UNIT 3 IMPACT TO UNITS 1 & 2 EVALUATION

1. PURPOSE

The purpose of this document is to evaluate whether the construction and operation of a new reactor unit at the Calvert Cliffs Nuclear Power Plant (CCNPP) adversely impacts and affects the implemented CCNPP Units 1 & 2 Emergency Preparedness Program.

Specifically, it addresses items listed in Regulatory Guide 1.206, Section C.I.13.3.2, Emergency Plan Considerations for Multi-unit Sites.

2. STATEMENT OF INTENT

Constellation Generation Group and UniStar Nuclear Operating Services propose to construct a U.S. Evolutionary Power Reactor (U.S. EPR) to be designated as CCNPP Unit 3. There will be two separate emergency plans for the CCNPP site; one for Units 1 & 2 (the current CCNPP emergency plan) and the other for Unit 3. Combining the emergency plans will be considered at a later date following the licensing of Unit 3 and will be accomplished through the 10 CFR 50.54(q) evaluation process. There will be no sharing of personnel in the respective Emergency Response Organizations (EROs). The Emergency Operations Facility (EOF), Joint Information Center (JIC), Near Site Assembly Area, the meteorological tower instrumentation and the Alert and Notification System (ANS) will be shared by all units.

3. MULTI-UNIT SITE CONSIDERATIONS

Note: Responses to the items cited in the Regulatory Guide are provided below each item.

Regulatory Guide 1.206, Section C.I.13.3.2 states:

If the new reactor is located on, or near, an operating reactor site with an existing emergency plan (i.e., multi-unit site), and the emergency plan for the new reactor includes various elements of the existing plan, the application should do the following:

1. **Address the extent to which the existing site's emergency plan is credited for the new unit(s), including how the existing plan would be able to adequately accommodate an expansion to include one or more additional reactors and include any required modification of the existing emergency plan for staffing, training, emergency action levels, and the like.**

   The Units 1 & 2 emergency plan does not take credit for any Unit 3 equipment or personnel resources with regard to providing support to the existing program.

   The Unit 3 emergency plan will have a separate ERO, separate EP staff, separate training program, separate Emergency Action Levels (EALs), separate equipment and separate TSC/OSC.

   All units will share the EOF, JIC, Near Site Assembly Area, metrological monitoring system and Alert and Notification System (ANS). This will require modification to the Units 1 & 2 emergency plan to reflect shared resources.

   A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Unit 3 from Units 1 & 2.

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A task analysis will be performed to ensure communications, accommodations and administrative resources in the EOF, JIC and near site assembly area are appropriately laid out to support Unit 3 response requirements and address any impact to the existing Units 1 & 2 emergency plan.

Facility layout and furnishings will be evaluated and modified to the extent necessary to allow for combined use if concurrent events are declared at Units 1 & 2 and Unit 3 and activation of both EROs is required.

A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of Unit 3 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and shared resources to ensure response functions for either unit are not degraded (in capability or timeliness) when responding to a concurrent event.

Shared use of the meteorological monitoring system and the ANS does not impact the Units 1& 2 emergency plan. Use of the meteorological tower indication is passive. The ANS applies to the EPZ based on the highest event declared at the site and is operated by offsite agencies.

2. **Include a review of the proposed extension of the existing site's emergency plan pursuant to 10 CFR 50.54(q), to ensure that the addition of a new reactor(s) would not decrease the effectiveness of the existing plans and the plans, as changed, would continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.**

   See Sections 4 and 5 of this evaluation.

3. **Describe any required updates to existing emergency facilities and equipment, including the alert notification system.**

   All units will share the EOF, JIC, Near Site Assembly Area, metrological monitoring system and Alert and Notification System (ANS). This will require modification to the Units 1 & 2 emergency plan to reflect shared resources.

   A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Unit 3 from Units 1 & 2.

   A task analysis will be performed to ensure communications, accommodations and administrative resources in the EOF, JIC and near site assembly area are appropriately laid out to support Unit 3 response requirements and address any impact to the existing Units 1 & 2 emergency plan.

   Facility layout and furnishings will be evaluated and modified to the extent necessary to allow for combined use if concurrent events are declared at Units 1 & 2 and Unit 3 and activation of both EROs is required.

   A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of Unit 3 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and shared resources to ensure response functions

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for either unit are not degraded (in capability or timeliness) when responding to a concurrent event.

Siting of Unit 3 will not require modification of the Emergency Planning Zone (EPZ), therefore no changes to the ANS are necessary. The previous 12 months data for the Units 1 & 2 NRC ANS Reliability Performance Indicator will be reviewed to ensure system performance is sufficient for Unit 3 prior to initial loading of fuel.

4. **Incorporate any required changes to the existing onsite and offsite emergency response arrangements and capabilities with state and local authorities or private organizations.**

   No changes to the Units 1 & 2 onsite emergency response arrangements or capabilities have been identified concerning the state and local or private organizations.

   No changes to the existing state and local offsite emergency response arrangements or capabilities have been identified concerning private organizations.

   Changes to the existing state and local offsite emergency response arrangements will be necessary to account for Unit 3 liaisons sent to the offsite agency EOCs in support of an event.

   Initial discussions for the construction of Unit 3 have been conducted with state and local authorities. As a result of these discussions, agreement letters were obtained from both state and local authorities with emergency planning responsibilities indicating a commitment to participate in further development of the emergency response plans for Unit 3, including any required training and field demonstrations, and working with the licensee to identify any needed changes to their current commitment to execute their responsibilities.

5. **Justify the applicability of the existing 10-mile plume exposure EPZ and 50-mile ingestion control EPZ.**

   The offsite radiological consequences for the Unit 3 design basis accident are below those of the Units 1 & 2 design basis accident.

   The limiting dose at the 10 Mile EPZ boundary for Unit 3, based on the worst case design basis accident, is 0.90 Rem TEDE Although this would provide a technically valid argument for a reduction of the 10 and 50 mile EPZ dose based requirements were the Unit 3 sited alone, operation of the existing units will require maintaining the EPZs as currently established. As such, the existing 10 Mile EPZ and 50 Mile Ingestion Control EPZ will be maintained and is applicable to Unit 3.

6. **Address the applicability of the existing ETE or provide a revised ETE, if appropriate.**

   ~~*The current ETE study report conducted for the CCNPP site is dated August 30, 2002 and is sufficient for the operation of Unit 3.*~~

   ~~*A Traffic Impact Analysis was performed to assess the impact of construction of Unit 3 on the current transportation routes near the site. The results of this study were provided in the CCNPP Unit 3 Environmental Report Section 4.4.1.5, Transportation Routes of the*~~

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~~*Environmental Report, and concluded that additional mitigation during the construction period will be needed. The types of mitigation suggested to address the construction impact include both physical improvements and management measures (such as staggered shift changes). Thus, the impacts to the surrounding communities from construction traffic, although expected to be moderate, will be temporary and manageable with the additional mitigation.*~~

~~*Additionally, a special site evacuation scenario considering the Unit 3 construction workforce will be developed to determine the potential impact on the existing ETEs that could occur prior to Unit 3 construction. If changes to the ETEs are warranted based upon this analysis, the ETE study report will be revised.*~~

A revised ETE study report conducted for the site, "Calvert Cliffs Nuclear Power Plant Development of Evacuation Time Estimates", Final Report, dated April 2008 and the "Addendum to Calvert Cliffs Nuclear Power Plant Development of Evacuation Time Estimates", Revision 0, dated August 2008 is provided for CCNPP. The revised ETE contains special site evacuation scenarios which consider the CCNPP3 construction workforce to determine the potential impact on the existing ETEs that could occur.

7. **If applicable, address the exercise requirements for co-located licensees, in accordance with Section IV.F.2.c of Appendix E to 10 CFR Part 50, and the conduct of EP activities and interactions discussed in RG 1.101.**

   Both the Units 1 & 2 and Unit 3 emergency plans include discussion that the offsite plans specify a FEMA evaluated full participation exercise for the CCNPP site be performed biennially.

   Both the Units 1 & 2 and Unit 3 emergency plans require participation by each licensee to:

   1. *Conduct an exercise biennially of its onsite emergency plan; and*

   2. *Participate quadrennially in an offsite biennial full or partial participation exercise;*

   All units participate in emergency preparedness activities and interaction with offsite authorities during the period between exercises. Each unit's emergency plan administrative procedures will be written to complement one another regarding the coordination and scheduling of the exercise schedule for the multi-unit site.

8. **If applicable, include ITAAC which will address any changes to the existing emergency plans, facilities and equipment, and programs that are to be implemented, along with a proposed schedule.**

   The Unit 3 emergency plan will have a separate ERO, EP staff, training program and EALs.

   There will be a limited sharing of equipment in the EOF, JIC, and Near Site Assembly Area. These shared resources will be reflected in the Unit 1 & 2 emergency plan and will be evaluated by Units 1 & 2 EP staff for programmatic impact using the 10 CFR 50.54(q) evaluation process.

   A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of Unit 3 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing,

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communications, monitoring systems and shared resources to ensure response functions for either unit are not degraded (in capability or timeliness) when responding to a concurrent event.

An addendum to the Units 1 & 2 emergency plan will be developed and implemented prior to the start of Unit 3 construction to address temporary site impacts due to the presence of additional equipment, materials and personnel within the OCA during the construction phase. This addendum will be reviewed and approved using the 10 CFR 50.54(q) evaluation process for Units 1 & 2.

Following construction and prior to operational testing, the addendum will be reviewed, evaluated, and retired. Prior to retiring the document, the Units 1 & 2 emergency plan will be reviewed to address any permanent impact from the limited sharing of resources and operational logistics that are planned to occur when the new unit is licensed for operation.

No ITAAC is necessary to address changes to the existing Unit 1& 2 E-Plan.

9. Describe how emergency plans, to include security, are integrated and coordinated with emergency plans of adjacent sites.

The Unit 3 emergency plan assigns the Emergency Preparedness Manager the responsibility to coordinate with Units 1 & 2 Emergency Preparedness Staff to ensure:

- *Consistency in planning with offsite authorities.*
- *Consistency in providing emergency preparedness information to the public.*
- *Operations and maintenance of shared emergency plan equipment and facilities.*
- *Site wide protective actions (notifications, assembly, evacuation, etc) including Security's actions.*
- *Proper scheduling of full participation exercises.*

A letter of agreement between the licensees outlining these shared responsibilities will be executed prior to pre-operational testing of Unit 3.

4. PRELIMINARY 10CFR 50.54(q) EVALUATION

The preliminary evaluation analyzed the impact of Unit 3 construction and operation on the following Units 1 & 2 planning standards by answering the question; Does the plan for the construction and operation of Unit 3 or the Unit 3 emergency plan impact any of the following?

Yes	No		
☐	☒	1.	[50.47(b)(1)] Primary responsibilities of CCNPP, offsite agencies or support organizations. OR The ability to respond initially or on a continuous basis.

Comments: Units 1 & 2 ERO, offsite agency response organizations or support organization responders primary responsibilities are not impacted. Since no changes are being made to the

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capability or timeliness of the responder's functions/responsibilities, this item will not be impacted by Unit 3.

From a staffing perspective, Units 1 & 2 personnel are not used for the Unit 3 ERO and therefore the ability to respond initially or on a continuous basis will not be impacted by Unit 3.

Offsite agency personnel located in the EOF and JIC are not impacted as the facilities are to be shared by both units.

Support organization (such as law enforcement, fire and medical) function under an all hazards plan that utilizes the National Incident Management System (NIMS) process for unified and forward command processes, and therefore the ability to respond initially or on a continuous basis will not be impacted by Unit 3.

Yes	No		
☒	☐	2.	[50.47(b)(2)] The assignment of responsibilities of personnel. OR Minimum staffing or timely augmentation. OR The interface between onsite and offsite support response activities.

Comments: An additional responsibility for Units 1 & 2 onshift personnel is needed to ensure Unit 3 personnel are notified of an event at Units 1 & 2.

The number of Units 1 & 2 personnel needed for minimum staffing will not be impacted by Unit 3. However, timely augmentation of Unit 1 & 2 ERO personnel may be potentially impacted if there is a concurrent or ongoing Unit 3 event. Emergency plan procedures will be reviewed for entry into the Owner Controlled Area (OCA) by ERO personnel.

The Units 1 & 2 interface with Support organization (such as law enforcement, fire and medical) will not be impacted by Unit 3.

Yes	No		
☒	☐	3.	[50.47(b)(3)] Arrangements for requesting and effectively using assistance or resources from offsite authorities. OR The accommodations for federal, state, and/or local staff at the EOF.

Comments: The current arrangements in place for Units 1 & 2 to request and effectively use assistance or resources from offsite authorities will not be impacted by Unit 3. The scope of resources used is based primarily on offsite actions such as public notification, evacuation and monitoring and therefore do not change with the addition of Unit 3 to the station. Arrangements involving the need for law enforcement, fire or medical support will not be impacted by Unit 3.

Although no impacts on arrangement for requesting and effectively using assistance or resources from offsite authorities have been identified at this time, planning efforts for Unit 3 include agreement letters from the same Units 1 & 2 state and local offsite authorities

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indicating their commitment to work with UniStar Nuclear to identify any needed changes to the current arrangements with the CCNPP site as the process continues.

The accommodations for offsite agencies in the EOF have been taken into consideration if an event is declared at Units 1 & 2 and Unit 3, with the need to activate both EROs. A combined drill involving activation of both EROs will be conducted prior to Unit 3 operation to ensure the adequacy of emergency facilities to support concurrent events. The drill will evaluate the adequacy of space, furnishing, communications and monitoring systems and coordination of shared resources. This will also be used to verify that there would be sufficient space and resources for local agency and federal staff at the shared facility or facilities.

Yes	No		
☐	☒	4.	[50.47(b)(4)] Emergency Action Levels.

Comments: No changes to the Units 1 & 2 EALs are required due to the addition of Unit 3.

Yes	No		
☒	☐	5.	[50.47(b)(5)] Notification procedures to either the ERO, local, state, or federal entities. OR The content of initial and follow-up messages.

Comments: A requirement to notify Unit 3 of an event at Units 1 & 2 will be added to the Units 1 & 2 emergency plan. The Units 1 & 2 and Unit 3 EP staff will work with the state and locals on the inclusion of Unit 3 in both the initial or follow-up information forms.

Yes	No		
☐	☒	6.	[50.47(b)(6)] Communications capability among principal response organizations to emergency personnel or the public.

Comments: Current Units 1 & 2 communications capability among principal response organizations to emergency personnel or the public will not change. The Unit 3 emergency plan will have a separate ERO and separate equipment thus not requiring any modifications to the Units 1 & 2 emergency plan.

Yes	No		
☒	☐	7.	[50.47(b)(7)] Dissemination of coordinated information to the general or transient public including periodic information dissemination (brochures).

Comments: The dissemination of emergency planning information to the public will be coordinated between all units at CCNPP to avoid duplicate efforts. This information will be updated to reflect the addition of Unit 3 prior to full power operation.

Yes	No		
☒	☐	8.	[50.47(b)(8)] Provisions for or maintenance of emergency facilities and equipment. OR The periodicity of communications and emergency equipment tests.

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Comments: Sharing of the EOF, JIC, Near Site Assembly Area, Meteorological tower and ANS will require coordination of administrative procedures for maintenance and testing of those facilities and equipment. This will ensure that tests are conducted at required periodicities but not unnecessarily duplicated.

Yes	No		
☐	☒	9.	[50.47(b)(9)] Methods, systems and/or equipment for the assessment and monitoring of actual or potential offsite radiological consequences.

Comments: Data from the existing meteorological tower will be transmitted to the applicable Unit 3 Emergency Response Facilities. This will not impact the ability of the Units 1 & 2 Emergency Response Facilities to receive meteorological data.

Unit 3 will utilize its own Dose Assessment program therefore the existing Units 1 & 2 dose assessment program will not be affected.

Yes	No		
☒	☐	10.	[50.47(b)(10)] Protective Actions developed for either the Plume or Ingestion Exposure Pathways including onsite protective actions.

Comments: Onsite evacuation routes and assembly areas will be evaluated to ensure construction and/or operation of the new unit does not reduce the level of safety for plant workers. Protective Action Recommendations to offsite authorities will be consistent from all CCNPP units.

Yes	No		
☐	☒	11.	[50.47(b)(11)] Means for controlling emergency worker radiation exposures consistent with the guidelines established by the EPA.

Comments: Units 1 & 2 current means for controlling emergency worker radiation exposures are not impacted by Unit 3. Unit 3 will have separate procedures and equipment for controlling emergency worker radiation exposures thus not requiring any modifications to the Units 1 & 2 E-Plan and procedures.

Yes	No		
☐	☒	12.	[50.47(b)(12)] Arrangements for medical services for contaminated injured individuals.

Comments: Units 1 & 2 current arrangements with medical services will not be impacted by Unit 3. Unit 3 has obtained agreement letters from the same Units 1 & 2 medical services for contaminated individuals indicating their commitment to participate in any further development of the emergency response plans and to work with Constellation Generation Group and UniStar Nuclear Operating Services to identify any needed changes to the current Letter of Agreement with the CCNPP site if applicable.

Yes	No		
☒	☐	13.	[50.47(b)(13)] Plans for plant reentry and/or recovery organization operations.

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Comments: The Unit 3 emergency plan will have a separate plant reentry and recovery organization. However, while the organization will not change, Units 1 & 2 reentry and recovery plans will be revised to reflect additional considerations as a result of Unit 3; such as whether Unit 3 personnel may reenter the site to continue Unit 3 operation.

Yes	No		
☒	☐	14.	[50.47(b)(14)] Periodicity of drills and/or exercises as well as deficiency resolution.

Comments: There are no required changes to the Units 1 & 2 emergency plan due to the addition of the Unit 3. Regulatory Guide 1.101 addresses exercise requirements for multi units at a single location with dual-licensees.

Yes	No		
☒	☐	15.	[50.47(b)(15)] Training requirements for ERO or local site support personnel.

Comments: Current training requirements for Units 1 & 2 ERO are not impacted as Unit 3 will have a separate ERO and training program.

Training of local support personnel will be coordinated between units to avoid duplicate training. Unit 3 has obtained agreement letters from the same Units 1 & 2 state and local support agencies indicating their commitment to participate in any required training and field demonstrations.

Yes	No		
☐	☒	16.	[50.47(b)(16)] Responsibilities for Emergency Plan development, maintenance, and review as well as training requirements for personnel maintaining the plan.

Comments: Units 1 & 2 current responsibilities for emergency plan development, maintenance, and review as well as training requirements for personnel maintaining the plan will not be impacted as the Unit 3 emergency plan will have a separate EP staff with separate training requirements.

Yes	No		
☒	☐	17.	Implementation of other federal regulations (primarily Appendix E to 10 CFR Part 50) and requirements or formal commitments related to the CCNPP Emergency Preparedness Program.

Comments: Section IV.E.8 of Appendix E to 10 CFR Part 50 states the licensee shall include: "A licensee onsite technical support center and a licensee near-site emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency."

All units at CCNPP will share a single EOF. This will affect Units 1 & 2 emergency response if an event is declared for Unit 3 at the same time.

A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Unit 3 from Units 1 & 2.

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Facility layout and furnishings will be evaluated and modified to the extent necessary to allow for combined use if concurrent events are declared at Units 1 & 2 and Unit 3 and activation of both EROs is required.

A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of Unit 3 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and shared resources to ensure response functions for either unit are not degraded (in capability or timeliness) when responding to a concurrent event.

5. DETAILED 10 CFR 50.54(Q) EVALUATION

Further discussion of any planning standard marked as "yes' in section 3.

- **PLANNING STANDARDS #2**

The impact on Planning Standard **#2** is classified as a difference. Communication between each unit's control rooms would need to be established for notification and information dissemination should an event occur at either unit. A requirement to notify Unit 3 of an event at Units 1 & 2 will be added to the Units 1 & 2 emergency plan. Units 1 & 2 emergency plan procedures will be revised to ensure Unit 3 Control Room personnel are notified of a declaration of an event occurring at Units 1 & 2. This will not reduce the effectiveness of the Units 1 & 2 Emergency Plan efforts as it does not change commitments to current requirements and does not reduce any ERO capabilities. The addition to notify Unit 3 will not negatively impact the control room staff or delay the completion of currently assigned operations and emergency plan tasks.

The timely augmentation of the Units 1 & 2 ERO may be potentially impacted in the unlikely event of a concurrent or ongoing Unit 3 event. Unit 1 & 2 ERO personnel responding to the event may be slowed at the OCA main entrance due to the processing of Unit 3 personnel. Therefore, the Unit 1 & 2 emergency plan procedures will be reviewed and evaluated for potential entry impediments into the OCA by ERO personnel to ensure there is no decrease in Units 1 & 2 program effectiveness.

- **PLANNING STANDARDS #3**

The impact on Planning Standard **#3** for accommodations for federal, state and/or local staff at the EOF, would be a difference only if both EROs are activated and the event is classified at a Site Area Emergency or higher (full response by offsite agencies). Emergency plan procedures will be modified to address joint activation of the shared facilities. Some modification (additional furniture, communications systems etc.) to the shared facilities will be performed to maintain current capabilities and effectiveness. These modifications will be based upon the performance results of the human factors evaluation on the shared systems used for event assessment at the EOF and the task analysis on communications, accommodations and administrative resources in the EOF, JIC and near site assembly area.

A combined drill requiring mobilization and response activities of the Units 1 & 2 and Unit 3 EROs will be conducted prior to operation of Unit 3 to ensure the adequacy of all utility emergency facilities to support concurrent events for all CCNPP units. The drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and coordination of shared resources to ensure response functions for either unit are not a decrease in program effectiveness.

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- **PLANNING STANDARDS #5**

The impact on Planning Standard **#5** is classified as a difference. Communication between each unit's control rooms would need to be established for notification and information dissemination should an event occur at either unit. A requirement to notify Unit 3 of an event at Units 1 & 2 will be added to the Units 1 & 2 emergency plan. Units 1 & 2 emergency plan procedures will be revised to ensure Unit 3 Control Room personnel are notified of a declaration of an event occurring at Units 1 & 2. This will not reduce the effectiveness of the Units 1 & 2 Emergency Plan efforts as it does not change commitments to current requirements and does not reduce any ERO capabilities. The addition to notify Unit 3 will not negatively impact the control room staff or delay the completion of currently assigned operations and emergency plan tasks.

The format and content of the initial and follow-up information forms will change only in that it will need to include a designator position for an emergency at Unit 3. The Units 1 & 2 and Unit 3 EP staffs will work with the state and locals to determine how best to add Unit 3 to both the initial and follow-up information forms.

- **PLANNING STANDARD #7**

The impact on Planning Standard **#7** does not affect the ability to respond to an emergency. The impact is on the provision of emergency preparedness information to the general public (prior to an actual emergency being declared) in a consistent manner. This will be addressed in the emergency preparedness administrative procedures providing for the coordination of efforts to ensure appropriate Units 1 & 2 and Unit 3 information is generated and routinely disseminated. This coordinated effort will ensure there is no decrease in effectiveness of planning efforts.

- **PLANNING STANDARD #8**

The differences impacting Planning Standard **#8** is a difference and will be addressed in the emergency preparedness administrative procedures providing for the coordination of efforts of all Units EP staff to ensure all shared facilities, meteorological tower and ANS are properly maintained. This coordinated effort will ensure there is no decrease in the current effectiveness of planning efforts.

- **PLANNING STANDARD #10**

The impact on Planning Standard **#10** would be a deviation. Onsite evacuation routes and assembly areas will be evaluated to ensure construction and/or operation of the new unit does not reduce the level of safety for plant workers. During the construction phase of Unit 3, the CCNPP Units 1 & 2 Security Plan will incorporate NEI 03-12, Appendix E, "Additional Security Measures for Operating Reactors during Construction of New Reactor Plants within the Owner Controlled Area" through the 10 CFR 50.54(p) process. Section 2.6 of Appendix E addresses evacuation routes for Units 1 & 2 remaining open during the construction phase of Unit 3. As such, current primary and secondary egress capabilities will be maintained to ensure the health and safety of site personnel. This change is considered an improvement as it formalizes the emergency planning process previously informally addressed for large outages at Units 1 & 2.

- **PLANNING STANDARD #13**

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For Planning Standard **#13**, additional considerations by the Units 1 & 2 recovery organization concerning the presence of Unit 3 would need to be reflected in the Units 1 & 2 recovery plans and is considered a difference. The potential impact to the continued safe operation and maintenance of Unit 3, from reentry and recovery planning following a declared emergency at Units 1 and/or 2 will have to be considered on an event by event basis. Should an event occur at Units 1 & 2 that does not adversely impact Unit 3 operations, at a minimum the continued operation of Unit 3, including access to the site, would need to be considered. These additional considerations will be added to the Units 1 & 2 recovery plans and procedures to ensure there is no decrease in Units 1 & 2 program effectiveness.

- **PLANNING STANDARD #14**

The impact on Planning Standard **#14** would be a deviation – The exercise requirements for Units 1 & 2 will be changed to be in full compliance with the requirements of 10CFR50 Appendix E and Regulatory Guide 1.101. This change is allowed by Appendix E to 10 CFR Part 50, and Regulatory Guide 1.101 - and therefore does not negatively affect program effectiveness - which states:

Co-located licensees are two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the following emergency planning and siting elements:

a. *plume exposure and ingestion emergency planning zones,*

b. *offsite governmental authorities,*

c. *offsite emergency response organizations,*

d. *public notification system, and/or*

e. *emergency facilities.*

This regulatory guide provides guidance to co-located licensees and co-located applicants on methods that the staff of the U.S. Nuclear Regulatory Commission (NRC) considers acceptable for complying with the agency's regulations for emergency response plans and preparedness relative to conducting emergency response planning activities and interactions (A&I) in the years between participation in the offsite full or partial participation exercises with offsite authorities. This regulatory guide does not impose any new positions or requirements. Licensees and applicants are not required to use the methods specified in the regulatory position set forth in this guide, and are free to propose other means to achieve compliance with the applicable regulations.

- **PLANNING STANDARD #15**

The impact on Planning Standard **#15** is a difference. The responsibility for training offsite groups that support the Emergency Preparedness Program will be shared by all CCNPP Units and will be addressed in emergency preparedness administrative procedures to coordinate the required training of offsite support personnel. This coordinated effort will ensure there is no decrease in effectiveness of the current offsite support personnel training program elements.

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Additionally, Units 1 & 2 ERO personnel will be trained on the requirement to notify Unit 3 personnel of a classified event at Units 1 & 2 as well as the potential impact of Unit 3 ERO with respect to shared facility space during co-declared events. This added training will not reduce the effectiveness of the Units 1 & 2 emergency planning training program.

- **PLANNING STANDARDS #17**

The impact on Planning Standard **#17** for accommodations for federal, state and/or local staff at the EOF, would be a difference only if both EROs are activated and the event is classified at a Site Area Emergency or higher (full response by offsite agencies). Emergency plan procedures will be modified to address joint activation of the shared facilities. Some modification (additional furniture, communications systems etc.) to the shared facilities will be performed to maintain current capabilities and effectiveness. These modifications will be based upon the performance results of the human factors evaluation on the shared systems used for event assessment at the EOF and the task analysis on communications, accommodations and administrative resources in the EOF, JIC and near site assembly area.

A combined drill requiring mobilization and response activities of the Units 1 & 2 and Unit 3 EROs will be conducted prior to operation of Unit 3 to ensure the adequacy of all utility emergency facilities to support concurrent events for all CCNPP units. The drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and coordination of shared resources to ensure response functions for either unit are not a decrease in program effectiveness.

6. SUMMARY

Since there will be no sharing of personnel in the respective Emergency Response Organizations (EORs) and only the Emergency Operations Facility (EOF), Joint Information Center (JIC), Near Site Assembly Area, Meteorological Instrumentation and Alert and Notification System (ANS) will be shared by all units, the impact on CCNPP Units 1 & 2 emergency preparedness program will be minimal.

Accommodations will be made for inter-unit notifications, limited sharing of facilities and equipment, onsite protective actions and coordination of interfacing program maintenance items (public information, offsite interfaces, maintenance of shared facilities, etc.).

These changes either individually or in total will not reduce the current effectiveness of the CCNPP Units 1 & 2 emergency plan.

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Summary of Action Items

1. A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Unit 3 from Units 1 & 2.

2. A task analysis will be performed to ensure communications, accommodations and administrative resources in the EOF, JIC and near site assembly area are appropriately laid out to support Unit 3 response requirements and address any impact to the existing Units 1 & 2 emergency plan.

3. A drill requiring mobilization and response activities of both EROs will be conducted prior to operation of Unit 3 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and shared resources to ensure response functions for either unit are not degraded (in capability or timeliness) when responding to a concurrent event.

4. Units 1 & 2 and Unit 3 Emergency plan implementing procedures will be modified to address joint activation of the shared facilities.

5. The previous 12 months data for the Units 1 & 2 NRC ANS Reliability Performance Indicator will be reviewed to ensure system performance is sufficient for Unit 3.

6. Changes to the existing state and local offsite emergency response arrangements will be necessary to account for Unit 3 liaisons sent to the offsite agency EOCs in support of an event.

7. A special site evacuation scenario considering the Unit 3 construction workforce will be developed to determine the potential impact on the existing ETEs that could occur prior to Unit 3 construction.

8. Units 1 & 2 and Unit 3 emergency plan administrative procedures will be written to complement one another regarding the coordination and scheduling of the exercise schedule for the multi-unit site.

9. An addendum to the Units 1 & 2 emergency plan will be developed and implemented prior to the start of Unit 3 construction to address temporary site impacts due to the presence of additional equipment, materials and personnel within the OCA during the construction phase. This addendum will be reviewed and approved using the 10 CFR 50.54(q) evaluation process for Units 1 & 2.

   Following construction and prior to operational testing, the addendum will be reviewed, evaluated, and retired. Prior to retiring the document, the Units 1 & 2 emergency plan will be reviewed to address any permanent impact from the limited sharing of resources and operational logistics that are planned to occur when the new unit is licensed for operation.

10. Onsite evacuation routes and assembly areas will be evaluated to ensure construction and/or operation of the new unit does not reduce the level of safety for plant workers. Unit 1 & 2 emergency plan procedures will be reviewed and evaluated for potential entry impediments into the OCA by ERO personnel to ensure there is no decrease in Units 1 & 2 program effectiveness.

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11. A letter of agreement between the licensees of Units 1 & 2 and Unit 3 outlining shared responsibilities will be executed.

12. Emergency plan procedures will be reviewed for entry into the Owner Controlled Area (OCA) by ERO personnel to address timely augmentation of Unit 1 & 2 ERO personnel if there is a concurrent or ongoing Unit 3 event.

13. A requirement to notify Unit 3 of an event at Units 1 & 2 will be added to the Units 1 & 2 emergency plan. Units 1 & 2 emergency plan procedures will be revised to ensure Unit 3 Control Room personnel are notified of a declaration of an event occurring at Units 1 & 2.

14. Units 1 & 2 and Unit 3 emergency preparedness administrative procedures will provide for the coordination of efforts to ensure appropriate Units 1 & 2 and Unit 3 information is generated and routinely disseminated.

15. Units 1 & 2 and Unit 3 emergency preparedness administrative procedures will provide for the coordination of efforts of all Units EP staff to ensure all shared facilities, meteorological tower and ANS are properly maintained.

16. Units 1 & 2 reentry and recovery plans will be revised to reflect additional considerations as a result of Unit 3.

17. Units 1 & 2 and Unit 3 emergency preparedness administrative procedures will provide for the coordination of required training of offsite support personnel.

18. Units 1 & 2 ERO personnel will be trained on the requirement to notify Unit 3 personnel of a classified event at Units 1 & 2 as well as the potential impact of Unit 3 ERO with respect to shared facility space during co-declared events.

19. The Units 1 & 2 and Unit 3 EP staffs will work with the state and locals to determine how best to add Unit 3 to both the initial and follow-up information

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