to perform PARs GT 10 miles using dose projection. Increase in effectiveness from previous revision. Not a RIE.</p>

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<p>4.5.1 (cont)</p> <ul style="list-style-type: none"> • For the TSC or EOF: <ol style="list-style-type: none"> 1. OBTAIN downwind field team readings to verify dose projection results. 2. <u>IF</u> time permits, THEN CONSULT with Benton and Franklin County EOCs on the recommendation to evacuate beyond 10 miles. 3. DO NOT USE 90 degree sector boundaries to define the affected area beyond 10 miles for PARs beyond 10 miles. 4. USE geo-political boundaries such as roads, rivers and county lines to define the boundaries of the PAR beyond 10 miles. 5. INCLUDE those areas downwind where the PAG values are projected to be exceeded. 6. <u>IF</u> plume PARs are issued for areas beyond 10 miles that could affect areas outside Benton and Franklin counties, <u>THEN</u> the Emergency Director should ENSURE that the State EOC is notified. 	<p>4.5.1 (cont)</p> <ul style="list-style-type: none"> • For the EOF or TSC, (EOF Manager or TSC Manager as Emergency Director): <ol style="list-style-type: none"> a. <u>IF</u> dose projections exceed PAGs beyond 10 miles, <u>THEN</u> OBTAIN downwind field monitoring data to verify dose projection results. b. USE dose projection program 50 mile map to determine area encompassed by the GE plume. <ol style="list-style-type: none"> 1. Determine the distance to the leading edge of the GE portion of the plume, then round up to the next whole mile. 2. Select geo-political boundaries such as roads, rivers and county lines (that encompass the GE portion of the plume) to define the boundaries of the PAR beyond 10 miles. c. MAKE Evacuation PAR to include the previously affected downwind section(s) and to the additional area indicated by the geo-political boundaries beyond 10 miles. d. COMPLETE the appropriate parts of the CNF, and PERFORM the required notifications in accordance with PPM 13.4.1, Emergency Notifications. 	<p>Step 4.5.1.2 deleted: PARs are expected to be performed within 15 minutes and recommended to offsite agencies. State and counties continue to participate in ERO centers with ongoing communications. This recognizes timeliness for PARs Not a RIE.</p> <p>4.5.1.b is a replacement for the old precaution of 90 degree sector boundary use and so meets step. Not a RIE.</p> <p>4.5.1.d is additional information which is in the process for notification. Not a RIE.</p>

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<p align="center"><u>References</u></p>	<p>References updated with Volume 13 procedures vice EOPs</p>	<p>EOPs do not define PARs or what to do with them unlike Volume 13 procedures, editorial. Not a RIE.</p>																		
<p><u>Attachment 7.1 Decision Guide for Offsite Protective Action Recommendations</u></p>	<p><u>Attachment 7.1 Decision Guide for Offsite Protective Action Recommendations at a GE</u></p>	<p>Format change. Not a RIE.</p>																		
<p>Recreational Areas:</p> <ul style="list-style-type: none"> Columbia River Henn Rapids Recreation Area / ORV Park Ringold Fishing Area Wahluke Hunting Area <table border="1"> <thead> <tr> <th>WD (from)</th> <th>Sections</th> </tr> </thead> <tbody> <tr> <td>012° to 079°</td> <td>3</td> </tr> <tr> <td>080° to 124°</td> <td>3, 4</td> </tr> <tr> <td>125° to 146°</td> <td>4</td> </tr> <tr> <td>147° to 214°</td> <td>1, 4</td> </tr> <tr> <td>215° to 259°</td> <td>1</td> </tr> <tr> <td>260° to 304°</td> <td>1, 2</td> </tr> <tr> <td>305° to 326°</td> <td>2</td> </tr> <tr> <td>327° to 011°</td> <td>2, 3</td> </tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> Do not add additional Sections based on change in wind direction only. Add Sections only if PAG is exceeded or a potential release may occur as per step 4.3.2. If dose projections or survey results a PAG may be exceeded beyond 10 miles refer to Section 4.4. 	WD (from)	Sections	012° to 079°	3	080° to 124°	3, 4	125° to 146°	4	147° to 214°	1, 4	215° to 259°	1	260° to 304°	1, 2	305° to 326°	2	327° to 011°	2, 3		<p>Based upon best practices from benchmarking, incorporates 10 mile EPZ evacuation requirements plus incorporates impediment considerations.</p> <p>The SAE automatic PARs in revision 18 are part of the CNF form and are covered by step 4.1 of the procedure so are not carried forward in the attachment to revision 19. Notes complete the decision steps. Not a RIE.</p> <p>Site Area Emergency (SAE)</p> <p>Notes to the flow chart continue below.</p>
WD (from)	Sections																			
012° to 079°	3																			
080° to 124°	3, 4																			
125° to 146°	4																			
147° to 214°	1, 4																			
215° to 259°	1																			
260° to 304°	1, 2																			
305° to 326°	2																			
327° to 011°	2, 3																			

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	<p>Note 1: Rapidly Progressing Severe Accident A rapidly progressing severe incident is a General Emergency (GE) with rapid loss of containment integrity (emergency action levels indicate containment barrier loss) and loss of ability to cool the core. This path is used for scenarios in which containment integrity can be determined as bypassed or immediately lost during a GE with core damage.</p> <p>If this scenario cannot be immediately confirmed, assume it is not taking place and answer "no" to this decision block. A rapidly progressing severe incident may be defined as:</p> <ol style="list-style-type: none">1. The PAR is the first after a GE has been declared. <p>AND</p> <ol style="list-style-type: none">2. There is loss of the containment barrier per the Emergency Action Levels <p>AND</p> <ol style="list-style-type: none">3. EITHER of the following:<ol style="list-style-type: none">a. Containment Radiation Monitor CMS-RIS-27E and CMS-RIS-27F reading GT 14,000 R/Hr. <p>OR</p> <ol style="list-style-type: none">b. A significant radiological release (greater than PAGs at 1.2 miles) in about an hour.	<p>Detail on when standard GE PARs exists for the condition. Meets the revision 18 attachment conditions with more guidance. Not a RIE.</p>

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	<p>Note 2: Known Impediment(s) to Evacuation or Controlled Release</p> <ul style="list-style-type: none"> • If the General Emergency is due to Hostile Action, then this would be considered an Impediment to Evacuation. This impediment is effective until the Off-Site Incident Commander has determined that conditions are safe for evacuations to proceed and communicated this to CGS Emergency Director. • If notified by OROs prior to beginning the PAR determination that; adverse weather, earthquake, wildfire, etc... would preclude the safe or timely evacuation of the public at the time of the emergency, then that condition constitutes a known Impediment to Evacuation. • Controlled Release, Primary Containment venting that is performed to prevent containment failure and can be terminated within one hour. Controlled means that the release was initiated by Operator Action and can be terminated by Operator Action. 	<p>Incorporates planned releases due to containment vent, which is an increase in effectiveness to the last revision. Not a RIE.</p> <p>Columbia Generating Station (CGS)</p> <p>Offsite Response Organization (ORO)</p>

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	Note 3: EVACUATE Evacuation and control of access to an affected area can be the most effective protective action for reducing the dose to the public unless circumstances as discussed in note 2 exist.	Discussion and explanation of evacuation, no change.

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	<p>Note 4: SHELTER (Shelter in Place) A type of protective action in which instructions are given to members of the public to remain indoors, turn off heating or air conditioning (as appropriate for the season), close windows, monitor communications channels, and prepare to evacuate.</p> <p>Sheltering in buildings with windows and doors closed and ventilation turned off can provide partial protection from a passing radioactive plume. The extent of the protection depends on the duration and isotopic mixture of the release and the type of building.</p> <p>Given that a decision could be made to Shelter for a short duration release (containment venting), it should be recognized that Shelter is a temporary measure and does not provide long-term protection from airborne radioactive materials. It loses effectiveness as interior air equalizes in concentration with the outside environment. Therefore, any recommendation for the public to Shelter should be followed by additional instructions at the appropriate time. See also note 6.</p>	<p>Discussion on shelter which is an increase in effectiveness over the last revision.</p>

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Rev 18 Section / Wording	Rev 19 Change	Comment / Evaluation																				
	<p>Note 5: Downwind Section(s)</p> <p>Sections for the surrounding 10-mile EPZ are divided into 4 - 90° sections.</p> <p>Determining which section(s) that are impacted may be performed by:</p> <ul style="list-style-type: none"> • Using dose projections software, or • Using the following table. <table border="1" data-bbox="1024 629 1409 1166"> <thead> <tr> <th colspan="2" data-bbox="1024 629 1409 667">Downwind Sections</th> </tr> <tr> <th data-bbox="1024 667 1241 783">Wind Direction (from)</th> <th data-bbox="1241 667 1409 783">Sections Impacted</th> </tr> </thead> <tbody> <tr> <td data-bbox="1024 783 1241 832">012° to 079°</td> <td data-bbox="1241 783 1409 832">3</td> </tr> <tr> <td data-bbox="1024 832 1241 882">080° to 124°</td> <td data-bbox="1241 832 1409 882">3, 4</td> </tr> <tr> <td data-bbox="1024 882 1241 931">125° to 146°</td> <td data-bbox="1241 882 1409 931">4</td> </tr> <tr> <td data-bbox="1024 931 1241 981">147° to 214°</td> <td data-bbox="1241 931 1409 981">1, 4</td> </tr> <tr> <td data-bbox="1024 981 1241 1030">215° to 259°</td> <td data-bbox="1241 981 1409 1030">1</td> </tr> <tr> <td data-bbox="1024 1030 1241 1080">260° to 304°</td> <td data-bbox="1241 1030 1409 1080">1, 2</td> </tr> <tr> <td data-bbox="1024 1080 1241 1129">305° to 326°</td> <td data-bbox="1241 1080 1409 1129">2</td> </tr> <tr> <td data-bbox="1024 1129 1241 1166">327° to 011°</td> <td data-bbox="1241 1129 1409 1166">2, 3</td> </tr> </tbody> </table>	Downwind Sections		Wind Direction (from)	Sections Impacted	012° to 079°	3	080° to 124°	3, 4	125° to 146°	4	147° to 214°	1, 4	215° to 259°	1	260° to 304°	1, 2	305° to 326°	2	327° to 011°	2, 3	<p>No change to revision 18.</p>
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EMERGENCY PLAN IMPLEMENTING PROCEDURES (EPIPs)

Enclosure 1

Rev 18 Section / Wording	Rev 19 Change	Comment / Evaluation
	<p>Note 6: Continue Assessments</p> <p>Radiological and meteorological assessments should be continued and evacuation considered for any areas where dose projections or field measurements indicate that PAGs may be exceeded.</p>	Format change only. Not a RIE.
	<p>Note 7: Are Impediment(s) to Evacuation Removed? And Controlled Release Stopped? Both actions must be yes if either condition had occurred earlier (note 2) or the condition is not applicable.</p>	Further explanation of flow chart, editorial in nature. Not a RIE.
Attachment 7.2	<u>Attachment 7.2</u>	Format changes only. Not a RIE.