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Date: 1/23/2008 1:34:30 PM
Subject: Update to EP ITAAC Tables
cc: "Bruce Musico" <BJM2@nrc.gov>

Jim,

Attached are your proposed EP ITAAC tables with suggested minor edits, corrections, and substantive changes that Bruce Musico provided. These suggested changes are in support of NRC and SNC reaching mutual agreement on a final set of EP ITAAC. Please review and let me know if you need a phone call to clarify. Please also let me know if the staff can expect these changes to be incorporated into Revision 4.

Christian Araguas

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13.3.5 VEGP Unit 3 ITAAC

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Emergency Classification System			
<p>10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.</p>	<p>1.1 An emergency classification and emergency action level (<u>EAL</u>) scheme must be established by the licensee. The specific instruments, parameters, or equipment status shall be shown for establishing each emergency class, in the in-plant emergency procedures. The plan shall identify the parameter values and equipment status for each emergency class. [D.1]</p>	<p>1.1.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving system and effluent parameters specified in Table Annex V2 D.2-1, <i>Hot Initiating Condition Matrix, Modes 1, 2, 3, and 4</i>; Table V2 D.2-2, <i>Cold Initiating Condition Matrix, Modes 5, 6, and De-fueled</i>; and <u>emergency implementing procedures (EIPs)</u>.</p> <p>1.1.2 <u>An analysis of the EAL technical bases will be performed to verify as-built, site-specific implementation of the EAL scheme.</u></p>	<p>1.1.1 The parameters specified in Table Annex V2 H-1, <i>Post Accident Monitoring Variables</i>, are retrievable in the control room, TSC, and EOF. The ranges encompass the values specified in the emergency classification and EAL scheme.</p> <p>1.1.2 <u>The EAL scheme is developed consistent with Regulatory Guide 1.101, <i>Emergency Planning and Preparedness for Nuclear Power Reactors</i>.</u></p>
3.0 Emergency Communications			
<p>10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.</p>	<p>3.1 The means exists for communications between the control room, OSC, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field monitoring teams. [F.1.d]</p>	<p>3.1 A test will be performed of the capabilities.</p>	<p>3.1 Communications are established between the control room, OSC, TSC, and EOF. Communications are established between the control room, TSC, and Georgia Emergency Management Agency (GEMA) Operation Center; Burke County Emergency Operation Center (EOC); SRS Operations Center; South Carolina Warning Point; and Aiken, Allendale, and Barnwell County Dispatchers. Communications are established between the TSC and radiological</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
	3.2 The means exists for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOC (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center. [F.1.f]	3.2 A test will be performed of the capabilities.	monitoring teams. 3.2 Communications are established from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs, and an access port for ERDS is provided.
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 The licensee has established a technical support center (TSC) and an onsite operations support center (OSC). [H.1]	5.1 An inspection of the as-built TSC and OSC will be performed, including a test of the capabilities.	5.1.1 The TSC has at least 2,175 square feet of floor space. 5.1.2 Communication equipment is installed in the TSC and OSC, and voice transmission and reception are accomplished. 5.1.3 The plant parameters listed in Table Annex V2 H-1, <i>Post Accident Monitoring Values</i> , can be retrieved and displayed in the TSC. 5.1.4 The TSC is located within the protected area, and no major security barriers exist between the TSC and the control room. 5.1.5 The OSC is located adjacent to the passage from the annex building to the control room. 5.1.6 The TSC ventilation system includes a high-efficiency particulate air (HEPA) and charcoal filter, and radiation monitors are installed.

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			5.1.7 A reliable and backup electrical power supply is available for the TSC.
	5.2 The licensee has established an emergency operations facility (EOF). [H.2]	5.2 An inspection of the EOF will be performed, including a test of the capabilities.	5.2.1 Voice transmission and reception are accomplished between the EOF and the control room. 5.2.2 The plant parameters listed in Table Annex V2 H-1, Post Accident Monitoring Values, can be retrieved and displayed in the EOF.
6.0 Accident Assessment			
10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	6.1 The means exists to provide initial and continuing radiological assessment throughout the course of an accident. [I.2]	6.1 A test of the emergency plan will be conducted by performing a drill to verify the capability to perform accident assessment.	6.1 Using selected monitoring parameters listed in Table Annex V2 H-1 of the VEGP emergency plan, simulated degraded plant conditions are assessed and protective actions are initiated in accordance with the following criteria: A. Accident Assessment and Classification 1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the drill. B. Radiological Assessment and Control 1. Demonstrate the ability to obtain onsite radiological surveys and samples. 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>3. Demonstrate the ability to assemble and deploy field monitoring teams <u>within 60 minutes from the decision to do so.</u></p> <p>4. Demonstrate the ability to satisfactorily collect and disseminate field team data.</p> <p>5. Demonstrate the ability to develop dose projections.</p> <p>6. Demonstrate the ability to make the decision whether to issue <u>radio-protective drugs (KI)</u> to emergency workers.</p> <p>7. Demonstrate the ability to develop appropriate protective action recommendations (<u>PARs</u>) and notify appropriate authorities <u>within 15 minutes of development.</u></p>
	<p>6.2 The means <u>exists</u> to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3]</p>	<p>6.2 An <u>analysis</u> of the <u>emergency implementing</u> procedures (<u>EIPs</u>) and the <u>Offsite Dose Calculation Manual (ODCM)</u> will be completed to verify ability to determine the source <u>term and</u> magnitude of releases.</p>	<p>6.2 The <u>EIPs</u> and ODCM correctly calculate source terms and magnitudes of postulated releases.</p>
	<p>6.3 The means <u>exists</u> to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]</p>	<p>6.3 An <u>analysis</u> of the <u>emergency implementing</u> procedures (<u>EIPs</u>) and the <u>Offsite Dose Calculation Manual (ODCM)</u> will be completed to verify <u>that</u> the relationship between effluent monitor <u>readings,</u> and offsite exposures and <u>contaminations,</u> has been established.</p>	<p>6.3 The <u>EIPs</u> and ODCM calculate the relationship between effluent monitor readings, and offsite exposures and contamination.</p>
	<p>6.4 The means <u>exists</u> to acquire and evaluate meteorological information. [I.5]</p>	<p>6.4 A test will be performed to verify the ability to access meteorological information in the TSC and control</p>	<p>6.4 The following parameters are displayed in the TSC and control room:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
		room.	<ul style="list-style-type: none"> • Wind speed (at 10 and 60 meters) • Wind direction (at 10 and 60 meters) • Standard deviation of horizontal wind direction (at 10 meters) • Vertical temperature difference (between 10 and 60 meters) • Ambient temperature (at 10 meters) • Dew-point temperature (at 10 meters) • Precipitation (at the tower base)
	6.5 The means <u>exists</u> to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8]	6.5 A test will be performed of the capabilities.	6.5 A drill or exercise is conducted demonstrating the capability for making rapid assessment of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, in accordance with emergency implementing procedures (EIPs).
	6.6 The means <u>exists</u> to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]	6.6 An analysis of the methodology contained in the <u>emergency implementing procedures (EIPs)</u> for estimating dose <u>and</u> preparing protective action recommendations (PARs); and in the <u>Offsite Dose Calculation Manual (ODCM)</u> to verify the ability to estimate an integrated dose from projected and actual dose rates.	6.6 The EIPs and ODCM estimate an integrated dose.
7.0 Protective Response			
10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the	7.1 The means exists to warn and advise onsite individuals of an emergency, including those in areas controlled by the <u>operator</u> , including: <ul style="list-style-type: none"> • Employees not having emergency assignments • Visitors • Contractor and construction 	7.1 A test of the onsite warning and communication capability <u>emergency implementing procedures (EIPs)</u> , including protective action guidelines, <u>assembly and accountability</u> , and site dismissal will be performed during a drill.	7.1 The organization will satisfy the following objectives during the drill: <ol style="list-style-type: none"> 1. Demonstrate the capability to direct and control emergency operations. 2. Demonstrate the ability to transfer emergency direction from the <u>control room</u> (simulator) to the <u>technical support</u>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
<p>prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.</p>	<p>personnel</p> <ul style="list-style-type: none"> Other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area <p>[J.1]</p>		<p>center (TSC), and from the TSC to the emergency operations facility (EOF).</p> <p>3. Demonstrate the ability to prepare for around-the-clock staffing requirements.</p> <p>4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of the start of an emergency.</p> <p>5. Demonstrate the ability to perform site dismissal.</p>
<p>8.0 Exercises and Drills</p>			
<p>10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.</p>	<p>8.1 The licensee conducts a full participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ, and each State within the ingestion pathway EPZ.</p> <p>[N.1]</p>	<p>8.1 A full participation exercise (test) will be conducted within the specified time periods of 10 CFR Part 50, Appendix E.</p>	<p>8.1.1 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E; onsite exercise objectives listed below have been met; and there are no uncorrected onsite exercise deficiencies.</p> <p><i>A. Accident Assessment and Classification</i></p> <p>1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise</p> <p>Standard Criteria:</p> <p>a. Determine the correct highest emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified.</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p data-bbox="1478 326 1640 350">B. Notifications</p> <p data-bbox="1478 380 1906 459">1. Demonstrate the ability to alert, <u>notify</u>, and mobilize site emergency response personnel.</p> <p data-bbox="1478 488 1667 513">Standard Criteria:</p> <p data-bbox="1478 542 1902 651">a. Complete the designated checklist and perform the announcement within 5 minutes of the initial event classification for an Alert or higher.</p> <p data-bbox="1478 680 1902 760">b. Activate the emergency recall system within 5 minutes of the initial event classification for an Alert or higher.</p> <p data-bbox="1478 789 1892 927">2. Demonstrate the ability to <u>notify responsible State and local governmental agencies within 15 minutes, and the NRC within 60 minutes, after declaring an emergency.</u></p> <p data-bbox="1478 956 1667 980">Standard Criteria:</p> <p data-bbox="1478 1010 1906 1148">a. Transmit information using the designated <u>checklist</u>, in accordance with approved <u>emergency implementing procedures (EIPs)</u>, within 15 minutes of event classification.</p> <p data-bbox="1478 1177 1906 1315">b. Transmit information using the designated <u>checklist</u>, in accordance with approved <u>EIPs</u>, within 60 minutes of last transmittal for a follow-up notification to <u>State and local authorities.</u></p> <p data-bbox="1478 1344 1824 1369">c. Transmit information using the</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>designated checklist within 60 minutes of event classification for an initial notification of the NRC.</p> <p>3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.</p> <p>Standard Criteria:</p> <p>a. Initiate notification of onsite individuals (via plant page or telephone), utilizing the designated <u>checklist</u>, within 15 minutes of notification.</p> <p>4. Demonstrate the capability of the Prompt Notification System (<u>PNS</u>), for the <u>public</u>, to operate properly when required.</p> <p>Standard Criteria:</p> <p>a. 90% of the sirens operate <u>properly</u>, as indicated by the Whelen feedback system.</p> <p>b. A NOAA <u>tone alert radio</u> is activated.</p> <p><i>C. Emergency Response</i></p> <p>1. Demonstrate the capability to direct and control emergency operations.</p> <p>Standard Criteria:</p> <p>a. <u>Command and control is demonstrated by the control room in the early phase of the emergency, and by the technical support center (TSC)</u></p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>within 60 minutes from TSC activation.</u></p> <p>2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC <u>within 30 minutes from activation</u>, and from the TSC to the emergency operations facility (EOF) <u>within 60 minutes from activation.</u></p> <p>Standard Criteria:</p> <p>a. <u>Evaluation</u> of briefings that were conducted prior to turnover responsibility. Personnel document transfer of duties.</p> <p>3. Demonstrate the ability to prepare for around-the-clock staffing requirements.</p> <p>Standard Criteria:</p> <p>a. Complete 24-hour staff assignments.</p> <p>4. Demonstrate the ability to perform assembly and accountability <u>for all onsite individuals within 30 minutes of the start of the emergency.</u></p> <p>Standard Criteria:</p> <p>a. <u>Protected area</u> personnel assembly and accountability completed within 30 minutes of the Alert or higher emergency declaration via public address announcement.</p> <p><i>D. <u>Emergency Response Facilities</u></i></p> <p>1. <u>Demonstrate activation of the</u></p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>operational support center (OSC), and full functional operation of the TSC and EOF within 60 minutes from activation.</u></p> <p>Standard Criteria:</p> <p>a. The TSC, OSC, and EOF are activated within about <u>60 minutes</u> of the initial notification.</p> <p>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, EOF, and <u>emergency news center (ENC)</u>, as appropriate.</p> <p>Standard Criteria:</p> <p>a. <u>Evaluation</u> of the adequacy of the emergency equipment in the emergency response facilities, <u>including availability and general consistency with emergency implementing procedures (EIPs).</u></p> <p>b. The Security Shift Captain implements and follows applicable emergency implementing procedures (EIPs).</p> <p>c. The Health Physics Supervisor (TSC) implements the designated checklist <u>if</u> an onsite/offsite release has occurred.</p> <p>3. Demonstrate the adequacy of communications for all emergency support resources.</p> <p>Standard Criteria:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. Emergency response communications listed in emergency implementing procedures (<u>EIPs</u>) are available and operational.</p> <p>b. Communications systems are tested in accordance with TSC, OSC, and EOF activation checklists.</p> <p>c. <u>Emergency response facility</u> personnel are able to operate all specified communication systems.</p> <p>d. Clear <u>primary and backup</u> communications links are established and maintained for the duration of the exercise.</p> <p><i>E. Radiological Assessment and Control</i></p> <p>1. Demonstrate the ability to obtain onsite radiological surveys and samples.</p> <p>Standard Criteria:</p> <p>a. HP Technicians demonstrate the ability to obtain appropriate instruments (range and type) and take surveys.</p> <p>b. Airborne samples are taken when the conditions indicate the need for the information.</p> <p>2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Standard Criteria:</p> <p>a. Emergency workers are issued <u>self-reading</u> dosimeters when radiation levels <u>require</u>, and exposures are controlled to <u>10 CFR Part 20</u> limits (unless the Emergency Director authorizes emergency limits).</p> <p>b. Exposure records are available, either from the ALARA computer or a hard copy dose report.</p> <p>c. Emergency workers include Security and personnel within all emergency facilities.</p> <p>3. Demonstrate the ability to assemble and deploy field monitoring teams <u>within 60 minutes from the decision to do so</u>.</p> <p>Standard Criteria:</p> <p>a. One field monitoring team is ready to be deployed <u>within 60 minutes</u> of being requested from the OSC, and no later than 90 minutes from the declaration of an Alert or higher emergency.</p> <p>4. Demonstrate the ability to satisfactorily collect and disseminate field team data.</p> <p>Standard Criteria:</p> <p>a. Field <u>team</u> data to be collected is dose rate or <u>counts per minute (cpm)</u> from the plume, both open and closed window, and air sample (<u>gross/net cpm</u>)</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>for particulate and iodine, if applicable.</p> <p>b. Satisfactory <u>data</u> dissemination is from the field team to the Dose Assessment <u>Supervisor</u>, via the field team communicator and field team coordinator.</p> <p>5. Demonstrate the ability to develop dose projections.</p> <p>Standard Criteria:</p> <p>a. The on-shift HP/Chemistry Shared <u>Foreman or Dose Assessment Supervisor</u> performs <u>timely and accurate dose projections</u>, in accordance with emergency implementing procedures (<u>EIPs</u>).</p> <p>6. Demonstrate the ability to make the decision whether to issue <u>radioprotective drugs (KI)</u> to emergency workers.</p> <p>Standard Criteria:</p> <p>a. KI is taken (simulated) if the estimated dose to the thyroid will exceed <u>25 rem committed dose equivalent (CDE)</u>.</p> <p>7. Demonstrate the ability to develop appropriate <u>protective action recommendations (PARs)</u>, and notify <u>appropriate authorities within 15 minutes of development</u>.</p> <p>Standard Criteria:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. <u>Total effective dose equivalent (TEDE)</u> and CDE dose projections from the dose assessment computer code are compared to emergency implementing procedures (<u>EIPs</u>).</p> <p>b. PARs are developed within 15 minutes of data availability.</p> <p>c. PARs are transmitted via voice or fax within 15 minutes of event classification and/or PAR development.</p> <p><i>F. Public Information</i></p> <p>1. Demonstrate the capability to develop and disseminate clear, <u>accurate</u>, and timely information to the news media, <u>in accordance with EIPs</u>.</p> <p>Standard Criteria:</p> <p>a. Media information (e.g., press releases, press briefings, electronic media) are made available within 60 minutes of notification of the on-call media representative.</p> <p>b. Follow-up information is <u>provided</u>, at a <u>minimum</u>, within 60 minutes of an emergency classification or <u>PAR</u> change.</p> <p>2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion.</p> <p>Standard Criteria:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. Calls are answered in a timely manner with the correct information, <u>in accordance with EIPs</u>.</p> <p>b. Calls are returned or <u>forwarded</u>, as <u>appropriate</u>, to demonstrate responsiveness.</p> <p>c. Rumors are identified and addressed.</p> <p><i>G. Evaluation</i></p> <p>1. Demonstrate the ability to conduct a post-exercise <u>critique</u>, to determine areas requiring improvement and corrective action.</p> <p>Standard Criteria:</p> <p>a. An exercise <u>time line is developed</u>, followed by an evaluation of the objectives.</p> <p>b. Significant problems in achieving the objectives are <u>discussed</u>, to ensure understanding of <u>why objectives were not fully achieved</u>.</p> <p>c. Recommendations for improvement in non-objective areas should be discussed.</p> <p>8.1.2 Onsite emergency response personnel are mobilized in sufficient number to fill the emergency positions identified <u>in emergency plan Section B, VEGP Emergency Organization</u>; and they successfully perform their assigned</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>responsibilities</u>, as outlined in <u>Acceptance Criterion 8.1.1.D, Emergency Response Facilities</u>.</p> <p>8.1.3 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E; offsite exercise objectives have been met; and there are no uncorrected offsite <u>deficiencies</u>, or a license condition requires offsite deficiencies to be corrected prior to operation above 5% of rated power.</p>
<p>9.0 Implementing Procedures</p> <p>10 CFR Part 50, Appendix E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant's detailed implementing procedures for its emergency plan shall be submitted to the Commission.</p>	<p>9.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</p>	<p>9.1 An inspection of the submittal letter will be performed.</p>	<p>9.1 The licensee has submitted detailed <u>emergency</u> implementing procedures (<u>EIPs</u>) for the onsite emergency plan no less than 180 days prior to fuel load.</p>

13.3.6 VEGP Unit 4 ITAAC

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Emergency Classification System			
10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	1.1 An emergency classification and emergency action level (<u>EAL</u>) scheme must be established by the licensee. The specific instruments, parameters, or equipment status shall be shown for establishing each emergency class, in the in-plant emergency procedures. The plan shall identify the parameter values and equipment status for each emergency class. [D.1]	<p>1.1.1 An inspection of the control room will be performed to verify that it has the displays for retrieving system and effluent parameters specified in Table Annex V2 D.2-1, <i>Hot Initiating Condition Matrix, Modes 1, 2, 3, and 4</i>; Table V2 D.2-2, <i>Cold Initiating Condition Matrix, Modes 5, 6, and De-fueled</i>; and emergency implementing procedures (<u>EIPs</u>).</p> <p>1.1.2 An analysis of the EAL technical bases will be performed to verify as-built, site-specific implementation of the <u>EAL scheme</u>.</p>	<p>1.1.1 The parameters specified in Table Annex V2 H-1, <i>Post Accident Monitoring Variables</i>, are retrievable in the control room. The ranges encompass the values specified in the emergency classification and EAL <u>scheme</u>.</p> <p>1.1.2 The EAL scheme is developed consistent with Regulatory Guide 1.101, <i>Emergency Planning and Preparedness for Nuclear Power Reactors</i>.</p>
3.0 Emergency Communications			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	3.1 The means exists for communications between the control room, OSC, TSC, and EOF. [F.1.d]	3.1 A test will be performed of the capabilities.	3.1 Communications are established between the control room, OSC, TSC, and EOF. <u>Communications</u> are established between the control room, Georgia Emergency Management Agency (GEMA) Operation Center; Burke County Emergency Operations Center (EOC); SRS Operations Center; South Carolina Warning Point; and Aiken, Allendale, and Barnwell County Dispatchers.
	3.2 The means exists for communications from the control room to the NRC headquarters and regional office EOC. [F.1.f]	3.2 A test will be performed of the capabilities.	3.2 Communications are established <u>from</u> the control room, TSC, and EOF, <u>to the</u> NRC headquarters and regional office <u>EOCs</u> , and an access port for the <u>Emergency Response Data System (ERDS)</u> is provided.

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 The licensee has established <u>an</u> onsite operations support center (OSC). [H.1]	5.1 An inspection of the as-built OSC will be performed, including a test of the capabilities.	<p>5.1.1 Communication equipment is installed in the OSC, and voice transmission and reception are accomplished.</p> <p>5.1.2 The plant parameters listed in Table Annex V2 H-1, <i>Post Accident Monitoring Values</i>, can be retrieved and displayed in the <u>TSC</u>.</p> <p>5.1.3 The OSC is located adjacent to the passage from the annex building to the control room.</p>
	5.2 The licensee has established an emergency operations facility (EOF). [H.2]	5.2 An inspection of the EOF will be performed, including a test of the capabilities.	<p><u>5.2.1</u> Voice transmission and reception are accomplished between the EOF and the control room.</p> <p><u>5.2.2</u> The plant parameters listed in Table Annex V2 H-1, <i>Post Accident Monitoring Values</i>, can be retrieved and displayed in the EOF.</p>
6.0 Accident Assessment			
10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	6.1 The means <u>exists</u> to provide initial and continuing radiological assessment throughout the course of an accident. [I.2]	6.1 A test of the emergency plan will be conducted by performing a drill to verify the capability to perform accident assessment.	<p>6.1 Using selected monitoring parameters listed in Table Annex V2 H-1 of the VEGP emergency plan, simulated degraded plant conditions are assessed and protective actions are initiated in accordance with the following criteria:</p> <p>A. Accident Assessment and Classification</p> <p>1. Demonstrate the ability to identify initiating conditions, determine emergency action <u>level</u> (EAL)</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>parameters</u>, and correctly classify the emergency throughout the drill.</p> <p>B. Radiological Assessment and Control</p> <ol style="list-style-type: none"> 1. Demonstrate the ability to obtain onsite radiological surveys and samples. 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers. 3. Demonstrate the ability to assemble and deploy field monitoring teams <u>within 60 minutes from the decision to do so</u>. 4. Demonstrate the ability to satisfactorily collect and disseminate field team data. 5. Demonstrate the ability to develop dose projections. 6. Demonstrate the ability to make the decision whether to issue <u>radio-protective drugs (KI)</u> to emergency workers. 7. Demonstrate the ability to develop appropriate protective action recommendations (PARs), and <u>notify appropriate authorities within 15 minutes of development</u>.
	6.2 The means <u>exists</u> to determine the source term of releases of radioactive material within plant systems, and the	6.2 An analysis of the <u>emergency implementing</u> procedures (EIPs) and the Offsite Dose Calculation Manual	6.2 The EIPs and ODCM correctly calculate source terms and magnitudes of postulated releases.

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
	magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3]	(ODCM) will be completed to verify ability to determine the <u>source term</u> and magnitude of releases.	
	6.3 The means <u>exists</u> to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]	6.3 An analysis of the <u>emergency implementing</u> procedures (EIPs) and the Offsite Dose Calculation Manual (ODCM) will be completed to verify that the relationship between effluent monitor <u>readings</u> , and offsite exposures and contaminations, has been established.	6.3 The EIPs and ODCM calculate the relationship between effluent monitor <u>readings</u> , and offsite exposures and contamination.
	6.4 The means exists to acquire and evaluate meteorological information. [I.5]	6.4 A test will be performed to verify the ability to access meteorological information in the TSC and control room.	6.4 The following parameters are displayed in the TSC and control room: <ul style="list-style-type: none"> • Wind speed (at 10 and 60 meters) • Wind direction (at 10 and 60 meters) • Standard deviation of horizontal wind direction (at 10 meters) • Vertical temperature difference (between 10 and 60 meters) • Ambient temperature (at 10 meters) • Dew-point temperature (at 10 meters) • Precipitation (at the tower base)
	6.5 The means <u>exists</u> to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8]	6.5 A test will be performed of the capabilities.	6.5 A drill or exercise is conducted demonstrating the capability for making rapid assessment of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.
	<u>6.6</u> The means <u>exists</u> to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]	<u>6.6</u> An analysis of the methodology contained in the <u>emergency implementing</u> procedures (EIPs) for estimating dose <u>and</u> preparing protective action recommendations (PARs); and in the <u>Offsite Dose</u>	<u>6.6</u> The EIPs and ODCM estimate an integrated dose.

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
		Calculation Manual (ODCM) to verify the ability to estimate an integrated dose from projected and actual dose rates.	
<p>7.0 Protective Response</p> <p>10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.</p>	<p>7.1 The means exists to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:</p> <ul style="list-style-type: none"> • Employees not having emergency assignments • Visitors • Contractor and construction personnel • Other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area <p>[J.1]</p>	<p>7.1 A test of the onsite warning and communication capability <u>emergency implementing procedures (EIPs)</u>, including protective action guidelines, <u>assembly</u> and accountability, and site dismissal will be performed during a drill.</p>	<p>7.1 The organization will satisfy the following objectives during the drill:</p> <ol style="list-style-type: none"> 1. Demonstrate the capability to direct and control emergency operations. 2. Demonstrate the ability to transfer emergency direction from the <u>control room (simulator)</u> to the <u>technical support center (TSC)</u>, and from the TSC to the <u>emergency operations facility (EOF)</u>. 3. Demonstrate the ability to prepare for <u>around-the-clock</u> staffing requirements. 4. Demonstrate the ability to perform assembly and accountability <u>for all onsite individuals within 30 minutes of the start of an emergency</u>. 5. Demonstrate the ability to perform site dismissal.
<p>8.0 Exercises and Drills</p> <p>10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.</p>	<p>8.1 The licensee conducts a limited participation exercise to evaluate portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ that have not been tested in a previous exercise.</p> <p>[N.1]</p>	<p>8.1 A limited participation exercise (test) will be conducted within the specified <u>time</u> periods of 10 CFR Part 50, Appendix E.</p>	<p>8.1.1 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E; onsite exercise objectives listed below have been <u>met</u>; and there are no uncorrected onsite exercise deficiencies.</p> <p><i>A. Accident Assessment and Classification</i></p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>1. Demonstrate the ability to identify initiating conditions, determine emergency action <u>level</u> (EAL) <u>parameters</u>, and correctly classify the emergency throughout the exercise</p> <p>Standard Criteria:</p> <p>a. Determine the correct highest emergency classification level based on events which were in progress, considering past events and their impact on the current <u>conditions</u>, within 15 minutes from the time the initiating condition(s) or EAL is identified.</p> <p><i>B. Notifications</i></p> <p>1. Demonstrate the ability to alert, <u>notify</u>, and mobilize site emergency response personnel.</p> <p>Standard Criteria:</p> <p>a. Complete the designated checklist and perform the announcement within 5 minutes of the initial event classification for an Alert or higher.</p> <p>b. Activate the emergency recall system within 5 minutes of the initial event classification for an Alert or higher.</p> <p>2. <u>Demonstrate the ability to notify responsible State and local governmental agencies within 15 minutes, and the NRC within 60 minutes, after declaring an emergency.</u></p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Standard Criteria:</p> <p>a. <u>Transmit information using the designated checklist, in accordance with approved emergency implementing procedures (EIPs), within 15 minutes of event classification.</u></p> <p>b. <u>Transmit information using the designated checklist, in accordance with approved EIPs, within 60 minutes of last transmittal for a follow-up notification to State and local authorities.</u></p> <p>c. Transmit information using the designated checklist within 60 minutes of event classification for an initial notification of the NRC.</p> <p>3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.</p> <p>Standard Criteria:</p> <p>a. <u>Initiate notification of onsite individuals (via plant page or telephone), utilizing the designated checklist, within 15 minutes of notification.</u></p> <p><i>C. Emergency Response</i></p> <p>1. Demonstrate the capability to direct and control emergency operations.</p> <p>Standard Criteria:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. <u>Command and control is demonstrated by the control room in the early phase of the emergency, and by the TSC within 60 minutes from activation.</u></p> <p>2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC <u>within 60 minutes from activation.</u></p> <p>Standard Criteria:</p> <p>a. Subjective evaluation of briefings that were conducted prior to turnover responsibility. Personnel document transfer of duties.</p> <p>3. Demonstrate the ability to prepare for <u>around-the-clock</u> staffing requirements.</p> <p>Standard Criteria:</p> <p>a. Complete 24-hour staff assignments.</p> <p>4. Demonstrate the ability to perform assembly and accountability <u>for all onsite individuals within 30 minutes of the start of an emergency.</u></p> <p>Standard Criteria:</p> <p>a. <u>Protected area</u> personnel assembly and accountability completed within 30 minutes of the Alert or higher emergency declaration via public address announcement.</p> <p>D. <u>Emergency Response Facilities</u></p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>1. Demonstrate timely activation of the OSC.</p> <p>Standard Criteria:</p> <p>a. The OSC <u>is activated</u> within about <u>60 minutes</u> of the initial notification.</p> <p>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the OSC, <u>as appropriate</u>.</p> <p>Standard Criteria:</p> <p>a. <u>Evaluation</u> of the adequacy of the emergency equipment in the emergency response facilities, <u>including availability and general consistency with EIPs</u>.</p> <p>b. The Security Shift Captain implements and follows applicable emergency implementing procedures (<u>EIPs</u>).</p> <p>c. The Health Physics Supervisor (TSC) implements the designated checklist <u>if</u> an onsite/offsite release has occurred.</p> <p>3. Demonstrate the adequacy of communications for all emergency support resources.</p> <p>Standard Criteria:</p> <p>a. Emergency response communications listed in emergency</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>implementing procedures (<u>EIPs</u>) are available and operational.</p> <p>b. Communications systems are tested in accordance with OSC activation checklist.</p> <p>c. Emergency response facility personnel are able to operate all specified communication systems.</p> <p>d. Clear <u>primary and backup</u> communications links are established and maintained for the duration of the exercise.</p> <p><i>E. Radiological Assessment and Control</i></p> <p>1. Demonstrate the ability to obtain onsite radiological surveys and samples.</p> <p>Standard Criteria:</p> <p>a. HP Technicians demonstrate the ability to obtain appropriate instruments (range and type) and take surveys.</p> <p>b. Airborne samples are taken when the conditions indicate the need for the information.</p> <p>2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</p> <p>Standard Criteria:</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. Emergency workers are issued <u>self-reading</u> dosimeters when radiation levels <u>require</u>, and exposures are controlled to <u>10 CFR Part 20</u> limits (unless the emergency director authorizes emergency <u>limits</u>).</p> <p>b. Exposure records are available, either from the ALARA computer or a hard copy dose report.</p> <p>c. Emergency workers include Security and personnel within all emergency facilities.</p> <p>3. Demonstrate the ability to assemble and deploy field monitoring teams <u>within 60 minutes from the decision to do so</u>.</p> <p>Standard Criteria:</p> <p>a. One field monitoring team is ready to be deployed within 60 minutes of being requested from the OSC, and no later than 90 minutes from the declaration of an Alert or higher emergency.</p> <p>4. Demonstrate the ability to satisfactorily collect and disseminate field team data.</p> <p>Standard Criteria:</p> <p>a. Field <u>team</u> data to be collected is dose rate or <u>counts per minute (cpm)</u> from the plume, both open and closed window, and air sample (<u>gross/net cpm</u>) for particulate and iodine, if applicable.</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>b. Satisfactory <u>data</u> dissemination is from the field team to the Dose Assessment <u>Supervisor</u>, via the field team communicator and field team coordinator.</p> <p>5. Demonstrate the ability to develop dose projections.</p> <p>Standard Criteria:</p> <p>a. The on-shift HP/Chemistry Shared Foreman or Dose Assessment Supervisor performs <u>timely and accurate dose projections</u>, in accordance with emergency implementing procedures (<u>EIPs</u>).</p> <p>7. Demonstrate the ability to develop appropriate <u>protective action recommendations (PARs)</u>, and <u>notify appropriate authorities within 15 minutes of development</u>.</p> <p>Standard Criteria:</p> <p>a. <u>Total effective dose equivalent (TEDE)</u> and CDE dose projections from the dose assessment computer code are compared to emergency implementing procedures (<u>EIPs</u>).</p> <p>b. PARs are developed within 15 minutes of data availability.</p> <p>c. PARs are transmitted via voice or fax within 15 minutes of event classification and/or PAR development.</p>

Planning Standard	EP Program Elements (From NUREG-0654/FEMA-REP-1)	Inspections, Tests, Analyses	Acceptance Criteria
			<p>8.1.2 Onsite emergency response personnel are mobilized in sufficient number to fill the emergency positions identified in emergency plan Section B, <i>VEGP Emergency Organization</i>; and they successfully perform their assigned responsibilities, as outlined in <u>Acceptance Criterion 8.1.1.D, Emergency Response Facilities</u>.</p> <p>8.1.3 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E; offsite exercise objectives have been met; and there are no uncorrected offsite deficiencies, or a license condition requires offsite deficiencies to be corrected prior to operation above 5% of rated power.</p>
<p>9.0 Implementing Procedures</p> <p>10 CFR Part 50, Appendix E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant's detailed implementing procedures for its emergency plans shall be submitted to the Commission.</p>	<p>9.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</p>	<p>9.1 An inspection of the submittal letter will be performed.</p>	<p>9.1 The licensee has submitted detailed <u>emergency</u> implementing procedures (<u>EIPs</u>) for the onsite emergency plan no less than 180 days prior to fuel load.</p>