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January 25, 2010

ATTN: Document Control Desk U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

BELL BEND NUCLEAR POWER PLANTRESPONSE TO RAI No. 70BNP-2010-008Docket No. 52-039

References: 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 70 (RAI No. 70) – NSIR-DPR-LB- 3576, email dated December 3, 2009

The purpose of this letter is to respond to the request for additional information (RAI) identified in the referenced NRC correspondence to PPL Bell Bend, LLC. This RAI addresses Emergency Planning, as discussed in Part 5 of the Bell Bend Nuclear Power Plant Combined License Application (COLA).

The enclosure provides our responses to RAI No. 70, Questions 09.13.03-15 through 09.13.03-17; 09.13.03-19 through 09.13.03-25; 09.13.03-28; 09.13.03-29; and 09.13.03-31 through 09.13.03-33, which include revised COLA content. This future revision of the COLA is the only new regulatory commitment.

Should you have questions or need additional information, please contact the undersigned at 570.802.8102.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 25, 2010

Respectfully,

Rocco R. Sdarro

RRS/kw

Enclosure: As stated

cc: (w/o Enclosures)

Mr. Samuel J. Collins Regional Administrator U.S. Nuclear Regulatory Commission Region I 475 Allendale Road King of Prussia, PA 19406-1415

Mr. Michael Canova Project Manager U.S. Nuclear Regulatory Commission 11545 Rockville Pike, Mail Stop T6-E55M Rockville, MD 20852

Response to NRC Request for Additional Information, RAI No. 70 Questions 09.13.03-15 through 09.13.03-17; 09.13.03-19 through 09.13.03-25; 09.13.03-28; 09.13.03-29; and 09.13.03-31 through 09.13.03-33

Bell Bend Nuclear Power Plant

Question 13.03-15

- A-1 Figure A-2, "Agency Response Organization Interrelationships," provides a block diagram of responding organizations, but the diagram does not include the EPA, Columbia County Department of Public Safety, and Luzerne County Emergency Management Agency which are described in the section. The Department of Health, State Police, Agriculture/Fish & Wildlife, hospitals, fire department, medical support, municipal, and local law enforcement appear in Figure A-2, but are not discussed.
 - A. Discuss whether the EPA should be shown in Figure A-2. Revise Figure A-2 as appropriate.
 - B. Discuss the roles and responsibilities of State agencies in Section II.A.1.a.2. Revise the Emergency Plan as appropriate.
 - C. Identify the Columbia County Department of Public Safety and Luzerne County Emergency Management Agency in Figure A-2 of the Emergency Plan.
 - D. Identify and provide details on the hospitals, fire departments, medical support, municipal and local law enforcement in Section II.A.1.a. of the Emergency Plan.
- A-2 Section II.A.1.a.2, "Commonwealth Agencies," describes the functional response actions for PEMA, but the title is needed of the responsible individual in charge of emergency response at PEMA. The Department of Environmental Protection / Bureau of Radiological Protection (DEP/BRP) is described, but the title of the specific individual at DEP/BRP in charge of emergency response is not identified.
 - A. Identify the individual, by title or position, who is responsible for emergency response for PEMA. Include this information in the Emergency Plan.
 - B. Identify the individual, by title or position, who is responsible for emergency response at DEP/BRP. Include this information in the Emergency Plan.
- A-3 The letters of agreement in Appendix 3, "Letters of Agreement (Certification Letters)," do not address the specific guidance topics, such as concept of operations, emergency measures, implementation criteria, or information exchange arrangements. Provide complete copies of letters of agreement with signature pages for organizations identified in Appendix 3 to show that these agreements identify emergency measures to be provided, implementation criteria, and information exchange arrangements.
- A.4 Part II, Chapter A, section 2) of the BBNPP EP states that the Commonwealth has developed the Pennsylvania Emergency Plan. Section A.2.a states that Pennsylvania has developed a "Radiological Emergency Response Plan." The COL applicant submitted portions of the "Pennsylvania Emergency Operations Plan" with its application. Please identify which title is the correct title of the state/Commonwealth plan.
- A.-5 Section 1.b. sub paragraph e) is titled "Essential elements of the 50-mile Plume Exposure emergency plans." Clarify if this paragraph refers to the 10 mile Plume Exposure EPZ or to the 50 mile Ingestion Exposure pathway EPZ.
- A-6 In section 1.a.2 the BBNPP EP states that the Department of Environmental Protection/Bureau of Radiological Protection (DEP/BRP) operates their own EOC however there is no discussion about the role of this EOC. Provide information regarding the role of and any interfaces between the onsite EOF and the DEP/BRP EOC.

13.03-15 Response

- A-1.A Figure A-2 will be revised to include an organizational block for the EPA in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- A-1.B Any Commonwealth department or division can be called on to assist during a declared emergency. BBNPP Emergency Plan Section A.1.a.2 provides a discussion of the roles and responsibilities for the lead Commonwealth agencies, but intentionally leaves out the roles and responsibilities of the support groups (which are fully described in the Commonwealth's emergency plan and procedures). Section A.1.a.2 and Figure A-2 will be revised to designate any group outside the lead Commonwealth agencies as "Other Commonwealth Agencies" in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- A-1.C Figure A-2 will be revised to include an organizational block for Columbia and Luzerne Counties in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- A-1.D BBNPP Emergency Plan Section A.1.a.3 states that the municipalities within the EPZ which participate in the planning effort are listed in their respective county emergency plans. Details regarding the municipal organizations can be found within the appropriate county documents.

Assistance from hospital and medical support, fire departments and local law enforcement when utilized in support of the lead offsite agencies (incident command) are assigned action or support responsibilities under the county plans. Section A.1.a.3 will be revised to discuss support from any group outside the lead local agencies in a future revision to the COLA Part 5 BBNPP Emergency Plan.

Supplemental emergency assistance from hospital and medical support, fire departments and local law enforcement, when called upon directly by the station ERO, is described in BBNPP Emergency Plan Section B.9 and Appendix 3. Appendix 3 provides the letters of agreement from hospitals, ambulance services, fire departments, and the Pennsylvania State police. The list is as follows:

- 1. Berwick Ambulance Association
- 2. Berwick Hospital Center
- 3. East Berwick Hose Company No. 2
- 4. The Geisinger Medical Center
- 5. Hobbie Volunteer Fire Company
- 6. Hunlock Creek Volunteer Ambulance Association
- 7. Mocanaqua Volunteer Fire Company
- 8. Nescopeck Community Ambulance Association
- 9. Pond Hill-Lily Lake Ambulance Association
- 10. PA State Police Troop P Headquarters at Wyoming
- 11. Reliance Fire Company No. 1
- 12. Salem Township Fire Company #1
- 13. Shickshinny Volunteer Ambulance
- 14. Shickshinny Volunteer Fire Company

- A-2.A The Director, Pennsylvania Emergency Management Agency is the position in charge of emergency response at PEMA. This specific information is contained in the agency's plan and procedures (not the utility plan) in accordance with NUREG-0654.
- A-2.B The Director, Pennsylvania Bureau of Radiation Protection is the position in charge of emergency response at DEP/BRP. This specific information is contained in the agency's plan and procedures (not the utility plan) in accordance with NUREG-0654.
- A.3 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, will be supplemented to acquire the final and complete Letters of Agreement (LOA) developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The LOA will identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and will specify the arrangements for exchange of information. Refer to Attachment 1 of this enclosure for the revised ITAAC.
- A-4 Since the submittal of the application, PEMA has been in the process of revising their emergency plan title from "Commonwealth of Pennsylvania Emergency Operations Plan, Annex E, Radiological Emergency Response to Nuclear Power Plant Incidents" to "Commonwealth of Pennsylvania, Nuclear/Radiological Plan, Annex A, Nuclear Power Plant Incidents." Once the revision is complete, all BBNPP Emergency Plan references to the Commonwealth plan will be updated.
- A-5 BBNPP Emergency Plan Section A.1.a.2.b is intended to describe the coordination process for bringing in Commonwealth response resources for support actions, and applies to either the 10- or 50-mile planning zones. The "50-Mile Plume Exposure" portion of the title of this sub-section was insufficiently clear and will be revised for clarification in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- A-6 The role of the DEP/BRP EOC is defined by the department's list of functions provided directly above the bullet stating that they operate an EOC. The DEP/BRP receives radiological conditions information directly from the licensee's ERO. The DEP/BRP makes recommendations to PEMA and provides a DEP/BRP liaison to the EOF.

13.03-15 COLA Impact

A-1.A COLA Part 5, Emergency Plan, Part II, Figure A-2, Agency Response Organizational Interrelationships, will be revised to include a block for EPA as shown below in a future COLA revision.



Enforcement

- A-1.B COLA Part 5, Emergency Plan, Part II, Section A.1.a.2 will be revised to add the following in a future COLA revision.
 - Other State Agencies provide assistance, in their respective areas of expertise, as needed. These functions are provided as outlined in the Commonwealth Plan or as directed by Commonwealth leadership during declared events.

Additionally, COLA Part 5, Emergency Plan, Part II, Figure A-2, Agency Response Organizational Interrelationships, will be revised to include a block for Other Commonwealth Agencies as shown above for A-1.A in a future COLA revision.

A-1.D COLA Part 5, Emergency Plan, Part II, Section A.1.a.3 will be revised to add the following in a future COLA revision.

Columbia and Luzerne County officials also provide direction for the local organizations that are assigned action or support responsibilities under their plans (such as hospital and medical support, fire departments and local law enforcement).

Additionally, COLA Part 5, Emergency Plan, Part II, Figure A-2, Agency Response Organizational Interrelationships, will be revised to include specify Columbia and Luzerne Counties as shown above for A-1.A in a future COLA revision.

- A-3 COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- A-5 BBNPP Emergency Plan Section A.1.a.2.b will be re-titled as follows in a in a future COLA revision.

b) <u>Coordination of Offsite Response Resources</u> Essential elements of the 50-Mile Plume Exposure emergency plans:

Question 13.03-16

- B-1 Section II.B.7, "Corporate Emergency Response Organization," states that corporate management personnel are part of the Offsite ERO and the Emergency Public Information Organization, but does not mention headquarters personnel sent to augment the Emergency Onsite Organization. Provide details on headquarters personnel by position and function to be performed who are available to augment the ERO. Include this information in the Emergency Plan.
- B-2 Section II.B.7, "Corporate Emergency Response Organization," states that the applicant will provide necessary company resources to aid the site but does not identify these other employees with special qualifications.

Section II.B.8, "Industry/Private Support Organizations," identifies industry and private support organizations, and Section II.B.9, Supplemental Emergency Assistance to the ERO, refers to agreements with outside support agencies, but does not provide a description of their special qualifications. Provide details on other employees and non-employees and their special qualifications by position and function that may be called upon for assistance during emergencies. Include this information in the Emergency Plan.

- B-3 The final responsibility discussed in Section II.B.5.b for the Environmental Assessment Director and the Radiological Assessment Coordinator, states that release and dose assessment data are provided upon request to Emergency Public Information personnel and the HPN Communicator. Section II.B.5.b, however, states that the HPN Communicator obtains release and dose assessment data from the Radiological Assessment Director and Monitoring Team data from the Environmental Assessment Director. Clarify who is responsible for providing release and dose assessment data to Emergency Public Information personnel and the HPN Communicator - the Environmental Assessment Director, the Radiological Assessment Coordinator, or both. Include this information in the Emergency Plan.
- B-4 Figure B-1c, "Emergency Offsite Organization," shows the Security Coordinator reporting to the Administrative Support Manager; however, the responsibilities of the Security Coordinator are not discussed in the Emergency Offsite Organization. Describe the responsibilities of the Security Coordinator, shown in Figure B-1c, for the Emergency Offsite Organization. Include this information in the Emergency Plan.
- B-5 Section II.B.5.c, "Public Information Emergency Response Organization," describes the positional responsibilities for the Emergency Public Information Center, including the Public Information Liaison, Public Information Director, and Radiological Advisor. Discuss whether Figure B-1d should show the Public Information Liaison, Technical Advisor, or Radiological Advisor positions. Revise Figure B-1d as appropriate.
- B-6 Section II.B.5.c describes the JIC Administrative Manager. Clarify whether the Administrative Support Manager shown in Figure B-1d is the JIC Administrative Manager described in Section II.B.5.c. Include this information in the Emergency Plan.
- B-7 Section B.5.14, "Operations Support Center Director," states that the OSC Director coordinates with the OSC Operations Lead to dispatch Operations personnel; however, the position of OSC Operations Lead is not described in Section B. Clarify whether the "OSC Operations Lead" is the same position as the "OSC Leads" or describe the position and responsibilities of the OSC Operations Lead. Include this information in the Emergency Plan.

- B-8 Table B-1a of the Site Annex identifies the minimum shift staffing for fire fighting per the station fire protection plan. Provide a discussion regarding the specific team make up of the Fire Brigade, including any collateral duties for each team member. Discuss how the Fire Brigade, with on-shift staffing, will be able to perform collateral duties if an emergency situation were to arise that warranted activation of the emergency response organization and the fire brigade simultaneously.
- B-9 Table B-1a of the Site Annex identifies several minimum staffing positions with footnotes indicating that these positions may be performed by shift personnel assigned other functions. For each of the following positions, identify specifically who will be assigned the associated functions and provide a discussion of their respective collateral duties, including their ability to perform multiple roles with potentially competing priorities during an emergency: mechanical maintenance, electrical/instrumentation and control, plant personnel for first aid and rescue, radiation protection personnel.
- B-10 Authorities, responsibilities and duties are discussed for each position of the plant ERO, but there was no discussion related to the use of digital Instrumentation and Controls (I&C) and Information Technology. Provide an explanation of how the ERO staffing levels are adequate to respond to issues related to the use of digital I&C and information technology in the plant, including those in the initial stages of an accident that requires expertise to deal with issues in the I&C service center.

13.03-16 Response

- B-1 BBNPP Emergency Plan Section B.7 states that corporate personnel are primarily trained and qualified to fill the offsite ERO (EOF) and emergency public information organization (JIC) positions. Station personnel are primarily trained and qualified to fill the onsite ERO positions (Control Room, TSC and OSC). However; any employees, corporate or station, which meet the prerequisites and response requirements for a particular ERO positions and functions in the onsite ERO. No change to the Emergency Plan is needed to address this question.
- B-2 BBNPP Emergency Plan Section B.7.a-d provides details on the types of company resources (physical, material and fiduciary) which will be called upon as needed to support emergency response. No statement or implication was given in that section of special qualifications associated with the listed items. Personnel who are not trained and qualified as part of the formal ERO will not be provided specialized training or qualifications for situational emergency response functions prior to an event occurring.

BBNPP Emergency Plan Section B.8 describes the support functions provided by the organizations contained in this section. The personnel within those organizations who could potentially provide their services will have the necessary knowledge and skills for those functions, which may or may not depend on a special qualification outside of their normal job description. Any special training for such personnel are controlled and provided by their own organization.

BBNPP Emergency Plan Section B.9 describes the organizations with which agreements are maintained to provide emergency management services such as police, fire and medical. Special qualifications, if applicable to BBNPP, will be stated in the agreements. The support agency titles in this section provide an adequate description of their services. (i.e. Fire Protection services provide support with response to fires, etc.)

- B-3 The Radiological Assessment Coordinator is responsible for release and dose assessment data obtained from dose assessment and projection activities. The Environmental Assessment Director is responsible for release and dose assessment data obtained from field monitoring team activities. The wording in the Environmental Assessment Director and the Radiological Assessment Coordinator sections is particular to their functional areas. The wording in the HPN Communicator section reflects the sources of the information types.
- B-4 The Security Coordinator position is located in the TSC (see Figure B-1b). The Security Coordinator position will be removed from Figure B-1c in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- B-5 BBNPP Emergency Plan Figure B-1d should show the Public Information Liaison, Technical Advisor, and Radiological Advisor positions. Organizational boxes for Technical Advisor, Radiological Advisor, and Public Information Liaison will be added to Figure B-1d in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- B-6 BBNPP Emergency Plan Section B.5.c.7 describes the duties of the JIC Administrative Manager, which is shown as the JIC Administrative Support Manager in Figure B-1d. The discrepancy in the Figure B-1d position title will be corrected to read the JIC Administrative Manager in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- B-7 BBNPP Emergency Plan Section B.5.a.15 "OSC Leads" lists Operations as one of the designated lead positions in the OSC. This is the OSC Operations Lead designated in B.5.a.14.
- B-8 The team make-up of the fire brigade is described in the FSAR Table 13.1-2, Minimum Shift Crew Composition, as follows:

A site fire brigade of at least five members (may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions) shall be maintained on site at all times. The Fire Brigade shall not include the Shift Manager and other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

An individual, who is not part of the Fire Brigade, is assigned to fill the role of Emergency Communicator; this assures that the primary emergency response actions can be carried out, even if the Fire Brigade is called to action. Shift staffing is sufficient to man the ERO and the Fire Brigade, simultaneously.

B-9 BBNPP Emergency Plan Annex Table B-1a is consistent with the onshift guidelines of NUREG-0654 Table B.1. The position of mechanical maintenance may be filled by any mechanical technician, non-licensed operator or licensed operator qualified for the position. The position of electrical/instrumentation and control may be filled by any electrical/l&C technician, non-licensed operator or licensed operator qualified for the position. The position of first aid team member will be filled by individuals trained as a minimum to Red Cross Multi Media. The position for in-plant radiation protection protective actions will be filled by personnel qualified as shift RP technicians. The primary duty of personnel who may be used to fill the collateral role functions is provided in Table B-1a of the Site Annex. Competing priorities during an emergency will be resolved by the Shift Supervisor.

B-10 There are currently no specific requirements or guidance developed for the staffing of additional on shift I&C positions (normal or emergency) or ERO I&C positions to address restoration activities involving digital I&C events. ERO staffing levels are established based on: (1) EOP and AOP actions that include the range of events as specified in the FSAR, and (2) requirements for shift personnel to be able to perform immediate actions to place the plant in a safe condition. Existing regulatory requirements for operations shift staffing incorporate these aspects and are followed by BBNPP.

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13.03-16 COLA Impact

B-4 COLA Part 5, Emergency Plan, Part II, Figure B-1c, Emergency Offsite Organization, will be revised as shown below to remove the {Security Coordinator} organizational block in a future COLA revision.



- B-5 COLA Part 5, Emergency Plan, Part II, Figure B-1d, Emergency Public Information Organization, will be revised as shown below to add Technical Advisor, Radiological Advisor, and Public Information Liaison organizational boxes in a future COLA revision.
- B-6 COLA Part 5, Emergency Plan, Part II, Figure B-1d, Emergency Public Information Organization, will be revised as shown below to change the title of the JIC Administrative Support Manager to JIC Administrative Manager in a future COLA revision.



Question 13.03-17

- C-1 Section C.1 states assistance is available from Federal agencies in accordance with the "National Response Plan" (NRP); however, the NRP has been superseded by the "National Response Framework." Change NRP references to National Response Framework, as appropriate.
- C-2 Section C.3, "Radiological Laboratories," refers to additional facilities that are available for counting and analyzing radiological samples to supplement the onsite radiological laboratory; however, the specific laboratories and their expected availability are not provided. Identify the specific laboratories and their capabilities, and describe their expected availability. Include this information in the Emergency Plan.

13.03-17 Response

- C-1 All references to the National Response Plan (NRP) will be revised to the National Response Framework (NRF) in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- C-2 Section C.3 will be revised to indicate the location and availability of offsite radiological laboratories in a future revision to the COLA Part 5 BBNPP Emergency Plan.

13.03-17 COLA Impact

C-1 COLA Part 5, Emergency Plan, Part II, Sections A.1, C.1 and Appendix 4 will be revised to change National Response Plan to National Response Framework as follows in a future COLA revision:

Section A: Assignment of Responsibility

1. Concept of Operations

The relationships and the concept of operations for the organizations and agencies that are a part of the overall ERO are as follows:

- a. Identified below are federal, {commonwealth}, and local organizations (and other local governmental agencies) that are involved in a response to an emergency at {BBNPP}.
 - Federal Agencies: The National Response Plan<u>Framework</u> (NRP<u>F</u>), Nuclear/Radiological Incident Annex outlines the statutory and regulatory responsibilities. The primary federal response for supporting an emergency at {BBNPP} includes:
 - b) Department of Homeland Security (DHS): Per the National Response PlanFramework (NRPF), DHS is responsible for the overall coordination of a multi-agency Federal response to a significant radiological incident. The primary role of DHS is to support the {commonwealth} by coordinating the delivery of Federal non-technical assistance. DHS coordinates {commonwealth} requests for Federal assistance, identifying which Federal agency can best address specific needs. If deemed necessary by DHS, it will

establish a Federal Response Center from which it will manage its assistance activities.

Section C: Emergency Response Support and Resources

1. Federal Response Support and Resources

Assistance is available from federal agencies through the National Response <u>PlanFramework</u> (NR<u>PF</u>). The lead federal agency who provides direct assistance to the Licensee during an emergency is the Nuclear Regulatory Commission (NRC). Other federal agencies, such as the Federal Emergency Management Agency (FEMA) and the Department of Energy (DOE), provide assistance to the {Commonwealth} through implementation of the NR<u>PF</u>.

Appendix 4: Glossary of Terms and Acronyms

NRPF.....National Response PlanFramework

C.2 COLA Part 5, Emergency Plan, Part II, Section C.3 will be revised consistent with the SSES Emergency Plan to indicate the location and availability of offsite radiological laboratories as follows in a future COLA revision:

3. Radiological Laboratories

{Additional facilities for counting and analyzing samples can be provided by the SSES near-site radiation chemistry laboratory. This laboratory can act as backup in the event that the BBNPP counting room and laboratory become unusable or the offsite radiological monitoring and environmental sampling operation exceeds the BBNPP laboratory capacity during an emergency. Additionally, a fixed counting laboratory provided by an off-site environmental contractor can be utilized to assist with environmental analysis. Outside analytical assistance may also be requested from state and federal agencies.} {Additional facilities for counting and analyzing samples can be provided by contracted laboratory services or arrangements with other nuclear facilities. These laboratory become unusable or the offsite radiological monitoring and environmental sampling operation exceeds the capacity of the site capabilities during an emergency. Additional outside analytical assistance may be requested from {Commonwealth} and federal agencies.}

Question 13.03-19

- E-1 The BBNPP Emergency Plan does not describe the existing Alert and Notification System (ANS) developed for the Susquehanna Steam Electric Station (SSES) nuclear power station. However the BBNPP Emergency Plan (EP) indicates that it plans to take credit for use of the existing system. Provide a description of the existing Alert and Notification System, including its component parts (e.g. sirens, tone alert radios, other methods) in the BBNPP Emergency Plan.
- E-2 Section E, "Notification Methods and Procedures," paragraph 2.b. states a notification will be initiated to cognizant Commonwealth/local government agencies as soon as possible but within one hour of the termination of an event classification, or entry into Recovery Phase. Identify the officials of State and local government agencies, by title and agency, who will be notified. Include this information in the Emergency Plan.

13.03-19 Response

E-1 The ANS, which is formally titled Public Notification System (PNS) for SSES and BBNPP, is described in general in Section E.6 and minimum test frequency of the PNS is provided in Section F.3 of the BBNPP Emergency Plan. The BBNPP Emergency Plan states that the system functional status will meet the FEMA operability requirements as referenced in FEMA-REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants" in Section E.6.2.1. Activation and operation of the PNS sirens is discussed in detail in the Commonwealth specific response plans and standard operating procedures, as stated in Section E.6 of the BBNPP Emergency Plan.

Detailed system design information, including its component parts, is documented in the FEMA design certification which is currently maintained by SSES. Additional testing and maintenance information specific to BBNPP will be developed in EPIP-906, Siren Maintenance and Testing, as stated in Appendix 2 of the BBNPP Emergency Plan. No additional system specific design information is necessary in the BBNPP Emergency Plan.

E-2 The BBNPP Commonwealth and local governmental agencies notified of the termination of an emergency or the entry into recovery are the same agencies involved in the initial event notification (PEMA, DEP/BRP, Columbia County Department of Public Safety and Luzerne County Emergency Management Agency). The Commonwealth and local governmental agencies that have lead response functions and are part of the initial notification process are described in Section A of the BBNPP Emergency Plan. Specific detail on the notification process is provided within emergency plan implementing procedures.

13.03-19 COLA Impact

The BBNPP COLA will not be revised as a result of these responses.

Question 13.03-20

- F-1 Section II.F.1, "Communications/Notifications," describes multiple backup communication systems including commercial cell phones, the Public Address System, site radios and pagers. Describe the availability of backup power for onsite and offsite communication systems, and include this information in the Emergency Plan.
- F-2 Section II.F.1, "NRC Communications (ENS and HPN)," states that the ENS, the ERDS, and HPN are separate telephone lines dedicated for communications with the NRC at BBNPP, but other communication links are not described. Describe the availability of the RSCL, PMCL, MCL, and LAN communications systems between BBNPP and NRC. Include this information in the Emergency Plan.
- F-3 Figure F-1 of Section F of the BBNPP EP shows initial emergency notification is from the EOF to the state warning point. Other sections of the BBNPP EP state that the initial emergency notification is from the Control Room to the state warning point. Clarify the information on this figure or explain why this figure is acceptable.

13.03-20 Response

- F-1 This question was addressed in the BBNPP response to NRC RAI 34 (BNP-2009-242, dated August 26, 2009 ML#092440329).
- F-2 The Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL) and Local Area Network (LAN) are not discussed with regards to utility to NRC communications/notification pathways because no regulatory guidance was identified during preparation of the COLA that provided that expectation. NRC communications are channeled from the station through the FTS, which is routed to the appropriated link or bridge by the NRC.
- F-3 As specified in the title of BBNPP Emergency Plan Figure F-1, the illustration represents the notification scheme "For Full Augmentation." Initial notification of an event escalation would come from the EOF when the full ERO is in place. Figure F-1 will be replaced with an illustration that includes the notification pathway when only the on-shift ERO is in place in a future revision to the COLA Part 5 BBNPP Emergency Plan.

13.03-20 COLA Impact

F-3 COLA Part 5, Emergency Plan, Part II, Figure F-1 will be replaced with the figure shown below in a future COLA revision.

Figure F-1: Event Notification Scheme (For-Full Augmentation)



Question 13.03-21

- G-1 Section G.3, "Media Accommodations," states that a Joint Information Center (JIC) has been designated.
 - A. Provide the location of the JIC. Include this information in the Emergency Plan.
 - B. Describe the capacity of the JIC and its ability to accommodate media, site, Federal, Commonwealth, and local personnel. Include this information in the Emergency Plan.
- G-2 Section G.3, "Media Accommodations," states that the Emergency Operations Facility (EOF) can accommodate personnel and news media staff if necessary. Provide the physical location of the EOF and the number of news media personnel that can be accommodated if necessary. Include this information in the Emergency Plan.
- G-3 Section G.4, "Coordination of Public Information," states that rumors or misinformation are identified by media/rumor control monitors who respond to public and news media calls and monitor media reports. Identify the responsible individuals by title for providing media/rumor control monitors. Include this information in the Emergency Plan.
- G-4 Section G.4, "Coordination of Public Information," addresses rumor control. Discuss whether established coordinated arrangements between various emergency response organizations are in place for dealing with rumors once they have been identified. Provide this information in the Emergency Plan.

13.03-21 Response

- G-1.A The Joint Information Center is located next to the EOF, outside of the 10 mile Emergency Planning Zone, in the East Mountain Business Center on East Mountain Boulevard in Plains Township. This information will be added to Section G.3.a.2 in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- G-1.B As stated in the COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, the JIC has at least 8,700 square feet of space and that a portion of this space can adequately accommodate a limited number of new media. This equates to space for ~140 news media personnel.

BBNPP Emergency Plan Section G.3.a.2 discusses the ability to accommodate media, site, Federal, Commonwealth, and local personnel. The facility occupancy limit for the JIC, or any other emergency response facility, is not specified in the BBNPP Emergency Plan.

- G-2 The BBNPP Emergency Plan does not state that the EOF can accommodate news media staff. It states that the news media is not normally permitted into the EOF during an emergency. It also states that the EOF can accommodate Commonwealth and local media staff if deemed necessary, referring to trained and qualified response public information personnel, not the news media itself. News media agency personnel will be accommodated at the JIC (which is next to the EOF) and the ICP, not within the EOF unless special ad-hoc exception is made by the Emergency Director.
- G-3 BBNPP Emergency Plan Section B.5.c.13 and 14 describes the Media Monitoring and Rumor Control Staffs organizational position and functions.

G-4 BNPP Emergency Plan Section G.4.c states that the JIC is staffed by federal, Commonwealth, local, and licensee personnel to assure timely, periodic exchange and coordination of information and that representatives coordinate information prior to conducting news briefings. This includes any response to rumors and misinformation. Additionally, liaisons are provided to the state and risk county EOCs to support the exchange of all types of information. Emergency plan implementing procedures will be developed to direct specific steps to ensure rumors are properly coordinated and addressed.

13.03-21 COLA Impact

G-1.A COLA Part 5, Emergency Plan, Part II, Section G.3.a.2 paragraph 2 will be revised as follows in a future COLA revision:

The site has a designated JIC <u>{located next to the EOF, outside of the 10 mile</u> <u>Emergency Planning Zone, in the East Mountain Business Center on East Mountain</u> <u>Boulevard in Plains Township.</u>}

Question 13.03-22

- H-1 Section 12.3.4.2.3, "Control Room Airborne Radioactivity Monitoring System," of the U.S. EPR Final Safety Analysis Report, states that the Main Control Room (MCR) envelope (MCR, TSC and MCR heating, ventilation, and air conditioning room) is normally supplied with fresh unfiltered air and that airborne radioactivity monitoring instrumentation is provided for the MCR to monitor for airborne radioactivity following a radioactive release. Discuss whether the TSC has continuous indications of radiation dose rates and airborne radioactivity concentrations inside the TSC when occupied during an emergency, whether from permanent or portable instrumentation. Include this information in the Emergency Plan.
- H-2 The TSC has process information and control system (PICS) workstations that provide primary SPDS display for TSC personnel. Discuss how the TSC data system will provide at least 2 hours of pre-event and 12 hours of post-event data, consistent with NUREG-0696. Include this information in the Emergency Plan.
- H-3 Security is not addressed in Section H.2 for the EOF. Discuss whether the EOF is provided with industrial security to maintain its readiness when it is idle and to exclude unauthorized personnel when it is activated. Include this information in the Emergency Plan.
- H-4 Section 2, "Statement of Intent," of the BBNPP Impact to SSES Emergency Preparedness Program Evaluation, states that BBNPP plans to take credit for the use of the existing SSES EOF. However, the location of and features of the EOF are not identified in the BBNPP Emergency Plan or in the Unit Specific Annex.
 - A. Discuss the location of the existing EOF and how it meets the radiation protection features described in Table 1 of NUREG-0737 Supplement 1. Include this information in the Emergency Plan.
 - B. The environmental controls in the existing building in which the EOF is located are not identified. Discuss whether the existing EOF has environmental controls to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment. Include this information in the Emergency Plan.
 - C. Section H.2, "Emergency Operations Facility (EOF)," does not describe permanent or portable radiological monitoring equipment available in the EOF that provides continuous indications of radiation dose rates and airborne radioactivity concentrations inside the EOF. Describe the permanent or portable radiological monitoring equipment available in the EOF that provides continuous indications of radiation dose rates and airborne radioactivity concentrations inside the EOF. Include this information in the Emergency Plan.
- H-5 Clarify whether the Emergency Offsite Facility, listed in Section 5.b.2, is the same as the Emergency Operations Facility and include that information in the Emergency Plan.

- H-6 In Table B-1b, the augmentation time is 90 minutes for EOF personnel, based on optimum travel conditions, while Table 2 NUREG-0737, Supplement 1 lists 30 and 60 minute augmentation times. Discuss how the 90 minute augmentation time for EOF staffing meets the goal of 30 and 60 minutes in Table 2 NUREG-0737, Supplement 1, and the guidance in NUREG-0696, Section 2.3, "Staffing and Training," which states that the EOF shall achieve full functional operation within 1 hour. Include this information in the Emergency Plan.
- H-7 Discuss how the EOF data storage and collection system will provide at least 2 hours of pre-event and 12 hours of post-event data, consistent with section 4.7 of NUREG-0696. Include this information in the Emergency Plan.
- H-8 Section H.5.c.2, "Safety Parameter Display System (SPDS)," states that the SPDS displays plant parameters relevant to the operational safety status in the Control Room; however, the reliability of the alternate computer system is not described. Describe how the alternate computer system used in the EOF for displaying the SPDS parameters meets the same reliable design for data indications and associated circuitry as the SPDS. Include this information in the Emergency Plan.
- H-9 Section F.1.5, "Emergency Response Data System (ERDS)," states that the ERDS will supply the NRC with selected plant data on a near real time basis; however, information is needed regarding whether ERDS will be tested quarterly in accordance with 10 CFR 50 Appendix E requirements. Clarify whether Emergency Response Data System (ERDS) will be tested quarterly. Include this information in the Emergency Plan.
- H-10 Section H.2, "Emergency Operations Facility (EOF)," states that the EOF has equipment to gather and display data needed to analyze and exchange information on plant conditions. Discuss whether the Emergency Operations Facility (EOF) data system unavailability is less than 0.01 percent during all plant conditions above cold shutdown, as discussed in NUREG 0696. Include this information in the Emergency Plan.

13.03-22 Response

- H-1 BBNPP Emergency Plan Section H.1.b states that to ensure adequate radiological protection, permanent radiation monitoring systems have been installed in the TSC and/or periodic radiation surveys are conducted. Detailed U.S. EPR facility system design specifications for this system are not yet established and will be included in the system design documents when complete, not the Emergency Plan.
- H-2 BBNPP Emergency Plan Section H.5 states that instrumentation for the detection or analysis of emergency conditions is maintained in accordance with plant Technical Specifications. Appendix 1 specifies NUREG-0696 as the guidance reference used to develop Section H of the Emergency Plan. Section H.5.c.1 states that the Plant Monitoring / Information System provides for short and mid-term storage of data for online retrieval and fast recall, and long term storage to appropriate media. This commitment is based on current common IT capabilities that surpass the guidelines of NUREG-0696, which was issued prior to the existence of such technology.

H-3 The EOF is secured by lock and an electronic alarm system which is monitored around the clock. The alarm system employs door and motion sensors.

The EOF section is separated from the rest of the building by an internal security system. Only people with access as emergency responders can get into the EOF area of the building. The BBNPP Emergency Plan Section B.5.b.10 specifies that the EOF Administrative Support Manager directs the activities of security and is responsible to ensure that access to the EOF is limited to emergency responders and authorize admittance to non-licensee personnel.

H-4.A The EOF is located outside of the 10 mile Emergency Planning Zone in the East Mountain Business Center on East Mountain Boulevard in Plains Township. Section H.2 will be revised to state the EOF location in a future revision to the COLA Part 5 BBNPP Emergency Plan.

Since the EOF is located outside of the 10 mile Emergency Planning Zone, no radiation protection features are designed or required to be designed into the facility.

- H-4.B The EOF is environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment. Section H.2 will be revised to describe the EOF environmental controls in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- H-4.C Since the EOF is located outside of the 10 mile Emergency Planning Zone, no permanent or portable radiological monitoring equipment is installed to provide continuous indications of radiation dose rates and airborne radioactivity concentrations. No revision to the BBNPP Emergency Plan is necessary to address this comment.
- H-5 The Emergency Offsite Facility listed in Section B.5.b.2 is the Emergency Operations Facility. Section B.5.b.2 will be revised to correct the facility title in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- H-6 <u>With regard to 30 minute responders:</u> NUREG-0737, Supplement 1, Table 2 and NUREG-0654 Table B-1 do not specify any particular facility for the response positions. The BBNPP EOF responders do not involve any of the guidance documents' 30 minute positions which are not already covered by the TSC and OSC response positions.

<u>With regard to 60 minute responders:</u> NUREG-0654 Appendix 1 states that the EOF and other key emergency personnel be brought to standby status at the Alert emergency classification level (activation of the EOF is not specified until a Site Area Emergency classification level is declared). The NUREG-0696 statement that the EOF shall achieve full functional operation within 1 hour is based on the declaration of a Site Area Emergency or higher. The BBNPP Emergency Plan requires that the EOF minimum staffing be met within 90 minutes of an Alert declaration, which exceeds the NUREG-0654 and NUREG-0696 guidelines.

In addition, the total BBNPP minimum staffing response involves 39 personnel that include three on-duty on call public information personnel. This response staffing is 13 higher than the 26 listed in NUREG-0654. Full BBNPP ERO response staffing includes a minimum of 27 additional personnel above the shift and duty responders. NUREG-0654 Table B-1 has no such equivalent.

- H-7 The provisions of NUREG-0696 Section 4.7 will be met via use of the Plant Process Computer System that provides the necessary data. The EOF plant monitoring and information system is not separate and distinct from the system used in the TSC. Section H.5.c.1 states that the Plant Monitoring / Information System provides for short and mid-term storage of data for on-line retrieval and fast recall, and long term storage to appropriate media. COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, tests the EOF plant information systems ability to retrieve and display radiological, meteorological, and plant system data.
- H-8 An alternate computer system will not be used at the EOF. The workstations that have the capability to display the SPDS parameters are client workstations to the main plant computer system. The Plant computer system servers will have redundant features to maximize availability. The plant computer systems will be monitored via the maintenance rule and will have a 0.01 unavailability criterion.

BBNPP Emergency Plan Appendix 1 specifies NUREG-0696 as the guidance reference used to develop Section H of the Emergency Plan. NUREG-0696 states that total EOF data system shall be designed to achieve an operational unavailability goal of 0.01 during all plant operating conditions above cold shutdown. Section H.5.c.2 will be revised to include a reliability specification in a future revision to the COLA Part 5 BBNPP Emergency Plan.

- H-9 The BBNPP ERDS software and hardware, when installed, will be maintained in accordance with 10 CFR 50 Appendix E.IV.3, Maintaining Emergency Response Data System. Section F.1.b-d.5 will be revised to include a commitment to test the ERDS in accordance with regulations in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- H-10 Refer to response for H-8.

13.03-22 COLA Impact

H-4.A COLA Part 5, Emergency Plan, Part II, Section H.2 will be revised to add the following in a future COLA revision.

The EOF is <u>{located outside the plume exposure EPZ in the East Mountain Business</u> <u>Center on East Mountain Boulevard in Plains Township. It is}</u> the location where the {Emergency Director} will direct the ERO in evaluating and coordinating the overall company activities involved with an emergency. Activation of the EOF is mandatory upon declaration of an Alert or higher classification. The EOF provides for:

H-4.B COLA Part 5, Emergency Plan, Part II, Section H.2 will be revised to add the following in a future COLA revision.

The EOF was designed with the following considerations:

• The location provides optimum functional and availability characteristics for carrying out overall strategic direction of the Licensee onsite and support operations, determination of public protective actions to be recommended to offsite officials, and coordination with Federal, {Commonwealth} and local organizations.

- <u>The EOF is environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment and It is of sufficient size to accommodate about 50 people.</u>
- H-5 COLA Part 5, Emergency Plan, Part II, Section B.5.b.2 will be revised as follows in a future COLA revision:
 - 2) {Emergency Offsite Operations Facility (EOF) Director} EOF
- H-8 COLA Part 5, Emergency Plan Part II Section H.5.c.2 will be revised as follows in a future COLA revision:
 - 2) Safety Parameter Display System (SPDS): SPDS provides a display of plant parameters from which the safety status of operation may be assessed in the Control Room, and TSC for the site (the EOF {and Commonwealth} can access similar data through the use of a alternate computer system). The primary function of the SPDS is to help operating personnel in the Control Room make quick assessments of plant safety status. SPDS and/or other display systems in the TSC, EOF {and Commonwealth facility(ies)} promote the exchange of information between these facilities and the Control Room and assists the emergency organization in the decision making process. {Parameter display systems in the BBNPP emergency facilities are designed achieve an operational unavailability goal consistent with NUREG-0696 of 0.01 during all plant operating conditions above cold shutdown.}
- H-9 COLA Part 5, Emergency Plan Part II Section F.1.b-d.5 will be revised as follows in a future COLA revision:
 - 5) Emergency Response Data System (ERDS): The ERDS will supply the NRC with selected plant data points on a near real time basis. ERDS is activated by the ERO as soon as possible but not later than one hour after declaration of an Alert, Site Area Emergency or General Emergency. The selected data points are transmitted via modem to the NRC at approximately 1-minute intervals. <u>The ERDS will be tested</u> in accordance with 10 CFR 50 Appendix E requirements. {A similar system is available to provide key plant parameter data to the Commonwealth of Pennsylvania.}

Question 13.03-23

1.1 Details regarding the Emergency Planning related instrumentation required for emergency classification, dose assessment, and post-accident sampling and analysis are not present. Provide measurements and indication details of Type A, B, C, D, E variables listed in RG 1.97. Include this information in the Emergency Plan.

13.03-23 Response

1-1 RG 1.97 Revision 4 endorses (with certain clarifying regulatory positions specified in Section C of the guide) the "IEEE Standard Criteria for Accident Monitoring Instrumentation for Nuclear Power Generating Stations," which the Institute of Electrical and Electronics Engineers (IEEE) promulgated as IEEE Std. 497-2002. The IEEE standard establishes the criteria for variable selection, performance, design, and qualification of accident monitoring instrumentation and includes requirements for display alternatives for accident monitoring instrumentation, documentation of design bases, and use of portable instrumentation. This level of equipment and system detail (design, qualification, maintenance, etc.) is not found in the Emergency Plan. The BBNPPP Emergency Plan Section I contains sufficient information on instrumentation to satisfy the planning standard and will not be revised to contain the IEEE level of information regarding plant monitoring instrumentation.

13.03-23 COLA Impact

The BBNPP COLA will not be revised as a result of this response.

Question 13.03-24

- J-1 Locations are identified where people might be expected to be present outside the Protected Area but within the Owner Controlled Area and provisions are established for notification of personnel within these areas. However, information is needed on the methods for notifying persons in these areas. Additional information is also needed regarding the time to notify persons outside the protected area but within owner controlled areas.
 - A. Describe the process for warning people offsite but within the Owner Controlled Area, Include this information in the Emergency Plan.
 - B. Provide the time to notify persons outside the protected area but within owner controlled areas. Include this information in the Emergency Plan.
- J-2 The site has identified locations that serve as Assembly Areas and offsite assembly locations for non-essential personnel when they are not instructed to proceed home. Page J-2 states, "The specific locations of these areas are provide locations or located in the BBNPP Annex." It appears a word is missing from the sentence.
 - A. Describe the offsite locations and provide letters of agreement if these locations are not under site control. Include this information in the Emergency Plan.
 - B. Complete the sentence in the Emergency Plan on page J-2 that states, "The specific locations of these areas are provide locations or located in the BBNPP Annex." Include this information in the Emergency Plan.
- J-3 Section J.2, "Evacuation Locations," states personal transportation will normally be used and established evacuation routes will be followed, and personnel without transportation will be identified and provided transportation. Describe how transportation to those personnel without private transportation will be provided. Include this information in the Emergency Plan.
- J-4 Section J.5 states that "all personnel within the affected unit protected area shall be accounted for..." Information is needed on the process for accounting for individuals and the process for continuously accounting for individuals.
 - A. Describe the process to account for individuals and include this information in the Emergency Plan.
 - B. Describe the process for continuously accounting for individuals once they have been identified, and include this information in the Emergency Plan.
- J-5 Sheltering and evacuation are identified as protective actions, but KI is not discussed. Describe the process for determining when KI may be considered as a PAR or part of a PAR, and include this information in the Emergency Plan.
- J-6. Provide additional maps in the Emergency Plan that identify pre-selected radiological sampling and monitoring points, site evacuation routes, and EPZ population distribution. Include this information in the Emergency Plan.

J-7 Section J.8 of the BBNPP Emergency Plan states that "ETEs for the evacuation of the plume exposure EPZ are in Appendix 5." However Appendix 5 "Evacuation Time Estimates" of the BBNPP EP does not contain any ETE information, but refers the reader to a separate document. Information is needed regarding how the ETE is used in the decision to recommend an evacuation PAR. Describe how the ETE is used in the determination of the PAR and include this information in the Emergency Plan. Describe what information from the ETE study will be included in Appendix 5 of the BBNPP Emergency Plan.

13.03-24 Response

- J-1.A Provisions for the warning of personnel in outbuildings and OCA areas may include PA announcements and area sweeps. These provisions will be specified in the implementing procedures as appropriate to the areas where they are applicable.
- J-1.B PPL has not identified regulatory guidance that specifies a time criterion for the notification of individuals outside the protected area but within the OCA. From a process standpoint, implementing procedure steps will direct the notification of individuals outside the protected area but within the OCA following the notification of personnel within the protected area. The time it takes to perform this notification depends upon on the location of the individuals and the nature of the event. In the absence of regulatory guidance for this notification criterion, PPL does not propose to include a specific commitment in the BBNPP Emergency Plan.
- J-2.A If a site evacuation is performed when there are radiological contamination concerns, then personnel and vehicles would be monitored and decontaminated at the Susquehanna Energy Information Center (located on US route 11 just North of SESS) or the West Building (located on Confers Lane adjacent to the BBNPP site). These facilities are under site control. This information will be added in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- J-2.B The sentence will be corrected in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- J-3 All personnel at BBNPP will use personal transportation to get to and from work. There is no public or company pooled transportation available. Personnel who for some reason cannot utilize their normal means of work transportation during a site evacuation will be paired with employees who have room in their personal vehicle. This process and its steps will be provided in the emergency plan implementing procedures.
- J-4.A The BBNPP Emergency Plan Section J.5 provides the commitment that all personnel within the protected area will be accounted for and the names of missing individuals (if any) determined within thirty (30) minutes of the emergency announcement. The process for establishing accountability may include access card readers, roll calls, the security computer, or other means applicable to the particular assembly area. Specific instruction for performing accountability will be provided in the emergency plan implementing procedures.

- J-4.8 The BBNPP Emergency Plan Section J.5 provides the commitment that once accountability is established within the protected area that it is maintained throughout the course of the event, unless specifically terminated by the Emergency Plant Manager. The process for maintaining accountability may include access card readers, signing out of controlled areas, the security computer, radios, or other means applicable to the particular situation. Specific instruction for maintaining accountability will be provided in the emergency plan implementing procedures.
- J-5 Section J.10.m will be revised to include a statement regarding the utility recommendation to the Commonwealth regarding the use of KI by the public in a future revision to the COLA Part 5 BBNPP Emergency Plan.
- J-6 Pre-established radiological sampling and monitoring points are defined and controlled by the Radiological Environmental Monitoring Program (REMP) documented in the Offsite Dose Calculation Manual (ODCM). Duplicate maps for the pre-established radiological sampling and monitoring points will not be included in the BBNPP Emergency Plan.

Site evacuation is described in BBNPP Annex Section 5. The description, as shown in the COLA impact for the response to RAI J-2.B, is considered suitable without the need for a map illustrating the route.

EPZ population distribution is covered extensively in the ETE study report, which is referenced in the BBNPP Emergency Plan Section J.8 and Appendix 5. Duplicate illustrations of the EPZ population distribution are not included in the BBNPP Emergency Plan.

J-7 The ETE is not used by the utility as part of the PAR decision process. Utility PARs are based on plant conditions (fission product barrier status) and dose conditions (PAGs) reliant on event specific release duration assumptions. The Commonwealth, as part of the integrated planning effort, will determine whether the public evacuation can be performed (in consideration of travel conditions and controls) within the ETE and develop a final directive.

The ETE is in Part 5 of the COLA. This correction was previously provided in BBNPP response to NRC RAI 47 (BNP-2009-292, dated October 1, 2009).

13.03-24 COLA Impact

J-2.A COLA Part 5, Emergency Plan Annex, Section 5.1 will add the following as paragraph #2 in a future COLA revision:

If a site evacuation is performed when there are radiological contamination concerns, then personnel and vehicles would be monitored and decontaminated at the Susquehanna Energy Information Center (located on US route 11 just North of SESS) or the West Building (located on Confers Lane adjacent to the BBNPP site). These facilities are under site control. J-2.B COLA Part 5, Emergency Plan, Part II, Section J.4 will be revised as follows in a future COLA revision:

Evacuation is the primary protective action anticipated for onsite personnel not having immediate emergency response assignments. The site has identified locations that serve as Assembly Areas and offsite locations for non-essential personnel when they are not instructed to proceed home. The specific locations of these areas are provided locations or located in the {BBNPP Annex}.

- J-5 COLA Part 5, Emergency Plan, Part II, Section J.10.m will be revised as follows in a future COLA revision:
 - m. At a General Emergency classification, the Licensee will provide the {Commonwealth} with recommendations for protective actions for the public, which includes the use of KI in areas being evacuated. For incidents involving actual, potential, or imminent releases of radioactive material to the atmosphere, EPA 400-R-92-001, the NRC Response Technical Manual (RTM-96) and NUREG-0654, Supp. 3 are used as the basis for the general public PARs.

Question 13.03-25

K-1 Section 12.5, "Operational Radiation Protection Program," of the FSAR incorporates by reference NEI 07-03, "Generic FSAR Template Guidance for Radiation Protection Program Description," Revision 3; however, Revision 3 is not the latest revision of NEI 07-03. Discuss and justify why the latest revision of NEI 07-03, "Generic FSAR Template Guidance for Radiation Protection Program Description," is not referenced. Include this information in the Emergency Plan.

13.03-25 Response

K-1 Additional information regarding this FSAR section was also requested in NRC RAI No.
 43. PPL provided a response to RAI No. 43 on September 10, 2009, in Letter BNP-2009-258 (ML092580076) indicating the BBNPP COLA FSAR Sections 12.5.1
 "References," FSAR Table 1.6-1 "Reports Referenced," and COLA Part 11D NEI References" will be revised to reflect the current revision to NEI 07-03A.

13.03-25 COLA Impact

The BBNPP FSAR will not be changed as a result of the response to this question.

Question 13.03-28

N-1. Section N.1.c states that exercises are conducted to ensure that all major elements of the Emergency Plan and preparedness program are demonstrated at least once in each six-year period and under various weather conditions; however, information is needed regarding exercises being varied from exercise to exercise and some exercises being unannounced. Describe the variation of exercises and discuss whether some exercises will be unannounced. Include this information in the Emergency Plan.

13.03-28 Response

N-1 <u>Concerning variation of scenarios</u>: Section N.1 will be revised to include a statement regarding variations in exercise scenarios in a future revision to the COLA Part 5 BBNPP Emergency Plan.

<u>Concerning unannounced exercises:</u> Unannounced exercises are not performed within the BBNPP emergency preparedness program. The coordinated planning effort between FEMA, NRC, Commonwealth and utility prohibit such an event. As described in Section N.2.f, unannounced augmentation drills are conducted and evaluated at least once each cycle, which meets the intent for the testing of a major portion of the program that requires no prior knowledge by the participants.

13.03-28 COLA Impact

N-1 COLA Part 5, Emergency Plan, Part II, Section N.1 will be revised as follows in a future COLA revision:

Exercises provide an opportunity to evaluate the ability of participating organizations to implement a coordinated response to postulated emergency conditions. Scenarios are varied from exercise to exercise such that; (1) all major elements of the plan and preparedness organization are tested within a six-year period and (2) are conducted during different seasons of the year (as allowed by FEMA and Commonwealth planning schedules). Exercises are conducted to ensure that all major elements of the E-Plan and preparedness program are demonstrated {at least once in each six-year period} and under various weather conditions. {{The site shall conduct at least one off-hours exercise between 6:00 p.m. and 4:00 a.m. every cycle (6 years). Weekends and holidays are also considered off-hours periods.} Provisions will be made for qualified personnel from the Licensee, federal, {Commonwealth}, or local governments to observe and critique each exercise as appropriate. The {Commonwealth} should fully participate in the ingestion pathway portion of exercises at least once every six years. {If there is more than one site in the {Commonwealth}, the {Commonwealth} may rotate this participation from site to site.}

Question 13.03-29

O-1. Section O.3, "First Aid Response," states that selected personnel are trained in accordance with the applicant approved First Aid program; however, information is needed regarding whether first aid training provided by the program is equivalent to Red Cross "first responder" training. Clarify whether first aid training is equivalent to Red Cross "first responder" training and include this information in the Emergency Plan.

13.03-29 Response

O-1 Section O.3 will be changed to state that training for individuals assigned to BBNPP first aid teams shall be equivalent to the Red Cross Multi-Media first aid training course in a future revision to the COLA Part 5 BBNPP Emergency Plan

13.03-29 COLA Impact

O-1 COLA Part 5, Emergency Plan, Part II, Section O.3 will be revised to state that training for individuals assigned to BBNPP first aid teams shall be equivalent to the Red Cross Multi-Media first aid training course as follows:

Selected site personnel are trained in accordance with the Licensee approved First Aid program, which shall be at a minimum equivalent to the Red Cross Multi-Media first aid training course. First-Aid teams will likely be augmented with additional personnel such as Fire Brigade Members and other personnel qualified to assist in the rescue.

Question 13.03-31

- Q-1 The BBNPP Emergency Plan, in Section J, and the BBNPP Site Specific Annex in Section 5 describe site evacuation methods used to protect onsite staff. However, other protective actions that should be considered in a hostile action based event in accordance with NRC Interim Compensatory Measures of Commission Orders of February 25, 2002, are not discussed in either plan. Actions such as in-plant sheltering, dispersal of key personnel to areas that can be defended by security forces and staging of ERO staff in alternate facilities are not discussed as protective actions. Revise the Plan to discuss these onsite protective actions, or explain why they are not needed.
- Q-2 Discuss if the BBNPP Emergency Plan reflects the effect on the plant from a security event that causes damage to a nearby facility.
- Q-3 In accordance with the Interim Compensatory Measures order of February 25, 2002, discuss in the Emergency Plan if onsite staffing, facilities and procedures are adequate to respond to a hostile action based event.
- Q-4 In accordance with the Interim Compensatory Measures order of February 25, 2002, discuss measures to provide more timely notification to the NRC in a security based event.

13.03-31 Response

- Q-1 BBNPP Emergency Plan Section D.1.g describes the integration of the Nuclear Security Plan with the Radiological Emergency Plan and states that the Security Plan provides guidance for decisions and actions to be taken for each security contingency event. Alternate mustering facilities are discussed in Section H.1.d. Section J.4 established that evacuation will commence unless there is a security threat occurring, which would have an adverse impact on the personnel while leaving the site (in which case they would be sheltered). Other condition specific actions taken for hostile action based events will be documented within the emergency plan implementing procedures.
- Q-2 Consistent with BNP-2009-236 dated August 25, 2009 (response to BBNPP RAI 38), the BBNPP Emergency Plan utilizes NEI 99-01 Rev 5 EALs. These EALs consider the impact of a confirmed SECURITY CONDITION as defined in the BBNPP Physical Security Plan (PSP). The PSP evaluation will reflect the effect on the plant from a security event that causes damage to nearby facilities and will communicate such effects and recommended actions to the Shift Supervisor.
- Q-3 The BBNPP Emergency Plan Part I Section A states that the plan addresses the requirements of the Commission Orders of February 25, 2002, relating to security events. The content of the plan is adequate to respond to a hostile action based event with regard to onsite staffing, facilities and procedures.
- Q-4 The BBNPP Emergency Plan Section E.2.b.2 states that an event will be reported to the NRC Operations Center immediately after notification of the appropriate Commonwealth or local agencies but not later than one (1) hour after the time of initial classification. This commitment is consistent with the Interim Compensatory Measures.

13.03-31 COLA Impact

The BBNPP COLA will not be revised as a result of these responses.

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Question 13.03-32

- S-1 Part 10 ITAAC COL application table 2.3-1, "Emergency Planning ITAAC" provides acceptance criteria for planning standard 5.0: "Emergency Facilities and Equipment". Acceptance criterion 5.1.8. states "The BBNPP US EPR OSC communications capabilities are addressed by Acceptance Criterion 3.1.1. The staff is unable to locate a discussion of the OSC in that criterion. Provide that discussion in Table 2.3-1.
- S-2 EP-ITAAC are required by 10 CFR 52.80(a) and are discussed in Part 10, "ITAAC," of the Bell Bend COL application. Specifically, EP-ITAAC Acceptance Criterion 14.1.1 in Table C.II.1.B1 of Regulatory Guide (RG) 1.206 addresses the need for the COL applicant to identify exercise objectives and acceptance criteria. Simply listing broad exercise topics such as "Notification" or "Emergency Communications" does not address exercise objectives and associated acceptance criteria called for in EP-ITAAC Acceptance Criteria 14.1.1. A smaller set of EP-ITAAC are acceptable if the COL application contains information that fully addresses emergency preparedness requirements associated with any of the generic ITAAC contained in Table C.II.1-B1 of RG-1.206 which is not all inclusive, or exclusive of other ITAAC an applicant my propose.

An example of exercise objectives and associated acceptance criteria for a full participation exercise that has been found acceptable by the NRC staff can be found in Sections 13.3.5, "VEGP Unit 3 ITAAC," and 13.3.6, "VEGP Unit 4 ITAAC," of NUREG-1923, "Safety Evaluation Report for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant (VEGP) ESP Site," dated July 2009. See ADAMS ML092290650.

Revise Acceptance Criterion 8.1.1 in Table 2.3-1 of the COL application by providing exercise objectives and associated acceptance criteria, or explain why objectives and acceptance criteria are not required for each of the Planning Standards in Table C.II.1.B-1 of RG 1.206. If the example identified above is followed, the exercise objectives and acceptance criteria should be modified for the Bell Bend site.

- S-3 Part 10, ITAAC, in Table 2.3-1, "Emergency Planning ITAAC," acceptance criteria 6.3.1 ends with the words "for various radiological conditions." Consistent with RG 1.206 and the corresponding EP program element in Table 2.3-1, the correct acceptance criteria wording should end with "for various meteorological conditions." Revise Table 2.3-1 accordingly.
- S-4 NRC Regulatory Guide (RG) 1.206, Appendix C.II.1-B, Table C.II.1-B1, "Emergency Planning – Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC)," acceptance criterion 8.2.4 for Planning Standard 8.0, "Emergency Facilities and Equipment," states," The EOF has the means to acquire, display and evaluate radiological, meteorological, and plant system data pertinent to determining offsite protective measures." In Part 10 of the COL application, "Proposed License Conditions (Including ITAAC)," Table 2.3-1 "Emergency Planning ITAAC," Planning Standard 5.0, "Emergency Facilities and Equipment," Acceptance Criterion 5.2.1.3 states, "The BBNPP EOF's plant information system can retrieve and display the radiological meteorological plant system data for the parameters specified in the BBNPP US EPR Technical Bases manual and ITAAC Acceptance Criterion 1.1.1.." Clarify the capability of the EOF consistent with the associated ITAAC Acceptance Criterion in NRC RG 1.206, or explain why it is not required.
Enclosure

- S-5 Table C.II.1-B1, "Emergency Planning Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC)," in Appendix C.II.1-B, "Development Guidance for Emergency Planning ITAAC," to RG 1.206 contains the generic EP-ITAAC table. The table includes 17 Planning Standards and the accompanying EP Program Elements, Inspection, Tests, Analysis, and Acceptance Criteria. The COL application EP-ITAAC Table 2.3-1 does not address eight of the generic ITAAC Planning Standards. The following generic ITAAC Planning Standards are not addressed in the format recommended by RG 1.206:
 - 1. Assignment of Responsibility-Organizational Control--10 CFR 50.47(b)(1)
 - 2. Onsite Emergency Organization--10 CFR 50.47(b)(2)
 - 3. Emergency Response Support and Resources--10 CFR 50.47(b)(3)
 - 4. Radiological Exposure Control--10 CFR 50.47(b)(11)
 - 5. Medical and Public Health Support--10 CFR 50.47(b)(12)
 - Recovery and Reentry Planning and Post-Accident Operations --10 CFR 50.47(b)(13)
 - 7. Radiological Emergency Response Training--10 CFR 50.47(b)(15)
 - 8. Responsibility for Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans --10 CFR 50.47(b)(16)

Discuss why ITAAC were not developed for the above Planning Standards, and/or propose appropriate ITAAC in a format consistent with RG 1.206, table C.II.I.B1.

S-6 The document entitled "BBNPP IMPACT TO SSES EMERGENCY PREPAREDNESS PROGRAM EVALUATION" states on page 11C-3:

"Siting of the BBNPP will require modification of the Emergency Planning Zone (EPZ), however no changes to the ANS are expected to be necessary....However a study will be conducted to determine if additional sirens will be necessary. If required, new sirens will be installed and tested prior to initial low power testing."

Include this applicant commitment in table 2.3-1 "Emergency Planning ITAAC" for BBNPP, including the provision of new EPZ maps that depict any changes, and the commitment to conduct a siren coverage study, or explain why it is not necessary.

S-7 The document entitled "BBNPP IMPACT TO SSES EMERENCY PREPAREDNESS PROGRAM EVALUATION" states on page 11C-2:

"A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of BBNPP to demonstrate the ability of all utility emergency facilities to support a concurrent event."

Include this applicant commitment in the ITAAC table 2.3-1 "Emergency Planning ITAAC" for BBNPP, or explain why it is not necessary.

13.03-32 Response

- S-1 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, will be corrected to add the OSC to Item 3.0. Refer to Attachment 1 of this enclosure for the revised ITAAC section.
- S-2 COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised to include more detailed onsite exercise objectives. Refer to Attachment 1 of this enclosure for the revised ITAAC section.
- S-3 COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, acceptance criteria 6.3.1 (now 9.3.1) will be changed to state "for various meteorological conditions." Refer to Attachment 1 of this enclosure for the revised ITAAC section.
- S-4 The wording of RG 1.206 is generic and could be understood as limited to parameters associated with the determination of offsite PARs. The wording of the BBNPP ITAAC acceptance criterion is specific to indications that involve any of the monitored parameters associated with the plant EALs.
- S-5 The following planning standard areas will be added to the COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1:
 - Assignment of Responsibility-Organizational Control--10 CFR 50.47(b)(1)
 - Onsite Emergency Organization--10 CFR 50.47(b)(2)
 - Radiological Exposure Control--10 CFR 50.47(b)(11)
 - Medical and Public Health Support--10 CFR 50.47(b)(12)
 - Radiological Emergency Response Training--10 CFR 50.47(b)(15)
 - Responsibility for Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans --10 CFR 50.47(b)(16)

Emergency Response Support and Resources--10 CFR 50.47(b)(3) and Recovery and Reentry Planning and Post-Accident Operations --10 CFR 50.47(b)(13) were not included in the ITAAC, although the numbering convention was retained, because there was no generic content to follow. Refer to Attachment 1 of this enclosure for the revised ITAAC sections.

- S-6 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, acceptance criteria 5.3.3 will be added to address the siren system study analyzing the boundary changes to the 10 mile EPZ. Refer to Attachment 1 of this enclosure for the revised ITAAC section.
- S-7 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1, acceptance criteria 14.3 will be added to address the dual ERO evaluated drill. Refer to Attachment 1 of this enclosure for the revised ITAAC section.

13.03-32 COLA Impact

- S-1 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- S-2 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- S-3 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- S-5 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- S-6 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.
- S-7 BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure, Table 2.3-1 will be revised as provided in Attachment 1 in a future COLA revision.

Question 13.03-33

- FS-1 The BBNPP FSAR, in section 2.1.3.4 of Chapter 2, notes that BBNPP has developed a "Radioactive Emergency Plan." Explain if this document is the same as the BBNPP Emergency Plan and BBNPP EP Annex.
- FS-2 FSAR Section 2.2.2.7.2, "AIRCRAFT" states that the applicant is waiting for FAA flight data regarding military route UR 707. The staff cannot completely evaluate the potential impact of offsite events such as an airplane crash on the site until more information is received. Discuss when the licensee believes this information will be provided. Also describe the probable impact of flight data for this military route on the plants design and emergency preparedness measures to be taken in the event of an aircraft accident.
- FS-3 The staff is unable to locate in Part 5 of the Bell Bend Nuclear Power Plant COL an evaluation that compares the Emergency Plan to the acceptance criteria for Emergency Planning in Section 13.3 of the Standard Review Plan (SRP) Rev. 3, dated March 2007 (NUREG 0800) as required by 10 CFR 52.79 (a)(41). The US EPR FSAR, in section 1.9.2. of Chapter 1, states that the site specific assessment is located in Table 1-2 of ANP-10292 (AREVA, 2007). This document was not provided with the application submitted by PPL Bell Bend, LLC, and a document printed in 2007 may not contain site specific assessments of a COL submitted in late 2008. Provide this information in the COL or explain why it is not required.

13.03-33 Response

- FS-1 The reference to the "Radioactive Emergency Plan" will be changed in FSAR 2.1.3.4 to identify that the BBNPP Emergency Plan is the correct document.
- FS-2 Additional information regarding this FSAR section was also requested in NRC RAI No. 15. PPL provided a response to RAI No.15 on July 22, 2009 in Letter BNP-2009-162 (ML092580076) that provides the details and calculations associated with the response.

In summary, a response to the Freedom of Information Act Request sent to the Federal Aviation Administration (FAA) was received by the applicant regarding this military flight route, however, the number of military flights could not be confirmed by the FAA. The FAA was unable to provide any data with respect to military operations on VR 707 because the Enhanced Traffic Management System filters out military aircraft. It has been concluded that no additional review of military operations on VR 707 is necessary due to the proximity of the airway in comparison to the center of containment of BBNPP, in part, based on the following:

A probabilistic risk assessment of the aircraft hazard at BBNPP has been performed and shows a core damage frequency (CDF) of 9.9E-8/year, less than 1.0E-7/year. This analysis is demonstrably conservative, as it postulates the maximum possible damage to the structures that are not hardened for aircraft crash and applies this consequence to all crashes regardless of the size of the plane. This analysis is summarized in the BBNPP FSAR Section 19.1.5.4.4.

FS-3 The Evaluation of the BBNPP Emergency Plan against NUREG 0800, Standard Review Plan, Section 13.3 is provided in Attachment 2.

COLA Impact

FS-1 The BBNPP FSAR Section 2.1.3.4 will be revised as follows:

2.1.3.4 Low Population Zone

Onsite emergency preparedness personnel have developed an Emergency Planning Zone (EPZ) that extends beyond the BBNPP site boundary and its Radioactivo Emergency Plan establishes evacuation routes both onsite and offsite.

FS-2 The BBNPP COLA will not be revised as a result of this response.

FS-3 The BBNPP COLA will not be revised as a result of this response.

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Attachment 1

BBNPP COLA Part 10, License Conditions and Inspection, Tests, Analyses and Acceptance Criteria (ITAAC) Closure,

Table 2.3-1 Marked-up pages for responses to RAI 70 Question 13.03-15 Part A-3 and Question 13.03-32

Parts S-1, S-2, S-3, S-5, S-6, S-7

Table 2.3-1 – Emergency Planning ITAAC				
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
1.0 Assignment of Response	sibility (Organization Control)			
10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to	1.1 Each Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information.	1.1 An inspection will be performed to confirm that Letters of Agreement (LOA) for the {BBNPP} Emergency Plan were submitted to the NRC.	1.1 Letters of Agreement (LOA) for the {BBNPP} Emergency Plan, identifying the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information, as defined in Appendix 3 of the {BBNPP} Emergency Plan, are submitted to the NRC no less than 180 days prior to fuel load.	
respond and to augment its initial response on a continuous				
basis.				

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Onsite Emergency Organization 2.0

<u>10 CFR 50.47(b)(2) – On-shift</u>	2.1 The staff exists to provide minimum and	2.1 An inspection of the	2.1 The staff exists to provide
facility licensee responsibilities	augmented on-shift staffing levels, consistent	implementing procedures or	minimum and augmented on-shift
for emergency response are	with Table B-1 of NUREG-0654/FEMA-REP-	staffing rosters will be performed.	staffing levels, consistent with
unambiguously defined,	<u>1, Rev. 1. [B.5, B.7]</u>		NUREG-0654/FEMA-REP-1, Rev.
adequate staffing to provide			1 Table B-1 list of response
initial facility accident response			functions.
in key functional areas is			
maintained at all times, timely			
augmentation of response			
capabilities is available, and the			
interfaces among various onsite			
response activities and offsite			
support and response activities			
are specified.		·	

	<u>{</u> Table 2.3-1 – Emergency Planning ITAAC}			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
14.0 Emergency Classificati	on 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 response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	1 <u>4</u> .1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1]	14.1 An inspection of the control room, TSC, and EOF will be performed to verify that they have displays for retrieving facility system and effluent parameters specified in the emergency classification and EAL scheme.	14.1 The specified parameters are retrievable in the control room, TSC and EOF, and the ranges of the displays encompass the values specified in the emergency classification and EAL scheme.	
25.0 Notification Methods a	nd Procedures			
10 CFR 50.47(b)(5) - Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations:	2 <u>5</u> .1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]	2 <u>5</u> .1 A test of the dedicated offsite notification system will be performed to demonstrate the capabilities for providing initial notification to the offsite authorities after a simulated emergency classification.	2 <u>5</u> .1 The {Commonwealth of Pennsylvania and the counties of Luzerne and Columbia} receive notification within 15 minutes after the declaration of a simulated emergency classification.	
the content of initial and follow- up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.	2 <u>5</u> .2 The means exist to notify emergency response personnel. [E.2]	2 <u>5</u> .2 A test of the primary and backup ERO notification systems will be performed.	2 <u>5</u> .2 {BBNPP} emergency response personnel receive the notification message, as validated by a survey (indicating the time of receipt) or a report to ensure full staffing in the prescribed time requirement.	

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{Table 2.3-1 – Emergency Planning ITAAC}			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	25.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZEach organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system. [E.6]	Inspections, Tests, Analyses25.3.1 A test will be performed ofthe {BBNPP} Alert andNotification System. The clarifyingnotes listed in NEI 99-02,"Regulatory AssessmentPerformance Indicator Guideline",will be used for this test.25.3.2 The pre-operationalFederally evaluated exercise(ITAAC 814.0) will demonstratethe means to provide instructionsto the populace within the plumeexposure EPZ.	Acceptance Criteria 25.3.1 Greater than 94% of ANS sirens are capable of performing their function. 25.3.2 Successful completion of Federal Register 20-580, "FEMA Radiological Emergency Preparedness: Exercise Evaluation Methodology", Criterion 5.b.1 (OROs provide
		5.3.3 A report will be completed that determines whether additional sirens are necessary due to the change in EPZ boundary for BBNPP.	accurate emergency information and instruction to the public and the news media in a timely manner) during the pre- operational federally-evaluated exercise required in ITAAC 8 <u>14.0.</u> <u>5.3.3 FEMA concurrence BBNPP that greater than 94% of ANS sirens are capable of performing their function.</u>

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Table 2.3-1 – Emergency Planning ITAAC				
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
36.0 Emergency Communi	cations			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	3 <u>6</u> .1 The means exists for communications among the Control Room, TSC, <u>OSC</u> , EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d]	3 <u>6</u> .1 A test is performed to confirm the capability to communicate between: 1) the Control Room, TSC, <u>OSC</u> and EOF; 2) the Control Room, TSC, and EOF with the principal EOCs; and 3) the TSC and EOF with the radiological field monitoring teams.	36.1 Communications (both primary and secondary methods/ systems) are established: 1) Between the {BBNPP} Control Room, TSC <u>, OSC</u> and the EOF, 2) Between the {BBNPP} Control Room and TSC and the EOF with the {(a) Commonwealth of Pennsylvania warning point and EOC; b) Luzerne County warning point and EOC; and c) Columbia County warning point and EOC} and 3) Between the {BBNPP} TSC and EOF with the {BBNPP} radiological field monitoring teams.	
	36.2 The means exists for communications from the Control Room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) [or its successor system] between the onsite computer system and the NRC Operations Center.) [F.1.f]	 3<u>6</u>.2.1 A test is performed to confirm the capability to communicate using ENS from the Control Room, TSC and EOF to the NRC headquarters and regional office EOCs. 3<u>6</u>.2.2 A test is performed to confirm the capability to communicate between the TSC and EOF with the NRC Operations Center utilizing HPN. 3<u>6</u>.2.3 A test is performed to establish the capability to transfer data to the NRC Operations 	 <u>36</u>.2.1 Communications are established from the {BBNPP} Control Room and TSC and EOF to the NRC headquarters and regional office EOCs utilizing the ENS. <u>36</u>.2.2 The {BBNPP} TSC and EOF demonstrate communications with the NRC Operations Center using HPN. <u>36</u>.2.3 The access port for ERDS [or its successor system] exists and successfully completes a transfer of deta form (BPN) to 	
		Senter Via ERDS [or its successor system] through a link with the onsite computer systems and the NRC Operations Center.	transfer of data from {BBNPP} to the NRC Operations Center in accordance with 10 CFR 50 Appendix E.VI, Emergency Response Data System.	

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{I able 2.3-1 – Emergency Planning II AAC}			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
47.0 Public Education and I	nformation		
10 CFR 50.47(b)(7) – Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.	47.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b] {Note: For BBNPP, the space for the news media is provided in the Joint Information Center (JIC), co-located with the EOF.}	4 <u>7</u> .1 An inspection of the JIC will be conducted to verify adequate space is provided for a limited number of news media.	47.1 {The JIC is co-located with the EOF, and has at least 8,700 square feet of space.} A portion of this space can adequately accommodate a limited number of news media.
58.0 Emergency Eacilities at	ad Equipmont	- West	a card a characteristic de la cardena de la carde
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5 <u>8</u> .1 The licensee has established a Technical Support Center (TSC) and onsite Operations Support Center (OSC). [H.1, H.9]	58.1 An inspection of the as-built TSC and OSC will be performed including a test of the capabilities.	$\overline{58}.1.1$ The {BBNPP} TSC contains a minimum working space of {1875} square feet. $\overline{58}.1.2$ The {BBNPP} TSC is located on the same floor level as the Control Room. $\overline{58}.1.3$ The {BBNPP} TSC is located in the fully hardened Safeguards Building. It is also within the control room envelope (CRE) which maintains habitability during normal, off- normal and emergency conditions. $\overline{58}.1.4$ The {BBNPP} TSC communications capabilities are addressed by the ITAAC Acceptance Criterion $36.1.1$

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	{Table 2.3-1 – Emergency Planning ITAAC}			
	Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
				5 <u>8</u> .1.5 The (BBNPP) TSC
				receives and displays the plant
				and environmental information for
				the parameters specified in the
				{BBNPP} U.S. EPR EAL
				Technical Basis Manual and listed
				in ITAAC Acceptance Criterion
				<u>+4</u> .1.1.
				58.1.6 The capability to initiate
				emergency measures and
				conduct emergency assessment
				was successfully demonstrated
ĺ				during the pre-operational
				tederally-evaluated exercise
,				required in ITAAC 814.0.
				58.1.7 The {BBNPP} Operations
				support-center (OSC) is located
				within the protected area
				separate from the (BBNPP)
				Control Boom and Technical
				Support Center
				58 1 8 The (BBNPP) U.S. FPB
				OSC communications capabilities
				are addressed by the Acceptance
				Criterion 3 6.1.1.
		58.2 The licensee has established an EOF.	58.2.1 A test of the capabilities of	58.2.1.1 {The BBNPP EOF has a
		[H.2]	the EOF will be performed,	at least 8,000 square feet and is
				large enough for required
			<u>{NOTE</u> : The BBNPP EOF is a	systems, equipment, records and
			shared facility for SESS and	storage.
			BBNPP and was previously	5 <u>8</u> .2.1.2 The { BBNPP } EOF
			inspected for SESS. }	communications capabilities are
				addressed by the Acceptance
	· · · · · · · · · · · · · · · · · · ·			Criterion 36.1.1.

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	{Table 2.3-1 – Emergency Planning ITAAC}				
	Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
				5 <u>8</u> .2.1.3 The { BBNPP } EOF's	
				plant information system can	
				retrieve and display the	
				radiological, meteorological, plant	
				system data for the parameters	
				Specified in the (BBNPP) 0.5.	
				Manual and listed in ITAAC	
				Acceptance Criterion 14 1 1	
				58.2.1.4 The capability to perform	
				offsite protective measures was	
				successfully demonstrated during	
				the pre-operational federally-	
				evaluated exercise required in	
				ITAAC 8 <u>14</u> .0.	
			58.2.2 An inspection of the	58.2.2.1 The Human Factors	
			implementation of the Human	Engineering Program design	
			Factors Engineering Program	requirements for the {BBINPP} are	
			performed	incorporated in the EOF.	
l			penemied.		
ſ	69.0 Accident Assessment				
	10 CFR 50.47(b)(9) – Adequate	69.1 The means exists to provide initial and	eg. I A test will be performed to	69.1 A report exists that confirms	
	equipment for assessing and	throughout the course of an accident [] 2]	exists to provide initial and	accomplished including use of	
	monitoring actual or potential		continuing radiological	selected monitoring parameters	
	offsite consequences of a		assessment throughout the	specified in the <i>f</i> BBNPP } U.S.	
	radiological emergency		course of an accident.	EPR EAL Technical Bases	
	condition are in use.			Manual and listed in ITAAC	
				Acceptance Criterion 14.1.1 to	
				assess simulated degraded plant	
				conditions and initiate protective	
				actions in accordance with the	
				following criteria.	
				A. Accident Assessment and	
				I. Initiating conditions identified,	
				and the emergency correctly	
				classified throughout the drill	
1			······································	classified infoughout the unit.	

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	{Table 2.3-1 – Emergency Planning ITAAC}				
	Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
-				B. Radiological Assessment and Control	
-				1. Onsite radiological surveys performed and samples collected.	
				2. Radiation exposure of emergency workers monitored and controlled.	
				3. Field monitoring teams assembled and deployed.	
				 Field team data collected and disseminated. 	
				5. Dose projections developed.	
				 The decision whether to issue radioprotective drugs to {BBNPP} emergency workers made. 	
				7. Protective action recommendations developed and communicated to appropriate authorities.	
		69.2 The means exists 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]	69.2 An analysis of emergency plan implementing procedures will be performed.	69.2 A methodology has been established to determine source term of releases of radioactive materials within plant systems and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors.	
		69.3 The means exists 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]	69.3 An analysis of emergency plan implementing procedures will be performed.	69.3.1 A methodology has been established accounting for the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various radiological meteorological conditions.	

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Dianning Standard			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			69.3.2 The continuous
			assessment of the impact of the
			release of radioactive materials t
	· · ·		the environment is addressed in
			ITAAC Acceptance Criteria 69.1
	69.4 The means exists to acquire and	69.4 An inspection will be	69.4 The {BBNPP} Control Roor
	evaluate meteorological information. [I.5]	performed to verify the	TSC and EOF can acquire {wind
		meteorological data/information is	speed (at 10m and 60m), wind
		available to emergency response	direction data (at 10m and 60m)
		personnel in the Control Room,	and ambient temperature (at 10
		TSC and EOF.	and 60m).}
	69.5 The means exists to make rapid	6 <u>9</u> .5 An analysis of emergency	69.5.1 A methodology has been
	assessments of actual or potential magnitude	plan implementing procedures will	established to provide rapid
	and locations of radiological hazards through	be performed.	assessment of the actual or
	liquid or gaseous release pathways,		potential magnitude and locatior
	including activation, notification means, field		of any radiological hazards
	team composition, transportation,		through liquid or gaseous releas
	communication, monitoring equipment, and		_pathways.
	estimated deployment times. [I.8]		69.5.2 The activation, notification
			means, field team composition,
			transportation, communication,
			monitoring equipment, and
			estimated deployment times are
			addressed in ITAAC Acceptance
			Criteria 69.1
	69.6 The capability exists to detect and	69.6 An inspection will be	69.6 The equipment and
	measure radioiodine concentrations in air in	performed of the capabilities	procedures are adequate to
	the plume exposure EPZ, as low as 10^{-7}	detect and measure radioiodine	detect and measure radioiodine
	μCi/cc (microcuries per cubic centimeter)	concentrations in air in the plume	concentrations in air in the plum
	under field conditions. [I.9]	exposure EPZ, as low as 1E-07	exposure EPZ, as low as 1E-07
		µCi/cc (microcuries per cubic	µCi/cc (microcuries per cubic
		centimeter) under field conditions.	centimeter).

{I able 2.3-1 – Emergency Planning IT AAC}				
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
	69.7 The means exists 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]	69.7 An analysis of emergency plan implementing procedures will be performed to verify that a methodology is provided to establish means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the isotopes specified in Table 2.2 of NUREG- 1228.	69.7 The means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the isotopes specified in NUREG-1228 has been established.	
710.0 Protective Response		······································	· · · · · · · · · · · · · · · · · · ·	
10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure 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 EPZ appropriate to the locale have been developed.	 7<u>10</u>.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1] 1. employees not having emergency assignments; 2. visitors; 3. contractor and construction personnel; and 4. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area. 	7 <u>10</u> .1 A test will be performed to confirm the capability to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator.	 7<u>10</u>.1.1 During a drill or exercise, notification and instructions are provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system. 7<u>10</u>.1.2 During a drill or exercise, warnings are provided to individuals outside the Protected Area, but within the Owner Controlled Area using the implementing procedures for the {BBNPP} Emergency Plan submitted in accordance with ITAAC 9<u>17</u>.0. 	

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11.0 - Radiological Exposure Controls

10 CFR 50.47(b)(11) - Means	11.1 The means exists to provide onsite	11.1 A test will be performed of	11.1 The means to provide onsite
for controlling radiological	radiation protection. [K.2]	the capabilities.	radiation protection in accordance
exposures, in an emergency,			with the implementing procedures
are established for emergency			were demonstrated per ITAAC
workers. The means for			14.0 Note E.2.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
controlling radiological	11.2 The means exists to provide 24-hour-	11.2 A test will be performed of	11.2 The means to provide 24-
exposures shall include	per-day capability to determine the doses	the capabilities.	hour-per-day capability to
exposure guidelines consistent	received by emergency personnel and		determine the doses received by
with EPA Emergency Worker	maintain does records. [K.3]		emergency personnel and
and Lifesaving Activity PAGs.			maintain dose records in
			accordance with the implementing
			procedures were demonstrated
			per ITAAC 14.0 Note E.2.
	11.3 The means exists to decontaminate	11.3 A test will be performed of	11.3 The means to
	relocated onsite and emergency personnel,	the capabilities.	decontaminate relocated onsite
	including waste disposal. [K.5.b, K.7]		and emergency personnel,
			including waste disposal in
			accordance with the implementing
			procedures were demonstrated
			per ITAAC 14.0 Note E.8.
	11.4 The means exists to provide onsite	11.4 A test will be performed of	11.4 The means to provide onsite
	contamination control measures. [K.6]	the capabilities.	contamination control measures
			in accordance with the
			implementing procedures were
			demonstrated per ITAAC 14.0
			Note E.9.

{Table 2.3-1 – Emergency Planning ITAAC}

12.0 Medical and Public Health Support

<u>10 CFR 50.47(b)(12) –</u> <u>Arrangements are made for</u> <u>medical services for</u> <u>contaminated, injured</u> <u>individuals.</u>	12.1 Each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals. [L.1]	<u>12.1 An inspection will be</u> performed to confirm that Letters of Agreement (LOA) for the <u>{BBNPP} Emergency Plan were</u> submitted to the NRC.	12.1 Letters of Agreement (LOA) for the {BBNPP} Emergency Plan for hospitals and medical services having the capability for evaluation of radiation exposure and uptake, as established in Appendix 3 of the Emergency Plan, are submitted to the NRC no less than 180 days prior to fuel load.
	<u>12.2 The means exists for onsite first aid</u> capability. [L.2]	<u>12.2 A test will be performed of</u> the capabilities.	12.2 The means for onsite first aid capability in accordance with the implementing procedures were demonstrated during the evaluated exercise.

		{Table 2.3-1 – Emergency	Planning ITAAC}	
	Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
		<u>12.3 Each organization shall arrange for</u> <u>transporting victims of radiological accidents</u> to medical support facilities. [L.4]	12.3 An inspection will be performed to confirm that Letters of Agreement (LOA) for the {BBNPP} Emergency Plan were submitted to the NRC.	Letters of Agreement (LOA) for the {BBNPP} Emergency Plan for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities, as established in Appendix 3 of the Emergency Plan, are submitted to the NRC no less
				than 180 days prior to fuel load.
	8 <u>14</u> .0 Exercises and Drills			
	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.	8 <u>14</u> .1 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 control EPZ. [N.1]	814.1 A full participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	8 <u>14</u> .1.1: <u>See note</u> The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives are met, and there are no uncorrected onsite exercise deficiencies in accordance with NRC Inspection Procedure (IP- 71114.01, "Exercise Evaluation").
-	、 ,		-	8 <u>14</u> .1.2 The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives are met, and there are

814.2 An off-hours/unannounced

drill will be conducted prior to full

mobilization of the onsite ERO.

power operation to test

no uncorrected offsite exercise deficiencies in accordance with Federal Register 20-580, FEMA

Radiological Emergency Preparedness: Exercise

Supervisor}.

Evaluation Methodology, and agreed to Extent of Play. 814.2.1 Onsite emergency

rësponse personnel are mobilized

in sufficient numbers to fully staff

and activate the TSC, OSC, EOF and JIC and command and control turnover from the {Shift

{Table 2.3-1 – Emergency Planning ITAAC}				
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria	
		14.3 A drill requiring mobilization	14.3 A drill critique report has	
		and response activities of both	been developed with an overall	
		the BBNPP and SSES EROs will	conclusion of PASS for the dual	
		be conducted prior to operation of	ERO scenario objectives.	
		BBNPP to demonstrate the ability		
		of all utility emergency facilities to		
· · · ·		support a concurrent event.		
15.0 Radiological Emergency Response Training				
<u>10 CFR 50.47(b)(15) –</u>	15.1 Site-specific emergency response	15.1 An inspection of the	15.1 ERO personnel are qualified	
Radiological emergency	training has been provided for those who	requirements in EPIP-904,	per the requirements in EPIP-904,	
response training is provided to	may be called upon to provide assistance in	Emergency Response Training	Emergency Response Training.	

will be performed.

<u>assist i</u>	n an emergency.				•
16.0	Résponsibility	for the Pl	anning Effe	vrt	

the event of an emergency. [O.1]

<u>10 CFR 50.47(b)(16) –</u>	16.1 The emergency response plans have	16.1 An inspection will be	16.1 Documents have been
Responsibilities for plan	been forwarded to all organizations and	performed to confirm that the	distributed in accordance with the
development and review and	appropriate individuals with responsibility for	controlled distribution list of	controlled distribution list.
for distribution of emergency	implementation of the plans. [P.5]	{BBNPP} emergency planning	-
plans are established, and		documents have been forwarded	
planners are properly trained.		to organizations and appropriate	· .
		individuals with responsibility for	
		implementation of the plans.	

917.0 Implementing Procedures

those who may be called on to

applicant's detailed implementing procedures for its emergency plan shall be	man roo days phor to rue road.	for the {BBNPP} Emergency Plan were submitted to the NRC.	defined in Appendix 2 of the Emergency Plan, are submitted to the NRC no less than 180 days prior to fuel load.
emergency plan shall be submitted to the Commission			

Note: The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50. At a minimum, the onsite exercise objectives listed below are met and there are no uncorrected onsite exercise deficiencies.

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 exercise.

Standard Criteria:

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.

B. Notifications

1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel.

Standard Criteria:

- a. Correctly complete the designated checklist and activate the ERO notification system using the appropriate message scenario.
- b. <u>Confirm the ERO is notified and minimum staffing personnel respond to their assigned facilities within 60 minutes of an event declaration requiring facility activation.</u>
- Demonstrate the ability to notify responsible State, local government agencies within 15 minutes and the NRC within 60 minutes after declaring an emergency.

Standard Criteria:

- a. <u>Transmit information accurately using the designated checklist, in accordance with approved emergency implementing procedures, within 15</u> minutes of event classification.
- b. <u>Transmit information using the designated checklist as soon as possible following State and local notification and within 60 minutes of event</u> classification for an initial notification of the NRC.
- 3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.

Standard Criteria:

- a. Initiate notification of onsite individuals (via plant page, telephone, etc.), using the designated checklist, within 15 minutes of event declaration.
- 4. Demonstrate the capability of the Prompt Notification System (PNS), for the public, to operate properly when required.

Standard Criteria:

- a. <u>Greater than 94% of ANS sirens are capable of performing their function as indicated by the feedback system. The clarifying notes listed in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, will be used for this test.</u>
- C. Emergency Response
 - 1. Demonstrate the capability to direct and control emergency operations.

Standard Criteria:

a. <u>Facility command and control is demonstrated by the Shift Supervisor in the Control Room (simulator) upon event declaration, and by the Emergency Plant Manager in the Technical Support Center (TSC) / Emergency Director in the Emergency Operations Facility (EOF) within 60 minutes of ERO notification.</u>

 Demonstrate the ability to transfer overall command and control from the Shift Supervisor in the Control Room (simulator) to the Emergency Plant Manager in the TSC and/or the Emergency Director in the EOF.

Standard Criteria:

- a. Evaluation of briefings that were conducted prior to turnover includes current plant conditions, response efforts and priorities, and the formal relief of delegable and non-delegable responsibilities.
- 3. Demonstrate the ability to prepare for around the clock staffing requirements.

Standard Criteria:

- a. Complete 24-hour staff assignments.
- 4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring a Protected Area assembly and accountability.

Standard Criteria:

a. <u>All Protected Area personnel are assembled in their designated assembly area and accountability is completed within 30 minutes of an emergency requiring Protected Area assembly and accountability.</u>

D. Emergency Response Facilities

- 1. Demonstrate activation of the Operational Support Center (OSC), Technical Support Center (TSC) and Emergency Operations Facility (EOF). Standard Criteria:
 - a. Minimum staffing of the TSC, EOF and OSC is achieved within 60 minutes of the initial ERO notification.
- 2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, EOF, and Joint Information Center (JIC), as appropriate.

Standard Criteria:

- a. <u>The adequacy of the emergency equipment in the emergency response facilities, including availability and consistency with emergency implementing procedures, supported the accomplishment of all of the evaluated performance objectives.</u>
- b. <u>The Security Coordinator implements and performs all appropriate steps from the emergency implementing procedures for the ingress, egress</u> and control of onsite and offsite personnel responding to the site during the scenario.
- c. <u>The Radiation Protection Manager (TSC) and staff correctly implements and performs all appropriate steps from the designated checklist</u> when a simulated onsite/offsite release has occurred during the scenario.
- 3. Demonstrate the adequacy of communications for all emergency support resources.

Standard Criteria:

- a. Emergency response communications listed in emergency implementing procedures are available and operational.
- b. Communications systems are adequate to support CR, TSC, OSC, EOF, and JIC Activation Checklists.
- c. Emergency response facility personnel are able to operate all specified communication systems.
- d. Clear primary communications links are established and maintained for the duration of the exercise.

E. Radiological Assessment and Control

1. Demonstrate the ability to obtain onsite radiological surveys and samples.

Standard Criteria:

- a. <u>RP personnel demonstrate the ability to obtain appropriate instruments (range and type) and take surveys for scenario conditions that allow EPA PAGs to be exceeded.</u>
- b. Airborne samples are properly taken, reported and assessed and utilized when the conditions indicate the need for the information.
- 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.

Standard Criteria:

- a. <u>Emergency workers are issued self- reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits</u> until the ED authorizes the use of emergency EPA limits.
- b. Exposure records are available, either from the ALARA computer or a hard copy dose report, and are updated and reviewed throughout the scenario.
- 3. Demonstrate the ability to assemble and deploy monitoring teams from the decision to do so.

Standard Criteria:

- a. When conditions require offsite surveys, Monitoring Teams are available, properly equipped, briefed and are dispatched in a timely manner.
- 4. Demonstrate the ability to satisfactorily collect and disseminate field team data.

Standard Criteria:

- a. Offsite radiological environmental data collected is provided as dose rate and counts per minute (cpm) from the plume, both open and closed window, and air sample (gross and net cpm) for particulate and iodine, if applicable.
- b. Offsite radiological environmental data is promptly and accurately communicated from the monitoring team to the Environmental Assessment Director.
- 5. Demonstrate the ability to develop dose projections.

Standard Criteria:

- a. <u>The Radiological Assessment Specialist or Radiological Assessment Coordinator performs timely and accurately dose projections in accordance with emergency implementing procedures and reports them to the Radiological Assessment Director.</u>
- 6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to emergency workers.

Standard Criteria:

- a. <u>Personnel are briefed and issued KI when scenario conditions exceed 25 rem committed dose equivalent (CDE) or the conscious decision is</u> made to issue KI as a precautionary measure.
- 7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities within 15 minutes of development.

Standard Criteria:

- a. <u>Total effective dose equivalent (TEDE) and committed dose equivalent CDE to the thyroid dose projections from the dose assessment</u> <u>computer code are compared to the PAGs</u>.
- b. PARs are accurately developed within 15 minutes of the time information of the condition warranting a PAR was available to the ERO.
- c. PAR's are accurately transmitted within 15 minutes of PAR development.

- 8. Demonstrate the ability to decontaminate relocated onsite and emergency personnel, including waste disposal. Standard Criteria:
 - a. The ability to effectively monitor and detect contamination on evacuees was demonstrated.
 - b. The ability to properly decontaminate an evacuee was demonstrated.
 - c. <u>The proper control and disposal of radioactive waste was demonstrated.</u>
- 9. Demonstrate the ability to monitor and control facility habitability.

Standard Criteria:

- a. Periodic radiological surveys conducted in occupied areas was demonstrated.
- b. Evaluation of habitability of assembly areas and relocation areas was demonstrated.
- c. Establishment and effective use of access control points following release or based on release potential was demonstrated.
- d. Proper start-up and operation of emergency ventilation systems for the emergency conditions was demonstrated.
- e. A ban on eating and drinking was provided, until conditions were verified acceptable for resumption of these activities, was demonstrated.

F. Public Information

1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with emergency implementing procedures.

Standard Criteria:

- a. Information provided to the media/public is prepared at a level that the public can understand. Visuals and handouts are provided as needed to clarify the information.
- b. Information is coordinated with Federal, State and local agencies to maintain factual consistency.
- 2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion.

Standard Criteria:

- a. Calls are answered in a timely manner with the correct information, in accordance with emergency implementation procedures.
- b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness.
- c. <u>Rumors are identified and addressed.</u>

G. Evaluation

- 1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action. Standard Criteria:
 - a. An exercise time line is developed, followed by an evaluation of the objectives against the expectations of the timeline.
 - b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved.
 - c. Areas requiring improvement are entered in the stations corrective action program.

Attachment 2

Evaluation of the Bell Bend Nuclear Power Plant Emergency Plan Against NUREG-0800, Standard Review Plan, Section 13.3

Appendix 1 and 2 of the Emergency Plan contain tables that provide specific cross references to the regulations and EP related guidance documents.

Sect	ion II. Acceptance Criteria	Section Reference/Comments
1.	All of the standards of 10 CFR 50.47(b), as supported by the guidance in the corresponding planning standards and evaluation criteria of NUREG 0654/FEMA-REP-1, Rev. 1, (including the March 2002 addenda) must be met before an OL is issued pursuant to 10 CFR 50.57 or a COL is issued pursuant to 10 CFR 52.97.	The BBNPP Emergency Plan has been developed in a format consistent with the format of NUREG-0654. It contains the 10 CFR 50.54(b) standards specified by each of the NUREG-0654 evaluation criteria.
	In addition, for the first reactor at a site, Appendix E to 10 CFR Part 50 requires that a full participation exercise be conducted within 2 years before NRC issuance of an operating license for full power (i.e., one authorizing operation above 5 percent of rated power). Because this exercise would be included in the ITAAC required for a COL, its acceptance criteria would have to be satisfied before fuel loading pursuant to a COL (see Table 14.3.10-1).	As documented in ITAAC #14.1, a full participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.
2.	The onsite and, except as provided in 10 CFR 50.47(d), offsite emergency response plans for nuclear power reactors must meet the standards established in 10 CFR50.47(b) and applicable requirements of Appendix E to 10 CFR Part 50. Compliance with these regulations is determined by using the guidance in Regulatory Guide (RG) 1.101, Rev. 2, which endorses NUREG-0654/FEMA-REP-1, Rev. 1, and through it NUREG-0396, and NUREG-0696. NUREG-0654/FEMA-REP-1, Rev. 1, establishes an acceptable basis for NRC licensees and State, tribal and local governments to develop radiological emergency plans and procedures, and improve their overall state of emergency preparedness.	The BBNPP Emergency Plan has been developed in a format consistent with the format of NUREG-0654 to specifically address each of the NUREG-0654 evaluation criteria. Applicable NUREG-0396 elements are addressed in Emergency Plan Part II Sections A-2 and B-7.
	NUREG-0696 discusses the facilities and systems to be provided by nuclear power plant licensees to aid the licensee's response to emergency situations.	NUREG-0696 elements are addressed in Emergency Plan Part II Sections F and H.
	Additional guidance is provided in NUREG-0718, NUREG-0737, Supplement 1 to NUREG-0737, NUREG-0814, and Supplement 3 to NUREG-0654/FEMA-REP-1, Rev. 1.	Emergency Plan related onsite facility and equipment elements of NUREG-0718, NUREG-0737, NUREG- 0737 Supplement 1 and NUREG-0814 elements are addressed in Emergency Plan Part II Sections F and H and in the DCD. The BBNPP EOF is shared with SSES. It has been built to the specifications of the applicable requirements and approved by the NRC for the use of the existing operating stations.
		Adherence to NUREG-0737 is referenced in the US EPR DCD.
		NUREG-0654 Supplement 3 is addressed in Emergency Plan Part II Section J.

Sect	ion II. Acceptance Criteria	Section Reference/Comments
Sect	 ion II. Acceptance Criteria 10 CFR 50.47(b)(4) requires a standard emergency classification and action level scheme. Section IV.C, "Activation of Emergency Organization," of Appendix E identifies the four emergency classes. Section IV.B, "Assessment Actions," of Appendix E to 10 CFR Part 50 also requires emergency action levels. The emergency plan should include the emergency classification level scheme described in Appendix 1 and Supplement 3 to NUREG-0654. The staff anticipates that any new application will use an emergency action level scheme similar to that described in Revision 4 of NEI 99-01, "Methodology for Development of Emergency Action Levels," dated January 2003, which was endorsed in Revision 4 Regulatory Guide (RG) 1.101, 	Section Reference/Comments An EAL scheme has been developed in accordance with NEI 99-01 Rev 5. As identified in the response to NRC RAI No. 38, question 13.03-1, certain parameter values for the BBNPP EALs required by 10 CFR 50.47(b)(4) and App. E.IV.B of 10 CFR Part 50 cannot be determined at this time. Specifically, several EAL thresholds cannot be derived until related as-built plant design information and Technical Specification set points are finalized.
	"Emergency Planning and Preparedness for Nuclear Power Reactors," dated October 2003. However, Revision 4 of NEI 99-01, "Methodology for Development of Emergency Action Levels," dated January 2003, is not considered to be entirely applicable to advanced light water reactor designs. Even though the majority of Revision 4 of NEI 99-01 may be applicable to any reactor design and should be used, the unique characteristics of the new reactor should be addressed in the development of emergency action levels specific to the new plant and the site. The format of the emergency action level scheme should follow the convention established in Regulatory Information Summary 2003-18, "Use of Nuclear Energy Institute (NEI) 99-01, Methodology for Development of Emergency Action Levels," Revision 4, dated January 2003, and its supplements.	As such, PPL has withdrawn the submitted BBNPP COLA Part 5 related EAL Enclosures A, B and C and has used Option 2. Option 2 calls for the re-submittal of Section D of the Emergency Plan which addresses the four critical elements of an EAL scheme.
	Section IV.B. "Assessment Actions," of Appendix E to 10 CFR Part 50 also requires that the initial emergency actions be discussed and agreed on by the State and local governmental authorities. The applicant should provide some form of confirmation of the agreement, such as a letter signed by State and local governmental authorities, in the emergency plan, if the applicant provides emergency action levels different from those for the existing reactor(s) on the site.	BBNPP COLA Part 5 Enclosure D includes signed letters from PEMA, Pennsylvania DEP Columbia County and Luzerne County which provide agreement with the EAL scheme developed in accordance with NEI 99-01 Rev 5.

Sect	ion II. Acceptance Criteria	Section Reference/Comments
4.	Appendix 2, "Meteorological Criteria for Emergency Preparedness at Operating Nuclear Power Plants," to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance related to the planning standards codified in 10 CFR 50.47(b)(8) and (9) and the requirements of Section IV.E.2 of Appendix E to 10 CFR Part 50. Proposed revision 1 to Regulatory Guide 1.23, "Meteorological Programs in Support of Nuclear Power Plants," is referenced in Appendix 2 to NUREG-0654 as a source of acceptance criteria for meteorological measurements. Since Appendix 2 was issued, additional guidance related to meteorological systems has been developed. NUREG-0696, "Functional Criteria for Emergency Response Facilities," refers to the guidance in proposed Revision 1 to Regulatory Guide 1.23, Revision 2 to Regulatory Guide 1.97, and Appendix 2 to NUREG- 0654/FEMA-REP-1, Rev. 1. Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," (Generic Letter 82-33) clarifies the guidance in Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-water-cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," and contains guidance related to the need to provide reliable indication of meteorological variables in the control room, Technical Support Center, and Emergency Operations Facility in the vicinity (up to about 10 miles) of the plant site. Revision 3 of Regulatory Guide 1.97 was issued in May 1983 and Revision 4 was issued in June 2006. Revision 1 to Regulatory Guide 1.23 was issued in March 2007.	A meteorological monitoring system that meets the regulatory requirements and guidance documents is described in Emergency Plan Part II Section H.5.a.1.
5.	Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," (Generic Letter 82-33) clarifies the guidance in Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-water-cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," and contains guidance related to upgrading emergency response facilities and meeting the requirements of 10 CFR 50.47(b)(6), (8), (9) and Section IV.E of 10 CFR Part 50.	Information that describes the major elements for SPDS and ERFs are contained in Emergency Plan Part II Sections H.1, H.2, H.5.c.2 and Annex Section 4.1. Meteorological monitoring capabilities that meet the elements of the reference are described in Emergency Plan Part II Section H.5.a.1.
6.	Appendix 3, "Means for Providing Prompt Alerting and Notification of Response Organizations and the Population," to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance related to 10 CFR 50.47(b)(5) and (6).	A public alert notification system that meets the regulatory requirements and guidance documents is described in Emergency Plan Part II Section E.6 and the FEMA ANS design certification for SSES.
7.	Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents," to NUREG-0654/FEMA-REP-1, Rev.1, provides guidance for the development of protective action recommendations for the public for severe reactor accidents. The guidance updates and simplifies the decision-making process for protective actions for severe reactor accidents given in Appendix 1 to NUREG-0654/FEMA-REP-1, Rev.1.	A PAR process that meets the criteria of NUREG- 0654 Supplement 3 is described in Emergency Plan Part II Sections J.7, J.9 and J.10.

Sect	ion II. Acceptance Criteria	Section Reference/Comments
8.	RG 1.101, Rev. 2, states that the criteria and recommendations in NUREG- 654/FEMAREP-1, Rev. 1, are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47. Except for cases in which the applicant or licensee proposes acceptable alternative methods for complying with specific portions of the regulations, the methods described in NUREG 0654/FEMA-REP-1, Rev. 1, will be used as a basis for evaluating the adequacy of the emergency plans. If an applicant proposes alternative practice or method for complying with the regulations, the application should provide an appropriate justification.	The BBNPP Emergency Plan has been developed in a format consistent with the format of NUREG-0654 to specifically address each of the NUREG-0654 evaluation criteria. Alternate methods are not used.
9.	In addition to NUREG-0654/FEMA-REP-1, Rev. 1, FEMA will evaluate State, tribal, and local government planning and preparedness on the basis of applicable policies and guidance, including approved alternative approaches and methods. FEMA will base its findings and determinations, relating to the adequacy of offsite radiological emergency planning and preparedness, on these evaluations.	Not applicable to this conformance evaluation.
10.	10 CFR 50.33(g), 10 CFR 50.47(c)(2), and Section I of Appendix E to 10 CFR Part 50 require that the size of the EPZ for a nuclear power plant shall be determined in relation to local emergency response needs and capabilities, as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. 10 CFR 52.77 requires that the COL application must contain all of the information required by 10 CFR 50.33. 10 CFR 50.33(g) requires that an applicant for an operating license submit radiological emergency response plans of State and local government entities that are wholly or partially within the 10-mile plume exposure EPZ, as well as the plans of State governments wholly or partially within the 50- mile ingestion pathway EPZ. An applicant should also submit plans for tribal governmental entities affected by the 10-mile EPZ. NUREG-0396 provides additional guidance relating to the definition of the EPZs.	Siting of BBNPP will require modification of the Emergency Planning Zone (EPZ) boundary established for SSES.
11.	Section IV of Appendix E to 10 CFR Part 50, through 10 CFR 52.79(a)(21) and10 CFR 50.34, requires that an application for an OL or COL provide an analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ; i.e., an ETE. The NRC regulations do not specify a limit for such estimated evacuation times. An ETE can identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. An ETE provides an analysis of the time required to evacuate and for taking other protective actions for various sectors and distances within the plume exposure EPZ. This information can be used by decision makers in responding to an actual emergency to aid in deciding what protective actions to implement. Appendix 4 to NUREG-0654/FEMAREP-1, Rev. 1, and Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provide guidance relating to performing an ETE analysis. NUREG/CR-6863 provides additional information on ETEs.	The ETE study report, developed in accordance with the applicable regulations and guidance documents, is referenced in Emergency Plan Part II Section J.8 and Appendix 5, and is provided in Part 5 of the COL application.

Sect	on II. Acceptance Criteria	Section Reference/Comments
12.	Section VI of Appendix E to 10 CFR Part 50 requires an emergency response data system (ERDS). The ERDS is a direct near real-time electronic data link between a licensee's onsite computer system and the NRC Operations Center, and provides for the automated transmission of a limited data set of selected parameters from a licensee's installed onsite computer system in the event of an emergency. NUREG-1394 provides the minimum standards and acceptable methods that may be used to implement and comply with the ERDS requirements.	An ERDS that meets the regulatory requirements and guidance documents is described in Emergency Plan Part II Section F.1.b-d.5.
13.	Insofar as emergency planning and preparedness requirements are concerned, 10 CFR 50.47(d) provides that a license authorizing fuel loading and/or low-power testing and training (up to 5 percent of the rated power) may be issued after a finding is made by the NRC that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The assessment of the applicant's onsite emergency plan will be based on the pertinent standards in 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50. However, the acceptability of an applicant's emergency plans will be reviewed against the standards with offsite aspects presented in 10 CFR 50.47(d)(1)-(7).	
·	50.47(d)(1) Arrangements for requesting and effectively using offsite assistance on site have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned onsite response have been identified.	Offsite assistance used onsite is described in Emergency Plan Part I Section H and Part II Section A. As stated in ITAAC 8.2, the EOF is a shared facility with SSES and includes space to accommodate offsite responders and has been previously inspected. Supporting organizations are described in Emergency Plan Sections B.8 and C.4.
	50.47(d)(2) Procedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.	Emergency Plan Appendix 2 lists EPIP-400, Emergency Notifications, as the procedure for the described function. Actual procedure development is a product of the ITAAC #17.1.
·	50.47(d)(3) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.	Notification of offsite personnel are described in Emergency Plan Part II Sections E.1-4
	50.47(d)(4) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.	Offsite EOCs are described in Emergency Plan Part II Section H.3.
	50.47(d)(5) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use onsite.	Radiation monitoring capabilities are described in Emergency Plan Part II Sections H.5.b & c, H.6.b, I.2, I.4 and I.7.

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Sect	ion II. Acceptance Criteria	Section Reference/Comments
	50.47(d)(6) Arrangements are made for medical services for contaminated and injured onsite individuals.	Medical response capabilities are described in Emergency Plan Part II Section L.
	50.47(d)(7) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency onsite.	Training offered to offsite agencies is described in Emergency Plan Part II Section O.1.
14.	Where an applicant for an OL or COL asserts that its inability to demonstrate compliance with the offsite emergency planning requirements of 10 CFR 50.47(b) is wholly or substantially the result of the non-participation of State and/or local governments, an operating license may be issued if the applicant demonstrates to the Commission's satisfaction those elements listed in 10 CFR 50.47(c)(1)(i)-(iii). (See 10 CFR 50.47(c)(1) and 10 CFR 52.79(a)(22)(ii).) Supplement 1 to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance for the development, review, and evaluation of utility offsite radiological emergency response planning and preparedness, for those situations in which State and/or local governments decline to participate in emergency planning.	The commonwealth and local government response agencies support and participate in the emergency planning of BBNPP as documented in the submitted Letters of Agreement (LOAs).
15.	The minimum acceptance criteria for all ESP applications, located in 10 CFR 52.17(b)(1), require that ESP applications identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. If such physical characteristics are identified, the applicant must also identify measures that would, when implemented, mitigate or eliminate the significant impediment. Applications providing only the information required by 10 CFR 52.17(b)(1) must also include a description of contacts and arrangements (preferably letters of agreement) made with local, State, and Federal governmental agencies with emergency planning responsibilities, in accordance with 10 CFR 52.17(b)(4). The applicant may choose to submit additional emergency planning information in the ESP application to address the two options in 10 CFR 52.17(b)(2). The two options allow an ESP applicant to propose either major features of the emergency plans, or to provide complete and integrated emergency plans. While neither option is required, each would provide for a more definitive finding concerning emergency plans and preparedness at the ESP stage than would be the case for submittal of only the minimum required information. Complete and integrated emergency plans in an ESP application will be reviewed in accordance with the applicable requirements of 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance relating to emergency planning information.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COL submittal (not an ESP).

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Sect	ion II. Acceptance Criteria	Section Reference/Comments
16.	For an ESP application, a preliminary analysis of evacuation times is one example of how some significant impediments to the development of emergency plans may be identified. Other factors, such as the availability of adequate shelter facilities, in consideration of local building practices and land use (e.g., outdoor recreation facilities, including camps, beaches, hunting or fishing areas), and the presence of large institutional or other special needs populations (e.g., schools, hospitals, nursing homes, prisons) should also be addressed when identifying significant impediments to the development of emergency plans. Any ETE analysis or other identification of physical impediments should include the latest population census numbers and reflect the most recent local conditions. Appendix 4 to NUREG-0654/FEMA-REP-1, Rev. 1, and Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provide guidance relating to performing an ETE analysis. NUREG/CR-6863 provides additional information on ETEs.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COLA submittal (not an ESP).
17.	For applications that require site approval for a stationary power reactor subject to 10 CFR Part 50 or 10 CFR Part 52 (e.g., CP, OL, ESP and COL), 10 CFR 100.1 and 10 CFR 100.21(g) require the identification of physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. This siting requirement is similar to that in 10 CFR 52.17(b)(1) for an ESP application, and the means for identifying significant impediments (e.g., an analysis of evacuation times or ETE) could apply to non-ESP applications. Further, if such physical characteristics are identified, the application must also identify measures that would, when implemented, mitigate or eliminate the significant impediment. Where unfavorable physical characteristics of the site exist, the proposed site may nevertheless be found to be acceptable if the design of the facility includes appropriate and adequate compensating engineering safeguards (see 10 CFR 100.10(d), which applies to applications submitted before January 10, 1997).	BBNPP is sited next to the existing operating SSES. No physical impediments have been identified concerning the operation of plants at this site.
	The application should provide a projection of the population within the 10-mile EPZ throughout the requested duration of the application; including a discussion of the sources of information and methodology that supports the population projection.	The resident population within the 10-Mile EPZ was based on 2000 Census data projected forward to the year 2009 when the ETE Study Report was updated, which is in accordance with the 05/11/07 public meeting as prescribed by the NRC.
	The application should specifically address whether the projected population creates a significant impediment to the development of emergency plans over the requested duration of the ESP or COL application, including how it would affect the ETE. If a significant impediment is created, then the applicant should identify measures that would, when implemented, mitigate or eliminate the significant impediment. Additional site-related guidance is provided in RG 4.7, and in ESP-related guidance documents (e.g., Supplement 2 to NUREG-654/FEMA-REP-1, Rev. 1).	BBNPP is sited next to the existing operating SSES. No physical impediments have been identified concerning the operation of plants at this site.

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Section II. Acceptance Criteria		Section Reference/Comments
18.	Copies of letters of agreement or other certifications, reflecting contacts and arrangements made with local, State, and Federal agencies with supporting emergency responsibilities, should be included in a CP, OL, ESP or COL application, as required by 10 CFR 52.17(b)(4), 10 CFR 52.79(a)(22), or Section II.B of Appendix E to 10 CFR Part 50.9	The commonwealth, county government and private response agencies support and participate in the emergency planning of BBNPP as documented in the submitted LOAs.
	The agreement information should be up-to-date when the application is submitted, and should reflect use of the proposed site for possible construction of a new reactor (or reactors).	The LOAs for BBNPP were current at the time of submittal.
	In addition, a discussion of the details associated with any ambiguous or incomplete language in the letters of agreement should be provided in the application. For an existing reactor site, the letters of agreement or other certifications should clearly address the presence of an additional reactor (or reactors) at the site, and any impact that would have on governmental agency or private organization emergency planning responsibilities, including acknowledgment by the agencies or organization of the proposed expanded responsibilities.	The LOAs were written specifically for BBNPP, and is explicitly stated as such in the submitted LOAs.
	If the applicant is unable to make arrangements with local, tribal, State, and Federal governmental agencies with emergency planning responsibilities, for whatever reason, the applicant should discuss its efforts to make such arrangements and describe any compensatory measures the applicant has taken or plans to take because of the lack of such arrangements. Supplement 1 to NUREG-654/FEMA-REP-1, Rev. 1, provides guidance for the development, review, and evaluation of utility offsite radiological emergency response planning and preparedness (i.e., a utility plan), for those situations in which State and/or local governments decline to participate in emergency planning. (See also 10 CFR 50.47(c)(1).)	Not applicable. BBNPP has obtained agreement for support arrangements with applicable agencies.
19.	Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, will be used as the primary guidance for the review of emergency preparedness information and plans submitted with an ESP application pursuant to Subpart A of 10 CFR Part 52. For a pre-existing nuclear facility, all major features of the emergency plan (i.e., all 14 planning standards) identified in Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, should be addressed in the ESP application. The detailed, specific evaluation criteria for each of the major features in Supplement 2 should be addressed for both a pre-existing nuclear facility, as well as for applicable major features associated with a site without a pre-existing nuclear facility. If emergency planning information is not provided on all 14 major features (including the detailed, specific evaluation criteria) in Section V of Supplement 2, the ESP application will not be rejected. The review and evaluation will, however, only be based on, and specifically limited to, the submitted information that relates to the guidance in Supplement 2 of NUREG-0654/FEMA-REP-1, Rev. 1.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COL submittal (not an ESP).

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Sect	ion II. Acceptance Criteria	Section Reference/Comments
20.	The planning standards and evaluation criteria for preparing and evaluating an ESP application containing complete and integrated emergency plans are provided in NUREG-0654/FEMA-REP-1, Rev. 1. Under this ESP option, the applicant should make a good-faith effort to obtain from the government agencies certifications that (1) the proposed emergency plans are practicable; (2) these agencies are committed to participating in any further development of the plans, including any required field demonstrations; and (3) these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan pursuant to 10 CFR 50.47(c)(1), sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site. The utility-prepared emergency plans and preparedness will be reviewed and evaluated using the guidance in Supplement 1 to NUREG-0654/FEMA-REP-1, Rev. 1.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COL submittal (not an ESP).
21.	10 CFR 52.17(b)(3) allows an applicant for an ESP, that proposes major features of the emergency plans or complete and integrated emergency plans, to include proposed ITAAC which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the license, the provisions of the Atomic Energy Act, and the NRC's regulations.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COL submittal (not an ESP).
22.	10 CFR 52.47(b)(1) allows an applicant for a design certification to include proposed ITAAC, including those applicable to emergency planning, which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a plant that incorporates the design certification is built and will operate in accordance with the design certification, the provisions of the Atomic Energy Act, and the NRC's regulations.	Not applicable. BBNPP has provided a complete Emergency Plan as part of a COL submittal (not a DCD).
23.	10 CFR 52.80(a) requires that an application for a combined license includes proposed emergency planning ITAAC which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations.	An Emergency Planning ITAAC is included in the submitted COL application.

Section II. Acceptance Criteria		Section Reference/Comments
24.	Table 14.3.10-1 [of SECY 05-0197] provides an acceptable set of generic emergency planning ITAAC that an applicant may use to develop application-specific ITAAC, tailored to the specific reactor design and emergency planning program requirements. A smaller set of ITAAC is acceptable if the application contains information that fully addresses emergency preparedness requirements associated with any of the generic ITAAC in Table 14.3.10-1 that are not used. Table 14.3.10-1 is not all-inclusive, or exclusive of other ITAAC an applicant may propose. Additional plant-specific emergency planning ITAAC (i.e., beyond those listed in Table 14.3.10-1) may be proposed, and they will be examined to determine their acceptability on a case-by-case basis. In general, ITAAC are inappropriate for procedure-level details associated with the emergency plans, in that procedure adequacy and implementation can be evaluated under the exercise ITAAC, and should be limited to those aspects of emergency planning and preparedness that can not reasonably be addressed prior to construction of the plant. Each EP-ITAAC must have an objective acceptance criteria stated.	An Emergency Planning ITAAC is included in the submitted COL application.
25.	For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(xxv) requires that an applicant provide a TSC, OSC, and, for a CP application only, a near-site emergency operations facility (EOF) (TMI Item III.A.1.213). NUREG-0696, Appendix B to NUREG-0718, NUREG-0737, and Supplement 1 to NUREG-0737 provide guidance relating to the design and implementation of emergency response facilities (e.g., TSC, OSC, EOF). In addition, 10 CFR 50.47(b)(8) and Subsection IV.E.8 of Appendix E to 10 CFR Part 50 requires that the design should include adequate emergency facilities and equipment to support emergency response. NUREG-0696, NUREG-0737, and Supplement 1 to NUREG-0737 provide guidance relating to occupancy and radiological habitability of vital areas (including the TSC), which aid in the mitigation of or recovery from an accident.	Not applicable. 10 CFR 50.34(f) applies to applicants for a light-water- reactor construction permit or manufacturing license whose application was pending as of February 16, 1982. The BBNPP application is for a COL and was submitted after 02/16/82.
26.	For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(iv) requires that an applicant seeking an operating license shall provide an SPDS in both the TSC and EOF (TMI Item I.D.2). The SPDS includes the minimum set of plant parameters needed to assess the safety status of the plant in a timely manner, and is capable of indicating when process limits are being approached or exceeded. Supplement 1 to NUREG-0737, NUREG-0696, and NUREG-0814 provide guidance regarding the SPDS. (The SPDS is reviewed under SRP Sections 7.5 and 18.2.)	Not applicable. 10 CFR 50.34(f) applies to applicants for a light-water- reactor construction permit or manufacturing license whose application was pending as of February 16, 1982. The BBNPP application is for a COL and was submitted after 02/16/82.

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Sect	ion II. Acceptance Criteria	Section Reference/Comments
27.	For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(viii) requires that an applicant provide a capability to promptly obtain and analyze samples from the reactor coolant system and containment that may contain accident source term radioactive materials, while ensuring that no individual receives radiation exposure in excess of 0.05 Sv (5 rem) to the whole body or 0.5 Sv (50 rem) to the extremities (TMI Item II.B.3).	Not applicable. 10 CFR 50.34(f) applies to applicants for a light-water- reactor construction permit or manufacturing license whose application was pending as of February 16, 1982.
	In addition, 10 CFR 50.47(b)(9) requires adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition. To address this regulation, the NRC has concluded that source term information should be obtained and analyzed, to continuously assess and refine dose assessments and confirm or modify initial protective action recommendations.	The BBNPP application is for a COL and was submitted after 02/16/82.
	Finally, 10 CFR 50.47(b)(11) requires the establishment of the means for controlling radiological exposure to emergency workers. Post-accident sampling systems are discussed in the October 31, 2000, Model Safety Evaluation, as it relates to the development of contingency plans for sampling and analysis of highly radioactive samples from the reactor coolant system, containment sump, and containment atmosphere.	
28.	For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(xvii) requires instrumentation to measure, record and readout of various containment parameters, including noble gas effluents at all potential, accident release points. In addition, an applicant must provide for continuous sampling of radioactive iodines and particulates in gaseous effluents from all potential accident release points, and for onsite capability to analyze and measure these samples (TMI Item II.F.1). RG 1.97 provides guidance relating to instrumentation to assess plant and environmental conditions during and following an accident.	Not applicable. 10 CFR 50.34(f) applies to applicants for a light-water- reactor construction permit or manufacturing license whose application was pending as of February 16, 1982. The BBNPP application is for a COL and was submitted after 02/16/82.
29.	10 CFR 50.72(a)(3) and (c)(3) require the notification of the NRC Operations Center following the declaration of an emergency in accordance with the licensee's approved emergency plans, and the establishment of an open and continuous communications channel when requested by the NRC.	The NRC is notified in accordance with the applicable regulations and is documented in Emergency Plan Part II Sections E.2.b.2 and E.4.
	10 CFR 50.72(a)(4) establishes requirements for the activation of the ERDS following the licensee's declaration of an alert, site area emergency, or general emergency. NUREG-1022 provides the minimum standards and acceptance methods that may be used to comply with these NRC reporting requirements.	ERDS is activated in accordance with the regulations and is documented in Emergency Plan Part II Section F.1.b-d.5.
	10 CFR 73.71(a) requires the notification of the NRC Operations Center, after the discovery of an imminent or actual safeguards threat against the facility or other safeguards events. Regulatory Guide 5.62 provides the minimum standards and acceptance methods that may be used to comply with these NRC reporting requirements.	Not contained in Emergency Plan. Refer to Safeguards Contingency Plan and/or subsequent security procedures.

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Section II. Acceptance Criteria	Section Reference/Comments
30. The emergency planning and preparedness standards and requirements in 10 CFR Part 50, 10 CFR Part 52, and 10 CFR Part 100 are supplemented by various generic communications and Commission Orders. Those generic communications that relate to emergency planning and are currently in effect are identified in Subsection VI (below). They provide additional guidance and criteria for meeting the relevant emergency planning standards and requirements. Any subsequently issued generic communications or Commission Orders that pertain to emergency planning and preparedness and are relevant to the application should also be addressed by the applicant.	
65. Administrative Letter (AL) 94-04, "Change of the NRC Operations Center Commercial Telephone & Facsimile Numbers," April 11, 1994.	BBNPP equipment used for NRC communications is inventoried and tested quarterly per Emergency Plan Part II Sections F.3, H.10 and N.2.a. Current NRC phone numbers will be used.
66. AL 94-07, "Distribution of Site-Specific and State Emergency Planning Information," May 6, 1994.	This AL has been replaced by the NRC electronic library request for information contained in RIS 2006- 21. As documented in the impact evaluation submitted with Part 5 of the COLA, the dissemination of Emergency Planning information to the public will be coordinated between BBNPP and SSES. This information will be updated to reflect the addition of BBNPP prior to full power operation.
67. AL 94-16, "Revision of NRC Core Inspection Program for Annual Emergency Preparedness Exercise," November 30, 1994.	The BBNPP exercise schedule was not altered by the change in the NRC inspection program and continues to meet the requirements of 10 CFR Part 50 Appendix E, Section IV.F.2 and 3.
68. Bulletin (BL) 79-18, "Audibility Problems Encountered on Evacuation of Personnel from High-Noise Areas," August 7, 1979.	Notification of site personnel in high noise areas and out buildings is addressed in the BBNPP Emergency Plan Part II Section J.1
69. BL 80-15, "Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power," June 18, 1980.	The BBNPP Emergency Plan does not specifically address backup power to the FTS. Bulletin 80-15 was addressed in response to NRC RAI 34 ¹ .

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¹ Rocco Sgarro (PPL) to Document Control Desk (NRC) letter BNP-2009-242, Submittal of Response to RAI No. 34, Communications Systems, dated August 26, 2009. (ADAMS Accession No. ML092440329)
Section II. Acceptance Criteria	Section Reference/Comments
70. BL 05-02, "Emergency Preparedness and Response Actions for Security-Based Events," July 18, 2005 (ADAMS Accession No. ML051740058).	The EAL changes prescribed by the bulletin are part of NEI 99-01 R5, which is used by BBNPP.
	The expedited NRC notification prescribed by the bulletin is addressed in Emergency Plan Part II Section E.2.b.2 and D.1.g.
	The alternate mustering location for the ERO prescribed by the bulletin is addressed in Emergency Plan Part II Section H.1.d.
	Specific mention of hostile action based drills is not addressed in the BBNPP Emergency Plan and is not required to be by the bulletin. Development of hostile action based drill requirements is ongoing as part of NEI 06-04 and proposed EP related regulation. Any new regulation will be addressed in the BBNPP Emergency Plan when it is enacted.
71. Generic Letter (GL) 82-33, "Supplement 1 to NUREG-0737 – Requirements for Emergency Response Capability (Generic Letter 82-33)," December 17, 1982.	This reference is addressed by the BBNPP Emergency Plan.
	Refer to Acceptance Criteria response #2 for information related to NUREG-0737.
72. GL 91-14, "Emergency Telecommunications," September 23, 1991 (ADAMS Accession No. ML031140150).	This GL describing the 1991 upgrade to the FTS is made obsolete by the changes to the system described in RIS 2000-11.
	The ENS is described in Emergency Plan Part II Section F.1.f with routine testing requirements contained in Section N.2.a.
73. Information Notice (IN) 81-34, "Accidental Actuation of Prompt Public Notification System," November 16, 1981.	The BBNPP PANS system is designed with a signal encoder to prevent inadvertent siren actuation from radio interference.
74. IN 85-41, "Scheduling of Pre-Licensing Emergency Preparedness Exercises," May 25, 1985.	Exercise completion prior to full power operation is contained in the EP ITAAC.
75. IN 85-44, "Emergency Communication System Monthly Test," May 30, 1985.	The ENS and HPN are tested monthly in accordance with regulation as documented in Emergency Plan Part II Section N.2.a.

Section II. Acceptance Criteria	Section Reference/Comments
76. IN 85-52, "Errors in Dose Assessment Computer Codes and Reporting Requirements Under 10 CFR Part 21," July 10, 1985.	The BBNPP dose model will be similar to the NRC RASCAL model as described in Emergency Plan Part Il Section I.4.
	Any identified errors in the code, should they be found, would be reported in accordance with regulations.
77. IN 85-80, "Timely Declaration of an Emergency Class, Implementation of an Emergency Plan, and Emergency Notifications," October 15, 1985.	The BBNPP Emergency Plan does not state the 15- minute classification goal of EPPOS-2 and NEI 99-02.
	Timely local, state and federal notifications are in accordance with regulations and contained in Emergency Plan Part II Section E.2.b.
78. IN 86-18, "NRC On-Scene Response During a Major Emergency," March 26, 1986	Adequate accommodations for the NRC site team in the TSC are documented in Emergency Plan Part II Section H.1.b and Emergency Plan Annéx Section 4.1.B.
	Adequate accommodations for the NRC site team in the emergency response facilities are described in the Emergency Plan Part II Section C.1.c.
79. IN 86-43, "Problems with Silver Zeolite Sampling of Airborne Radioiodine," June 10 1986.	Remergency Plan and annex references to the use of silver zeolite sample media is limited to portable equipment that would not be used in high hydrogen environments. Refer to Emergency Plan Part II Table H-1 and Annex Section 4.2.B.1.e.
80. IN 86-55, "Delayed Access to Safety-Related Areas and Equipment During Plant Emergencies," July 10, 1986.	Operator access into controlled area is not addressed in the Emergency Plan.
	Personnel access to controlled areas within the plant is governed during normal operations and events in accordance with plant procedures.
81. IN 86-98, "Offsite Medical Services," December 2, 1986.	Medical services are provided in accordance with FEMA GM MS-1 as described in Emergency Plan Part II Section L.
82. IN 87-54, "Emergency Response Exercises (Off-Year Exercises)," October 23, 1987.	More realistic event scenarios described in the information notice are conducted during off-year exercises as addressed in Emergency Plan Part II Section N.1.b.

Section II. Acceptance Criteria	Section Reference/Comments
83. IN 87-58, "Continuous Communications Following Emergency Notification," November 16, 1987.	Continuous communication capabilities provided in accordance with regulations are addressed in Emergency Plan Part II Sections B.1 (onshift) and E.4.
84. IN 88-15, "Availability of U.S. Food and Drug Administration (FDA)-Approved Potassium Iodide for Use in Emergencies Involving Radioactive Iodine," April 18, 1988.	This IN concerns non-reactor licensees using FDA- approved "radiation emergency potassium iodide" as no policy exists for this group. Policy for reactor licensees is provided in Federal Register, Vol. 50, No. 142, p. 30258, July 24, 1985. The storage and use of KI is documented in BBNPP Emergency Plan Part II Sections H.1.b, H.9, H.10 and J.6.
85. IN 89-72, "Failure of Licensed Senior Operators to Classify Emergency Events Properly," October 24, 1989.	The issue raised in the IN concerns SRO classification errors caused by implementing procedures that are not "user friendly" and to ineffective training methods. BBNPP will implement the latest version of NEI 99-01 EALs as described in Emergency Plan Part II Section D and Annex Section 3 as stated in Part 5 of the submittal. Operator and Emergency Director EAL classification performance will be evaluated during designated training sessions, drills and exercises.
86. IN 90-74, "Information on Precursors to Severe Accidents," December 4, 1990.	The applicable accident sequence precursor study report events referenced in the IN are addressed within the appropriate EAL technical basis sections included in Part 5 of the submittal.
87. IN 91-64, "Site Area Emergency Resulting from a Loss of Non-Class 1E Uninterruptible Power Supplies," October 9, 1991.	Common mode failure of uninterruptible power supplies used in non-safety related applications is not specifically addressed in the BBNPP Emergency Plan, although EALs have been developed to bound loss of power and loss of indication events as documented in Part 5 of the submittal.
88. IN 91-64, Supp. 1, "Supplement 1, Site Area Emergency Resulting from a Loss of Non-Class 1E Uninterruptible Power Supplies," October 7, 1992.	The Emergency Plan does not reference replacement intervals for the Exide Electronics, Incorporated (Exide) 75 KVA uninterruptible power supply (UPS) model No. 575-60T3-120/208 or preventative maintenance requirements for them.

Section	on II. Acceptance Criteria	Section Reference/Comments
	89. IN 91-77, "Shift Staffing at Nuclear Power Plants," November 26, 1991.	On shift staffing requirements that meet regulations and NUREG-0654 guidance are described in Emergency Plan Annex Table B-1a.
	90. IN 92-32, "Problems Identified with Emergency Ventilation Systems for Near-Site (Within 10 Miles) Emergency Operations Facilities and Technical Support Centers," April 29, 1992.	The issue of inadequate maintenance and testing of EOF and TSC emergency ventilation systems will be addressed in plant maintenance and testing procedures.
		The TSC habitability design is described in Emergency Plan annex Section 4.1.B.
		The EOF location and habitability design considerations are not contained in the Emergency Plan; however the BBNPP EOF is a shared facility with SSES and was previously inspected.
	91. IN 92-38, "Implementation Date for the Revision to the EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA-400-R-92-001)," May 12, 1992.	Not applicable. EPA 400-R-92-001, October 1991, is used throughout the BBNPP Emergency Plan as a basis for protective action concerning emergency workers and the public.
	92. IN 93-53, "Effect of Hurricane Andrew on Turkey Point Nuclear Generating Station and Lessons Learned," July 20, 1993.	The Hurricane Andrew lessons learned applicable to the Emergency Plan regarding loss of communications is addressed in Part II Section F.1.
-		Examples of the BBNPP communications network include systems such as normal and dedicated telephone lines on landlines, microwave and fiber- optic voice channels, cell phones, satellite phones, base and mobile radio units, and computer peripherals.
	93. IN 93-81, "Implementation of Engineering Expertise on Shift," October 12, 1993.	On shift staffing requirements for the STA are described in Emergency Plan Annex Table B-1a.
	94. IN 93-94, "Unauthorized Forced Entry into the Protected Area at Three Mile Island Unit 1 on February 7, 1993," December 9, 1993.	The ability of an intruder to drive an unauthorized vehicle into the protected area has been significantly reduced following the post 9/11 order and physical security upgrade requirements. The results of the security order enhancements and plans for response to security related events are contained in the site security plan.

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Section II. Acceptance Criteria	Section Reference/Comments
95. IN 94-27, "Facility Operating Concerns Resulting from Local Area Flooding," March 31, 1994.	Hydrological monitor are discussed in Emergency Plan Part II Section H.5.a.3. Flooding conditions (internal and external) are addressed in the EALs.
96. IN 95-23, "Control Room Staffing Below Minimum Regulatory Requirements," April 24, 1995.	On shift staffing requirements that meet regulations and NUREG-0654 guidance are described in Emergency Plan Annex Table B-1a.
97. IN 95-48, "Results of Shift Staffing Study," October 10, 1995.	The capabilities of the on-shift staff to respond to an event are addressed in Emergency Plan Part II Section B.1.
98. IN 96-19, "Failure of Tone Alert Radios to Activate When Receiving a Shortened Activation Signal," April 2, 1996.	The primary public alerting method for BBNPP is sirens and EAS. Tone alert radios are one of several supplemental options included in Emergency Plan Part II Section E.6.
	If tone alert radios are used they will be new products (post FAA change to the EAS) and tested in accordance with manufacturer's specifications to ensure that the activation signal is sufficient to operate the equipment.
99. IN 97-05, "Offsite Notification Capabilities," February 27, 1997.	Examples of the BBNPP communications network include systems such as normal and dedicated telephone lines on landlines, microwave and fiber- optic voice channels, cell phones, satellite phones, base and mobile radio units, and computer peripherals; which are addressed in Emergency Plan Part II Section F.1.
	Post 9/11 and the new nation response framework adopting the NIMS have improved the offsite communications systems capability and reliability in the areas surrounding BBNPP.

Section II. Acceptance Criteria	Section Reference/Comments
100. IN 98-20, "Problems with Emergency Preparedness Respiratory Programs," June 3, 1998.	Training and qualification of personnel who may use respiratory protection equipment is described in Emergency Plan Part II Sections O.4.e and O.5.b.
	Equipment availability and storage is discussed in Emergency Plan Part II Sections H.1.b, H.1.c and J.6.
	Primary responsibility for the respiratory protection program is the responsibility of the radiation protection department as described in Emergency Plan Part II Section J.6.
101. IN 02-14, "Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner-Controlled Area," April 8, 2002.	The notification of personnel outside the protected area but within the owner controlled area is addressed in Emergency Plan Part II Section J.1.
	Evacuation of the non-essential personnel from the site is addressed in Emergency Plan Part II Section J.2
102. IN 02-25, "Challenges to Licensees' Ability to Provide Prompt Public Notification and Information During an Emergency Preparedness Event," August 26, 2002.	The siren system is tested and maintained commensurate with FEMA operability requirements as referenced in FEMA-REP-10 per Emergency Plan Part II Section E.6.
	Siren test frequency includes, as a minimum, weekly silent tests as documented in Emergency Plan Part II Section F.3, although the system includes a continuous feedback monitoring capability.
	BBNPP does not use PHADS.
	EAS activation is controlled and implemented by offsite governmental agencies as described in Emergency Plan Part II Sections E.5, E.6 and E.7.
	ERO notifications are performed primarily with pagers as described in Emergency Plan Part II Section F.1.e.
103. IN 04-19, "Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment," November 4, 2004.	Documentation of back-up power to the emergency response facilities is not contained in the Emergency Plan.
	Back-up power to the TSC is described in the FSAR and DCD.
	The BBNPP EOF is a shared facility. It is currently an operational facility for SSES and was previously inspected for that station.

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104. IN 05-06, "Failure to Maintain Alert and Notification System Tone Alert Radio Capability," March 30, 2005.	The Public Alert and Notification System (PANS) consist of fixed sirens as described in Emergency Plan Part II Section E.6.
	If tone alert radios are used they will be maintained and tested in accordance with the applicable regulations and guidance documents.
105. IN 05-19, "Effect of Plant Configuration Changes on the Emergency Plan," July 18, 2005.	Changes to procedures, equipment, and facilities are controlled by the station's records management process where an impact on 50.59, security, emergency planning, QA and other programs are evaluated to determine whether they create a reduction in effectiveness.
106. Regulatory Issue Summary (RIS) 2000-08, "Voluntary Submission of Performance Indicator Date," March 29, 2000 (ADAMS Accession No. ML003685821).	Discussion of the voluntary submission of PI data is not applicable to the Emergency Plan, however BBNPP will participate in the submission of information consistent with SSES following construction and operation.
107. RIS 2000-11, "NRC Emergency Telecommunications System," June 30, 2000 (ADAMS Accession No. ML003727812).	NRC communications systems are addressed in Emergency Plan Part II Section F.1.f with monthly testing requirements documented in Section H.2.a.
108. RIS 2000-11, Supp. 1, "NRC Emergency Telecommunications System," March 22, 2001 (ADAMS Accession No. ML010570103).	NRC communications systems are addressed in Emergency Plan Part II Section F.1.f with monthly testing requirements documented in Section H.2.a.
109. RIS 2001-16, "Update of Evacuation Time Estimates," August 1, 2001 (ADAMS Accession Nó. ML012070310).	The evacuation time estimate (ETE) study report applicable to BBNPP was issued in 2009 in accordance with the applicable regulations and guidance documents. The ETE study is referenced in Emergency Plan Part II Section J.8 and Appendix 5, and is provided in Part 5 of the COL application.
110. RIS 2002-01, "Changes to NRC Participation in the International Nuclear Event Scale," January 14, 2002 (ADAMS Accession No. ML013200502).	The International Nuclear Event Scale is not applicable to licensees. BBNPP will continue to report events in accordance with the regulations as specified in the RIS as addressed in Emergency Plan Part II Section D.1

Section II. Acceptance Criteria	Section Reference/Comments
111. RIS 2002-16, "Current Incident Response Issues," September 13, 2002 (ADAMS Accession No. ML022560256).	Identification of a radioactive release during event notification is defined and documented in Emergency Plan Part II Section E.3.
	The ENS Communicator is provided access to the information necessary to perform their function.
112. RIS 2002-21, "National Guard and Other Emergency Responders Located in the	Not applicable.
Licensee's Controlled Area," November 8, 2002 (ADAMS Accession No. ML023160020).	National Guard or commonwealth/local law enforcement organizations are no longer stationed at the nuclear power plants in Pennsylvania.
113. RIS 2003-12, "Clarification of NRC Guidance for Modifying Protective Actions," June 24, 2003 (ADAMS Accession No. ML031680611).	The BBNPP Emergency Plan does not explicitly state that areas previously recommended to be evacuated are retained when new PARs are issued for wind shifts, although that is the current integrated practice with the Commonwealth of Pennsylvania.
	Additional changes to the BBNPP Emergency Plan regarding PARs will be reviewed following issuance of the pending regulatory changes to PARs to ensure consistency with the new rule.
114. RIS 2003-18, "Use of NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," October 8, 2003 (ADAMS Accession No. ML032580518).	Not applicable. BBNPP will be implementing NEI 99-01 Rev 5 based EALs (not Rev 4 described in the RIS) under full submittal as their initial set.
115. RIS 2003-18, Supp. 1, "Supplement 1, Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," July 13, 2004 (ADAMS Accession No. ML041550395).	Not applicable. BBNPP will be implementing NEI 99-01 Rev 5 based EALs (not Rev 4 described in the RIS) under full submittal as their initial set.
116. RIS 2003-18, Supp. 2, "Supplement 2, Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," December 12, 2005 (ADAMS Accession No. ML051450482).	Not applicable. BBNPP will be implementing NEI 99-01 Rev 5 based EALs (not Rev 4 described in the RIS) under full submittal as their initial set.
117. RIS 2004-07, "Release of Final Review Standard (RS)-002, Processing applications for Early Site Permits," May 19, 2004	Not applicable. BBNPP is a COL application without an ESP.

Section II. Acceptance Criteria	Section Reference/Comments
118. RIS 2004-13, "Consideration of Sheltering in Licensee's Range of Protective Action Recommendations," August 2, 2004 (ADAMS Accession No. ML041210046).	Sheltering is considered as a PAR option as illustrated in Emergency Plan Figure J-1; however Emergency Plan Part II Section J.10.m.1 does not contain detailed considerations for sheltering.
	Additional changes to the BBNPP Emergency Plan regarding PARs will be reviewed following issuance of the pending regulatory changes to PARs to ensure consistency with the new rule.
119. RIS 2004-13, Supp. 1, "Consideration of Sheltering in Licensee's Range of	Not applicable.
Protective Action Recommendations, Dated August 2004," March 10, 2005 (ADAMS Accession No. ML050340531).	The 90 day period provided by the RIS has expired.
120. RIS 2004-15, "Emergency Preparedness Issues: Post 9/11," (Official Use Only – See RIS 2006-02), October 18, 2004.	Commonwealth/local and NRC event notifications are made in accordance to the time requirements specified by regulations as described in Emergency Plan Part II Section E.2.b.
	The Emergency Plan does not restrict security from contacting LLEA without shift manager approval.
	Potential increased demand on LLEA resources has been addressed by the offsite agencies in support of SSES located at the site.
121. RIS 2004-15, Supp. 1, "Emergency Preparedness Issues: Post-9/11," May 25, 2006 (ADAMS Accession No. ML053000046).	Changes to procedures, equipment, and facilities are controlled by the station's records management process where an impact on 50.59, security, emergency planning, QA and other programs are evaluated to determine whether they create a reduction in effectiveness.
122. RIS 2005-02, "Clarifying the Process for Making Emergency Plan Changes," February 14, 2005 (ADAMS Accession No. ML042580404).	Changes to the Emergency Plan are evaluated in accordance with 10 CFR 50.54(q) as described in Emergency Plan Part II Section P.4.
123. RIS 2005-08, "Endorsement of Nuclear Energy Institute (NEI) Guidance 'Range of Protective Actions for Nuclear Power Plant Incidents," June 6, 2005 (ADAMS Accession No. ML050870432).	The Emergency Plan does not contain PARs that include consideration for sheltering due to impediments. Shelter PARs for impediments are usually developed by the offsite agencies as described in Emergency Plan Part II Section J.10.m.4 paragraph 4.

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124. RIS 2006-02, "Good Practices for Licensee Performance During the Emergency Preparedness Components of Force-On-Force Exercises," February 23, 2006 (ADAMS Accession No. ML052970294).	Not applicable. The scenario development and conduct recommendations are appropriate to drill development guidelines, not the Emergency Plan.
125. RIS 2006-03, "Guidance on Requesting an Exemption from Biennial Emergency Preparedness Exercise Requirements," February 24, 2006 (ADAMS Accession No. ML053390039).	The BBNPP Emergency Plan does not contain information on application for exemption from biennial exercise requirements. Requests for exemption from scheduled evaluated exercises will be addressed on a case basis using the most current guidance at the time of the request.
126. RIS 2006-12, "Endorsement of Nuclear Energy Institute Guidance "Enhancements to Emergency Preparedness Programs for Hostile Action"," July 19, 2006 (ADAMS Accession No. ML061530290).	Not applicable. Participation in the pilot hostile action based drills occurred from 2006 to 2009 for operating reactors.
127. Emergency Preparedness Position (EPPOS) No. 1, Rev. 0, "Acceptable Deviations from Appendix 1 of NUREG-0654 Based Upon the Staff's Regulatory Analysis of NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels", June 1, 1995 (ADAMS Accession No. ML022970165).	Not applicable. BBNPP will implement the latest version of NEI 99-01 EALs as described in Emergency Plan Part II Section D and Annex Section 3.
128. EPPOS No. 2, "Timeliness of Classification of Emergency Condition," August 1, 1995.	The BBNPP Emergency Plan does not state the 15 minute classification goal of EPPOS-2 and NEI 99-02, although it provides reference to such in Appendix 1. Changes to the BBNPP Emergency Plan regarding the 15 minute classification goal will be reviewed following issuance of the pending regulatory changes emergency classification timeliness to ensure consistency with the new rule.
129. EPPOS No. 3, "Requirement for Onshift Dose Assessment Capability, November 8, 1995.	The BBNPP Emergency Plan annex table B-1a does not specify the capability for onshift dose assessment as stated in Emergency Plan appendix 1. Changes to the BBNPP Emergency Plan regarding the function of onshift dose assessment will be reviewed following issuance of the pending regulatory changes to onshift staffing to ensure consistency with the new rule.
130. EPPOS No. 5, "Emergency Planning Information Provided to the Public," December 4, 2002.	The content of information disseminated annually to the public is consistent with the EPPOS as described in Emergency Plan Part II Section G:1.

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	131. Circular (CR) 80-09, "Problems with Plant Internal Communications Systems," April 28, 1980.	Not applicable. Power supplies to internal plant communications systems and areas susceptible to portable radio transmission signals are addressed in plant procedures.
31.	For COL reviews, the description of the operational program and proposed implementation milestone(s) for the Emergency Planning program are reviewed in accordance with 10 CFR 50.47, Part 50 Appendix E. The implementation milestones are as follows:	
	full participation exercise conducted within 2 years of scheduled date for initial loading of fuel per 10 CFR 50, Appendix E.IV.F.2a(ii); onsite exercise conducted within 1 year before the schedule date for initial loading of fuel per 10 CFR Part 50, Appendix E.IV.F.2a(ii);	As documented in ITAAC# 14.1, a full participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.
	and applicant's detailed implementing procedures for its emergency plan submitted no less than within 180 days prior to scheduled date for initial loading of fuel per 10 CFR Part 50, Appendix E.V.	As documented in ITAAC# 17.1, detailed implementing procedures for the onsite emergency plan will be submitted no less than 180 days prior to fuel load.