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10 CFR 50.4  
10 CFR 52.79

November 19, 2009

UN#09-446

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

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016  
Response to Request for Additional Information for the  
Calvert Cliffs Nuclear Power Plant, Unit 3,  
RAI No. 155, Emergency Planning

- References:
- 1) Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "FINAL RAI No. 155 NSIR 2952" email dated September 18, 2009
  - 2) UniStar Nuclear Energy Letter UN#09-437, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 155, Emergency Planning, and RAI No. 156, Emergency Planning, dated October 19, 2009

The purpose of this letter is to respond to the request for additional information (RAI) identified in the NRC e-mail correspondence to UniStar Nuclear Energy, dated September 18, 2009 (Reference 1). This RAI addresses Emergency Planning, as submitted in Part 5 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA), Revision 6.

Reference 2 provided a November 19, 2009 schedule for the responses for RAI No. 155, Questions 13.03-7 through 13.03-21.

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The enclosure provides our responses to RAI No. 155, Questions 13.03-7 through 13.03-21 and includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision of the COLA.

Our responses to RAI No. 155, Questions 13.03-7 through 13.03-21 do not include any new regulatory commitments. This letter does not contain any sensitive or proprietary information.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205, or Mr. Michael J. Yox at (410) 495-2436.

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

Executed on November 19, 2009



Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 155, Questions 13.03-7 through 13.03-21, Emergency Planning, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch  
Laura Quinn, NRC Environmental Project Manager, U.S. EPR COL Application  
Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure)  
Loren Plisco, Deputy Regional Administrator, NRC Region II (w/o enclosure)  
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2  
U.S. NRC Region I Office

GTG/RDS/mdf

UN#09-446

**Enclosure**

**Response to NRC Request for Additional Information  
RAI No. 155, Questions 13.03-7 through 13.03-21,  
Emergency Planning,  
Calvert Cliffs Nuclear Power Plant, Unit 3**

**RAI No. 155**

**Question 13.03-7**

**SITE-49:** Assignment of primary responsibilities for emergency response

**Basis:** 10 CFR 50.47(b)(1); NUREG-0654/FEMA-REP-1 Evaluation Criterion A.1.a; Evaluation Criterion A.1.b; Evaluation Criterion A.1.c; Evaluation Criteria A.3; 10 CFR 50, Appendix E. Section III; Appendix E.IV.A.8

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1, 2 and 18

A. Section A.1, "Concept of Operations," (pages A-1/8) of the Calvert Cliffs Nuclear Power Plant (CCNPP3) Unit 3 Emergency Plan provides a description of the Federal, State, and local government agencies that are intended to be part of the overall response organization. Information on the activities and responsibilities provided by States other than Maryland, county and private agencies, including utilities that respond during a CCNPP3 emergency is needed in the CCNPP3 Emergency Plan. Also identify the State and local officials responsible for planning, ordering and controlling appropriate protective actions.

B. Section A, "Assignment of Responsibility," (pages A-1/11) provides a list of participating organizations and a discussion of their roles and responsibilities. Provide a resolution of inconsistencies between the narrative and figures as identified below:

1. Provide organizations (i.e. Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), Federal Radiological Preparedness Coordinating Committee (FRPCC), Radiation Emergency Assistance Center/Training Site (REAC/TS) that were not identified in the block diagrams.
2. Identify in the diagram where the U.S. Department of Energy (DOE) assistance is requested.

C. A list of certifications between CCNPP3 and other emergency response support organizations is provided in Appendix 3, "Letters of Agreements (LOA) (Certification Letters)." These letters only certify that actual emergency planning arrangements would be finalized in a letter of agreement at a later stage in the new facilities licensing process. Provide the LOAs or propose an ITAAC for when the letters of agreement with all participating agencies (including medical providers) will be in the CCNPP3 Emergency Plan.

**Response**

A.1 Information on the activities and responsibilities provided by States [or Commonwealths or Districts] other than Maryland is contained in the CCNPP Unit 3 Emergency Plan Section A.1.a.2.b, c and d for Delaware, Virginia and the District of Columbia, respectively. The additional information provided below, which is consistent with the content of the Unit 1/2 Emergency Plan, will be added to the CCNPP Unit 3 Emergency Plan:

- Functions and activities of agencies responsible for emergency response in the Delaware portion of the ingestion pathway EPZ are described in the Delaware Radiological Emergency Plan and Implementing Procedures.

- Functions and activities of agencies responsible for emergency response in the Virginia portion of the ingestion pathway EPZ are described in the Virginia Radiological Emergency Response Plan.
- Functions and activities of agencies responsible for emergency response in the Washington, D.C., portion of the ingestion pathway EPZ are described in the District of Columbia, District Response Plan.

Information on the activities and responsibilities provided by county agencies within the plume exposure EPZ is contained in the CCNPP Unit 3 Emergency Plan Section A.1.a.3 for Calvert County, Dorchester County, and St. Mary's County. Specific information listing the local agencies within the ingestion pathway EPZ is not contained in the CCNPP Unit 3 Emergency Plan. The additional information provided below, which is consistent with the content of the CCNPP Unit 1 and Unit 2 Emergency Plan, will be added to the CCNPP Unit 3 Emergency Plan:

- Calvert County, Dorchester County, and St. Mary's County Radiological Emergency Plans and Standard Operating Procedures summarize the plan used by county agencies within the plume exposure EPZ. Command of county agencies is under the direction of the Board of County Commissioners for each county. Coordination and responsibility for implementing protective actions is the responsibility of the Director of each county's Emergency Management Agency.
- The ingestion pathway EPZ for CCNPP Unit 3 includes all or portions of the following Maryland counties:

Anne Arundel County	Queen Anne's County
Calvert County	Somerset County
Caroline County	St. Mary's County
Charles County	Talbot County
Dorchester County	Wicomico County
Kent County	Worcester County
Prince George's County	

Functions and responsibilities of agencies responsible for emergency response are described in the Maryland Emergency Operations Plan, Annex Q, and Radiological Emergency Plan.

- The ingestion pathway EPZ for CCNPP Unit 3 includes all or portions of the following Virginia political subdivisions:

Counties

Accomack (Tangier Island)	Lancaster
Arlington	Middlesex
Caroline	Northumberland
Essex	Prince William
Fairfax	Richmond
King George	Stafford
King and Queen	Westmoreland

Cities

Alexandria	Falls Church
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Functions and activities of these agencies are described in the Virginia Radiological Emergency Response Plan.

Information on the activities and responsibilities provided by private agencies is contained in Section B.8 of the CCNPP Unit 3 Emergency Plan and includes INPO, NEI, ANI, Ft. Smallwood lab, DOE REAC/TS and AREVA. The information in this section sufficiently describes the support provided by private/external agencies.

At this time there are no private agencies under specific written agreement to be part of the overall response during a CCNPP Unit 3 emergency. Private agencies may be called upon for support as needed and are addressed in other sections of the Emergency Plan.

- A.2 Section A.1.a.2.a provides the following information under bullet #1 (emphasis added) regarding identifying the State official responsible for protective actions:

*Governor of Maryland: The Governor of the State has overall command authority for both the radiological and non-radiological aspects of a nuclear incident. **The Governor shall make the final recommendation for protective actions** with input from the Secretary - Maryland Department of Environment (MDE) and shall serve as the state's primary spokesperson.*

Additional specific information regarding county organization and responsibility will be added to Emergency Plan, Section A.1.a.3, as follows:

- Calvert County, Dorchester County, and St. Mary's County Radiological Emergency Plans and Standard Operating Procedures summarize the plan used by county agencies within the plume exposure EPZ.

- Command of county agencies is under the direction of the Board of County Commissioners for each county. Coordination and responsibility for implementing protective actions is the responsibility of the Director of each county's Emergency Management Agency.
- B.1 Emergency Plan, Figure A-2 will be revised to include blocks for FEMA and EPA. FRPCC and REAC/TC are sub-groups of organizations already listed in Figure A-2.
- B.2 Emergency Plan, Figure A-2 will be revised to include a block for DOE.
- C. COLA Part 10, Table 2.3-1, will be supplemented with an ITAAC 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.

### **COLA Impact**

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

### **Section A: Assignment of Responsibility**

#### **1. Concept of Operations**

- a. Identified below are federal, {state}, and local organizations (and other local governmental agencies) that are involved in a response to an emergency at {CCNPP Unit 3}.

#### **2) {State} Agencies**

- b) {The State of Delaware: A portion of the 50-mile (80-kilometer) Ingestion Pathway Emergency Planning Zone for CCNPP Unit 3 lies within the State of Delaware. The State of Delaware has developed a Radiological Emergency Plan outlining necessary response actions. Functions and activities of agencies responsible for emergency response in the Delaware portion of the ingestion pathway EPZ are described in the Delaware Radiological Emergency Plan and Implementing Procedures.
- c) The Commonwealth of Virginia: A portion of the 50-mile (80-kilometer) Ingestion Pathway Emergency Planning Zone for CCNPP Unit 3 lies within the Commonwealth of Virginia. The Commonwealth of Virginia has developed a Radiological Emergency Response Plan outlining necessary response actions. Functions and activities of agencies responsible for emergency response in the Virginia portion of the ingestion pathway EPZ are described in the Virginia Radiological Emergency Response Plan.

- d) The District of Columbia: A portion of the 50-mile (80-kilometer) Ingestion Pathway Emergency Planning Zone for CCNPP Unit 3 lies within the District of Columbia. The District of Columbia has developed an Emergency Plan outlining necessary response actions. Functions and activities of agencies responsible for emergency response in the Washington, D.C., portion of the ingestion pathway EPZ are described in the District of Columbia, District Response Plan.

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

### **Section A: Assignment of Responsibility**

#### **1. Concept of Operations**

- a. Identified below are federal, {state}, and local organizations (and other local governmental agencies) that are involved in a response to an emergency at {CCNPP Unit 3}.

#### 3) {County} Government Agencies

{CCNPP Unit 3} and the surrounding communities that comprise the Plume Exposure Pathway EPZs have developed integrated emergency response programs that call upon the resources of their community. The community organizations are responsible for implementing and coordinating the community response to an emergency.

{Calvert County, Dorchester County, and St. Mary's County} are within the 10 mile Emergency Planning Zone for {CCNPP Unit 3}.

{Calvert County, Dorchester County, and St. Mary's County Radiological Emergency Plans and Standard Operating Procedures summarize the plan used by county agencies within the plume exposure EPZ. Command of county agencies is under the direction of the Board of County Commissioners for each county. Coordination and responsibility for implementing protective actions is the responsibility of the Director of each county's Emergency Management Agency.

The ingestion pathway EPZ for CCNPP Unit 3 includes all or portions of the following Maryland counties:

<u>Anne Arundel County</u>	<u>Queen Anne's County</u>
<u>Calvert County</u>	<u>Somerset County</u>
<u>Caroline County</u>	<u>St. Mary's County</u>
<u>Charles County</u>	<u>Talbot County</u>
<u>Dorchester County</u>	<u>Wicomico County</u>

Kent County

Worcester County

Prince George's County

Functions and responsibilities of agencies responsible for emergency response are described in the Maryland Emergency Operations Plan, Annex Q, and Radiological Emergency Plan.

The ingestion pathway EPZ for CCNPP Unit 3 includes all or portions of the following Virginia political subdivisions:

Counties

Accomack (Tangier Island)

Lancaster

Arlington

Middlesex

Caroline

Northumberland

Essex

Prince William

Fairfax

Richmond

King George

Stafford

King and Queen

Westmoreland

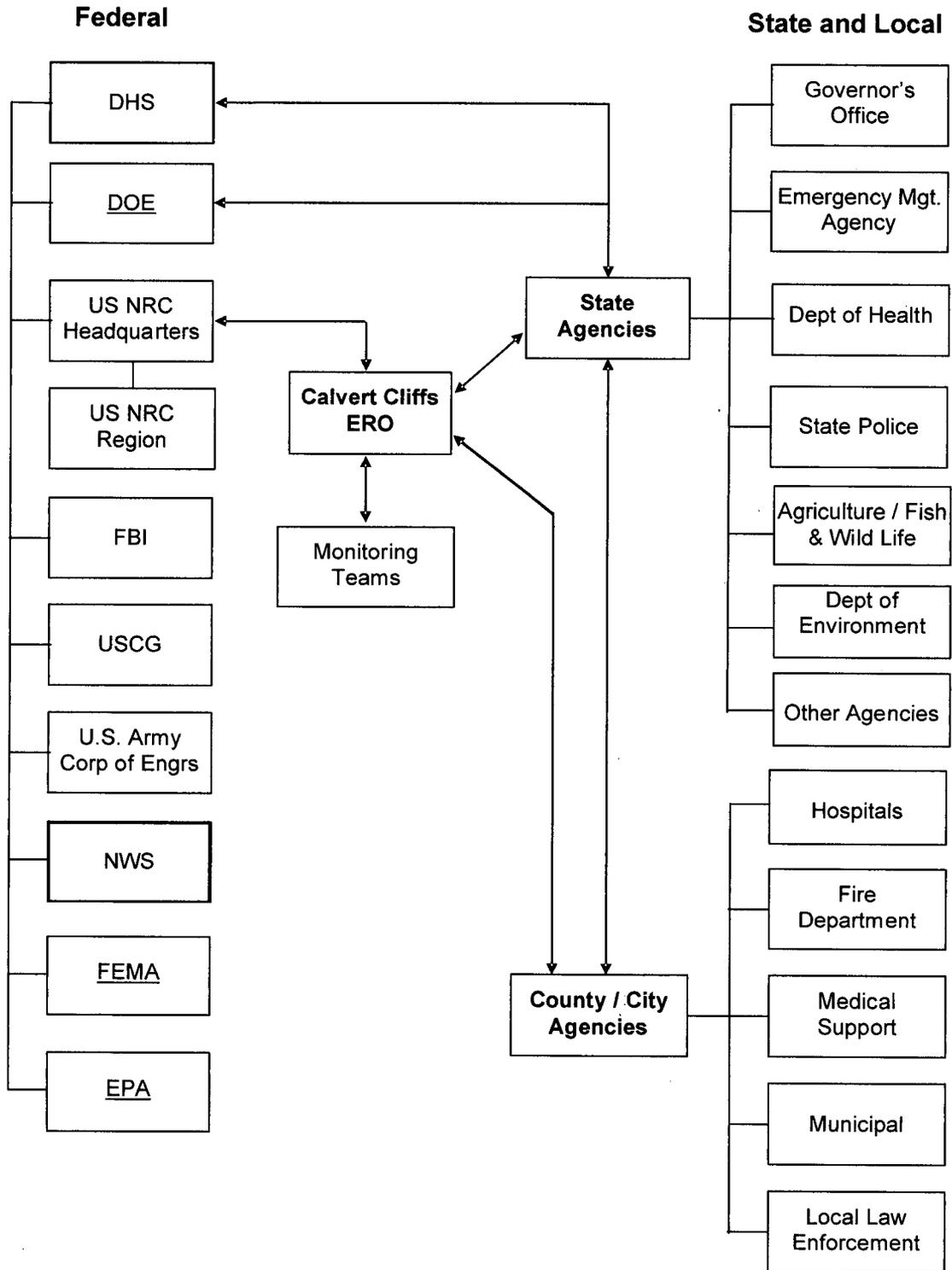
Cities

Alexandria

Falls Church

Functions and activities of these agencies are described in the Virginia Radiological Emergency Response Plan.}

COLA Part 5, Emergency Plan, Part II, Figure A-2 will be revised as follows in a future COLA revision.



COLA Part 10, Table 2.3-1, will be revised as follows in a future COLA revision.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>1.0 Assignment of Responsibility (Organization Control)</b>			
<p><u>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 respond and to augment its initial response on a continuous basis.</u></p>	<p><u>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.</u></p>	<p><u>1.1 An inspection will be performed to confirm that Letters of Agreement (LOA) for the {CCNPP Unit 3} Emergency Plan were submitted to the NRC.</u></p>	<p><u>1.1 Letters of Agreement (LOA) for the {CCNPP Unit 3} 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 {CCNPP Unit 3} Emergency Plan, are submitted to the NRC no less than 180 days prior to fuel load.</u></p>

**Question 13.03-8**

**SITE-50:** Onsite emergency response organization assignments

**Basis:** 10 CFR 50.47(b)(2); 10 CFR 50, Appendix E.IV.A.2.b; Appendix E.IV.A.5; NUREG-0654/FEMA-REP-1, Evaluation Criterion B.1; Evaluation Criterion B.5; Evaluation Criterion B.6; Evaluation Criterion B.9

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

**A.** Section B, "Emergency Response Organization [ERO]," of the CCNPP3 Emergency Plan (pages B-1/43) and Annex, Section 2, "Organizational Control of Emergencies," (pages 2-1/2) describes the CCNPP3 emergency response organization. Provide resolution of inconsistencies between the narrative, figures and tables as identified below:

- Address clerical staff and control room shift staff shown Figure B-1b in the text in Section B.5.a.
- Include the information from B.5.a.4.a, "TSC [Technical Support Center] Communicator," and B.5.a.4.e, "HPN [Health Physics Network] Communicator," and B.5.a.16, "OSC [Operations Support Center] Team Members," in Figure B-1b.
- Address field monitoring teams and clerical staff shown in Figure B-1c in Section B.5.b.
- Address the Administrative Support Manager, clerical staff and facility support staff shown in Figure B-1d in Section B.5.c.
- Include the information from Section B.5.c, "JIC [Joint Information Center] Administrative Manager;" C.7, "Public Information Liaison;" C.10, "Technical Advisor;" and C.11, "Radiological Advisor," in Figure B-1d.
- Address the Shift Communication in Item 3 of Table B-1b, "Minimum Staffing Requirements for the CCNPP Unit 3 ERO," (page B-37). Item 3 identifies several communicators but no "Shift Communicator."
- The reference for the Emergency Plant Manager responsibilities is indicated in Section B.5.a.1, (page B-6) as Section B.5.a.3 but the title of Section B.5.a.3 is "TSC Director."
- Explain what is meant by reference (e) for Table B-1a. Table B-1b, "Minimum Staffing Requirements for the CCNPP Unit 3 ERO," (page B-39) reference (e) states, "All Shift ERO positions are listed in Table B-1a, contained in unit specific annexes."
- Table B-1b includes positions not clearly listed in Figures B-1b, c or d (Communicator - Control Room (CR), TSC, OSC), Rad Controls Coordinator, Offsite and Onsite Monitoring Team Personnel, RP Personnel, Radiological Advisor, Technical Advisor, and Public Information Liaison).
- Figure B-1b includes positions not clearly listed in Table B-1b (Rad Protection Pool, Chemistry Pool, Operations Pool, Control Room Shift Staff).
- Figure B-1b includes TSC, OSC, CR in some boxes but not all.
- Figure B-1c includes positions not clearly listed in Table B-1b (Field Monitoring Teams, Security Coordinator).
- Figure B-1d includes positions not clearly listed in Table B-1b (Administrative Support Manager).

In providing this resolution of the inconsistencies, provide an explanation for each inconsistency of how the functionality of Table B-1 of NUREG-0654 is maintained and how a situation wherein individuals have multiple responsibilities or collateral duties is avoided. Elaborate on automated systems or plant design features that make the proposed staffing consistent with the functional intent of Table B 1 of NUREG-0654.

B. Table B-1b, "Minimum Staffing Requirements for the CCNPP Unit 3 ERO," (page B-37/39) provides the complete staffing requirements for the ERO including, the 60 minutes augmentation, other on-call personnel, and full augmentation. NUREG-0654, Table B-1 identifies 30 minute and 60 minute augmentation capabilities. Provide a justification for any inconsistencies between NUREG-0654 Table B-1 requirements and Table B-1b minimum staffing augmentation. The justification should elaborate on how the functionality of Table B-1 of NUREG-0654 is maintained and how a situation wherein individuals have multiple responsibilities or collateral duties is avoided.

C. Authorities, responsibilities and duties are discussed for each position of the plant emergency response organization (ERO) staff but there was no discussion related to the use of Digital Instrumentation and Control (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 stage of an accident that require expertise to deal with issues in the Instrumentation and Control Service Center (I&CSC).

D. Table B-1b, "Minimum Staffing Requirements for the CCNPP Unit 3 ERO," (pages B-37/39) identifies the Company Spokesperson, Public Information Director and JIC Director as "Other On-Call" staff. Provide an explanation of what is meant by "Other On-Call."

## Response

A.1 The Control Room shift staff organization blocks in Figure B-1b represent the minimum shift complement, which is described in CCNPP Unit 3 Emergency Plan, Section B.1 and CCNPP Unit 3 Emergency Plan Annex, Table B-1. When an event occurs, the Shift Supervisor fulfills the role of Emergency Director until relieved by the assigned on-call ERO member (see Section B.5.a.1). Once the ERO has been fully mobilized and has activated their facilities, the Shift Supervisor will organizationally fall under the Operations Manager, as illustrated in Figure B-1b. No inconsistencies could be identified with regard to the information contained in these figures and sections.

The Clerical Staff block in Figure B-1b represents the personnel who assist the TSC Administrative Support Manager in the performance of the responsibilities described in Section B.5.a.8. No inconsistencies could be identified with regard to the information contained in these figures and sections.

A.2 Per Table B-1b, the TSC Director is the position responsible for offsite communications when the EOF personnel are not available. Section B.5.a.4.a will be revised to eliminate reference to the TSC Communicator.

The dedicated HPN Communicator, shown in Figure B-1c, is part of the EOF Staff and is discussed in Section B.5.b.9. The discussion content in Section B.5.a.4.e is in error and will be deleted.

OSC Team Members illustrated in Figure B-1b are described in Section B.5.a.16. No inconsistencies could be identified with regard to the information contained in the figure and section.

A.3 A discussion concerning Field Monitoring Teams will be added to Section B.5.b.

The Clerical Staff block in Figure B-1c represents the personnel who assist the EOF Administrative Support Manager in the performance of the responsibilities described in Section B.5.b.10. No inconsistencies could be identified with regard to the information contained in the figure and section.

- A.4 Section B.5.c.7 describes the duties of the JIC Administrative Manager, which is the JIC Administrative Support Manager in Figure B-1d. The discrepancy in the Figure B-1d position title will be corrected.

The Clerical Staff block in Figure B-1d represents the personnel who assist the JIC Administrative Support Manager in the performance of the responsibilities described in Section B.5.c.7. No inconsistencies could be identified with regard to the information contained in the figure and section.

The Facilities Support Staff block in Figure B-1d represents the personnel who assist the JIC Coordinator in the performance of the responsibilities described in Section B.5.c.5. No inconsistencies could be identified with regard to the information contained in the figure and section.

- A.5 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.

Organizational boxes for Public Information Liaison, Technical Advisor, and Radiological Advisor will be added to Figure B-1d.

- A.6 Table B-1b does not provide assignments for the on shift ERO positions, or specifically the shift communicator. Refer to Table B-1a in the Annex and Emergency Plan Section B.1 for information regarding the shift emergency communicator. No inconsistencies could be identified with regard to this question.

- A.7 The reference to Section B.5.a.3 in the Emergency Plant Manager responsibilities will be corrected to Section B.5.a.2.

- A.8 Reference note (e) in Table B-1a states "An Individual shall be designated as {Shift Communicator} and an Individual shall be designated as {STA} for a classified event. Once assigned, these individuals shall not be assigned other responsibilities." This means that these two positions will not be assigned collateral functions/responsibilities during the event. Table B-1b has different reference notes that are not associated with Table B-1a. No inconsistencies could be identified with regard to this question.

- A.9 Figure B-1b and Section B.1.b.4 do not contain information describing the Damage Control Communicators listed as "Communicators" in Table B-1b. The figure and section will be revised to include the Damage Control Communicators.

The Radiation Controls Coordinator is shown on Figure B-1b. No inconsistencies could be identified with regard to the information contained in the figure and the table.

Onsite Monitoring Team Personnel are drawn from the Rad Protection Pool shown on Figure B-1b. No inconsistencies could be identified with regard to the information contained in the figure and the table.

Offsite Monitoring Team Personnel are the Field Monitoring Teams shown on Figure B-1c. No inconsistencies could be identified with regard to the information contained in the figure and the table.

RP Personnel are drawn from the Rad Protection Pool shown on Figure B-1b. No inconsistencies could be identified with regard to the information contained in the figure and the table.

Organizational boxes for Technical Advisor, Radiological Advisor, and Public Information Liaison will be added to Figure B-1d.

A.10 The Figure B-1b Rad Protection Pool (8 personnel) complement is made up of the following Table B-1b personnel as follows:

- 2 onsite monitoring team personnel
- 2 in-plant survey RP personnel
- 4 radiation protection RP personnel.

No inconsistencies could be identified with regard to the information contained in the figure and the table.

The Figure B-1b Chemistry pool is provided in Table B-1b, Section 4, as Chemistry Personnel. No inconsistencies could be identified with regard to the information contained in the figure and the table.

Operations Pool personnel called in to respond to an event are not reflected in Table B-1b. Information will be added to Table B-1b to correct the inconsistency.

The Figure B-1b Control Room Shift Staff (and Shift Supervisor) is provided in Table B-1b, Section 1, as a reference to Table B-1a. No inconsistencies could be identified with regard to the information contained in the figure and the table.

A.11 Facility designations are provided for those positions when it is part of the position title and when it is necessary to prevent misinterpretation.

A.12 The Figure B-1c Field Monitoring Teams are provided in Table B-1b, Section 4, as Offsite Monitoring Team Personnel. No inconsistencies could be identified with regard to the information contained in the figure and the table.

The Security Coordinator position is only in the TSC. The Security Coordinator position will be removed from Figure B-1c.

A.13 The Figure B-1d JIC Administrative Support Manager position box is the Table B-1b JIC Administrative Manager. The discrepancy in the position title will be corrected.

- B. Comparison of NUREG-0654 Table B-1 must be done using CCNPP Unit 3 Tables B-1a and B-1b. The CCNPP Unit 3 model for ERO augmentation does not include 30 minute responders. Industry experience has demonstrated that a 30 minute response is not practical. The CCNPP Unit 3 ERO staffing model accounts for the removal of the 30 minute response as follows:
- Onshift ERO staffing does not assign fire brigade or security personnel collateral ERO functions/responsibilities. The tasks of the fire brigade are limited to firefighting, first aid and search and rescue, which are the typical activities that industry and non-industry fire protection programs are trained on and qualified for. Security personnel perform response activities per the Security Plan without being assigned emergency plan actions beyond their primary security related functions.
  - The CCNPP Unit 3 60 minute response complement is significantly larger than the NUREG-0654 Table B-1 30 and 60 minute response complements combined. The CCNPP Unit 3 model requires 36 sixty minute responders versus a NUREG-0654 combined 26 responders representing both 30 and 60 minute columns.
  - The CCNPP Unit 3 model includes three additional on-duty on call public information personnel (Company Spokesperson, Public Information Director and JIC Director) required to respond when the ERO is activated. They are not required to meet the 60 minute response time since JIC functions are performed in cooperation with offsite agencies and may not be activated until a Site Area Emergency is reached.
  - Full ERO staffing includes a minimum of 27 additional personnel above the shift and duty responders. NUREG-0654 Table B-1 has no such equivalent.

See table below for a comparison of NUREG-0654 Table B-1 and the CCNPP Unit 3 ERO shift and 60 minute response positions.

NUREG-0654 Table B-1 Comparison to CCNPP Unit 3 ERO

Major Functional Area	NUREG-0654				CCNPP Unit 3		
	Position Title or Expertise	On Shift*	30 min	60 min	Position Title or Expertise	On Shift*	60 min
Plant Operation and Assessment of Operation Aspects	Shift Supervisor (SRO)	1			{Shift Supervisor}	1	
	Shift Foreman (SRO)	1			Control Room Supervisor	1	
	Control Room Operators	2			Reactor Operator	2	
	Auxiliary Operators	2			Equipment Operator	2	
Emergency Direction and Control (ED)	Shift Technical Advisor	1 <sup>(a)</sup>			{Shift Supervisor}	1 <sup>(a)</sup>	
	Senior Manager			1	{Emergency Plant Manager}		1
Notification/ Communication		1	1	2	{Emergency Director}		1
					Shift Communicator	1	
					{TSC Director}		1
					{EOF Director}		1
Radiological Accident Assessment and Support of Operational Accident Assessment					{ENS Communicator}		1
					{HPN Communicator}		1
	Senior HP Expertise		1		{Rad Protection Manager}		1
					{Rad Assessment Director}		1
	Offsite Surveys		2	2	{Rad Assmnt Coordinator}		1
	Onsite Surveys		1	1	{Env Assmnt Director}		1
In-Plant Surveys (HP Techs)	1	1	1	{Offsite Mon Team Personnel}		4	
Chem/HP Technicians	1	1	1	{Onsite Mon Team Personnel}		2	
Plant System Engineering, Repair and Corrective Actions					RP Personnel	1	2
	Shift Technical Advisor	1			Chemistry Personnel	1	1
					Shift Technical Advisor	1	
					{Operations Manager}		1
	Core/Thermal Hydraulics		1		{Engineering Director}		1
	Electrical			1	{Reactor Engineer}		1
	Mechanical			1	{Electrical Engineer}		1
					{Mechanical Engineer}		1
	Mechanical Maintenance	1 <sup>(a)</sup>		1	{Maintenance Manager}		1
	Rad Waste Operator			1	{OSC Director}		1
Electrical Maintenance	1 <sup>(a)</sup>	1	1	Mechanical Maintenance	1 <sup>(a)</sup>	2	
I&C Technician		1		Electrical/I&C Maintenance	1 <sup>(a)</sup>	3	
Protective Actions (In-Plant)	HP Technicians	2 <sup>(a)</sup>	2	2	RP Personnel	2 <sup>(a)</sup>	4
Fire Fighting		(b)	(d)		Fire Brigade	(b)	
First Aid and Rescue		2 <sup>(a)</sup>	(d)		Fire Brigade	2 <sup>(a)</sup>	
Access Control/Accountability	Security Force	(c)			Security Personnel	(c)	
Resource Allocation					{Admin Support Manager}		1
	<b>TOTAL</b>	<b>10</b>	<b>11</b>	<b>15</b>		<b>10</b>	<b>36</b>

(a) May be provided by personnel assigned other functions.  
(b) Per TS/Station Fire Protection Plan

(c) Per Station Security Plan  
(d) Local Support

- C. 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 CCNPP Unit 3.
- D. Other On-Call positions are those that are included in a duty rotation and are subject to fitness for duty and response requirements, but are not tied to a 60 minute response time. Since JIC activation is not required at any specific time following event declaration, and the decision to activate is made jointly with offsite authorities, on-call public information personnel are expected to respond as soon as possible to prepare the facility.

### **COLA Impact**

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

### **Section B: Emergency Response Organization**

#### **5. Emergency Response Organization Positional Responsibilities**

a. Plant Emergency Response Organization:

1) {Shift Supervisor} ({Interim Emergency Director}) Control Room

A {Shift Supervisor} is on duty 24 hours a day and has {Emergency Director} responsibilities in a declared emergency until relieved. While serving in this capacity the {Shift Supervisor} is responsible for:

- Activating the ERO (as deemed appropriate or as procedurally required).
- Initiating the NRC Emergency Response Data System (ERDS).
- Performing those duties outlined in Section B.5.a.32 for the {Emergency Plant Manager}. The responsibilities described for the {Emergency Plant Manager} apply to either the {Shift Supervisor} or the {Emergency Plant Manager} depending on which individual is in Command and Control.

COLA Part 5, Emergency Plan, Part II, Section B.5.a.4 will be revised as follows in a future COLA revision:

## **Section B: Emergency Response Organization**

### **5. Emergency Response Organization Positional Responsibilities**

#### a. Plant Emergency Response Organization:

#### 4) {Emergency Communicators} CR/TSC/OSC/EOF

The communicators are responsible for transmitting/receiving information to and from the TSC, OSC, EOF and Control Room. General responsibilities assigned to all Communicators include:

- Establish communications with appropriate parties as directed.
- Transmit information that has been reviewed and/or approved by the responsible Manager or Coordinator.
- Document time, date and information being transmitted or received on appropriate forms.
- Record and relay inquiries and the responses to those inquiries.
- Assist appropriate Managers and Coordinators in maintaining proper records and logs of emergency related activities.
- Gather, record and post appropriate information.

#### ~~a) Specific responsibilities assigned to the {TSC Communicator} include:~~

- ~~• Communicate and receive information via dedicated communications circuit or commercial telephone line with appropriate agencies prior to the EOF accepting Command and Control.~~
- ~~• Monitor offsite communications until released by the {TSC Director}.~~

#### ~~b) Specific responsibilities assigned to the {Operations Communicators} (TSC and Control Room):~~

- Relay requests from the Control Room and TSC for the dispatching of OSC Teams.
- Inform the Control Room, TSC, and EOF of significant changes in event status (e.g. changes in classification, command and control, initiation of site assembly, accountability, evacuation, etc.).
- Appraise the TSC and EOF staff of the overall plant condition and significant changes to system and equipment status.

- Appraise the Control Room of the status of OSC Team activities.

b) Specific responsibilities assigned to the {Damage Control Communicators} include:

- Relaying of requests from the Control Room and TSC for the dispatching of OSC Teams.
- Keeping the station emergency response facilities apprised of the status of OSC Team activities.

c) Specific responsibilities assigned to the {Emergency Notification System (ENS) Communicator} include:

- Notify the NRC of changes in event classification.
- Transmitting appropriate data to the NRC.
- Responding to NRC inquiries.
- Provide real time updates of significant changes to plant and system status and responses to NRC inquiries.
- Maintain continuous communications with the NRC, if requested, via the NRC ENS phone or commercial telephone line.

~~d) Specific responsibilities assigned to the {HPN Communicator} include:~~

- ~~• Maintain continuous communications with the NRC, if requested, via the NRC Health Physics Network (HPN) phone or commercial telephone line.~~
- ~~• Communicate current Health Physics information to NRC representatives, as requested.~~
- ~~• Coordinate the communications of radiological information to the NRC between the TSC and the EOF (onsite vs. environmental data).~~

COLA Part 5, Emergency Plan, Part II, Section B.5.b.6 will be revised as follows in a future COLA revision:

## **Section B: Emergency Response Organization**

### **5. Emergency Response Organization Positional Responsibilities**

#### **b. Offsite Emergency Response Organization:**

##### **6) {Environmental Assessment Director} EOF**

The {Environmental Assessment Director} reports to the {Radiological Assessment Director} and directs the Monitoring Teams. Responsibilities include:

- Coordinate the transfer of control of the Monitoring Teams if initially under the direction of the TSC {Radiation Controls Coordinator}.
- Ensure communications are established with the TSC to obtain information on the accident conditions, meteorological conditions and estimates of radioactive material releases.
- Maintain cognizance of Monitoring Team exposure. When warranted, ask the {Radiological Assessment Director} to initiate an evaluation of the need for administering KI to the Licensee workers.
- Determine needs of the {Radiological Assessment Director}, the {Radiological Assessment Specialist}, and the {HPN Communicator(s)} for updates on Monitoring Team data and ensure distribution of new data to them in accordance with those needs.
- Evaluate and coordinate additional equipment and personnel as necessary from unaffected units to augment and/or relieve site Monitoring Teams.
- Establish and maintain contact with the dispatched Monitoring Teams.
- Document the {Environmental Assessment Director's} instructions and then relay this information to the Monitoring Teams.
- Document environmental data reported by the Monitoring Teams.
- Periodically obtain and document information on Monitoring Team radiological exposure.
- Promptly report new environmental or Monitoring Team exposure data to the {Radiological Assessment Director}.
- Document questions and answers directed to and received from the Monitoring Teams. Ensure the {Radiological Assessment Director} is cognizant of these information requests and relay replies to these requests.

- Advise the {Radiological Assessment Director} of changes in event classification based on effluent releases or dose projections.
- Remain cognizant of forecast and meteorological data and ensure the status is updated periodically.
- Notify the {Radiological Assessment Director} of meteorological changes that may impact identification of downwind areas.
- Upon request, provide release and dose assessment data to Emergency Public Information personnel and the {HPN Communicator}.

The {Environmental Field Monitoring Teams} report to the {Environmental Assessment Director}. Responsibilities of the field monitoring teams include:

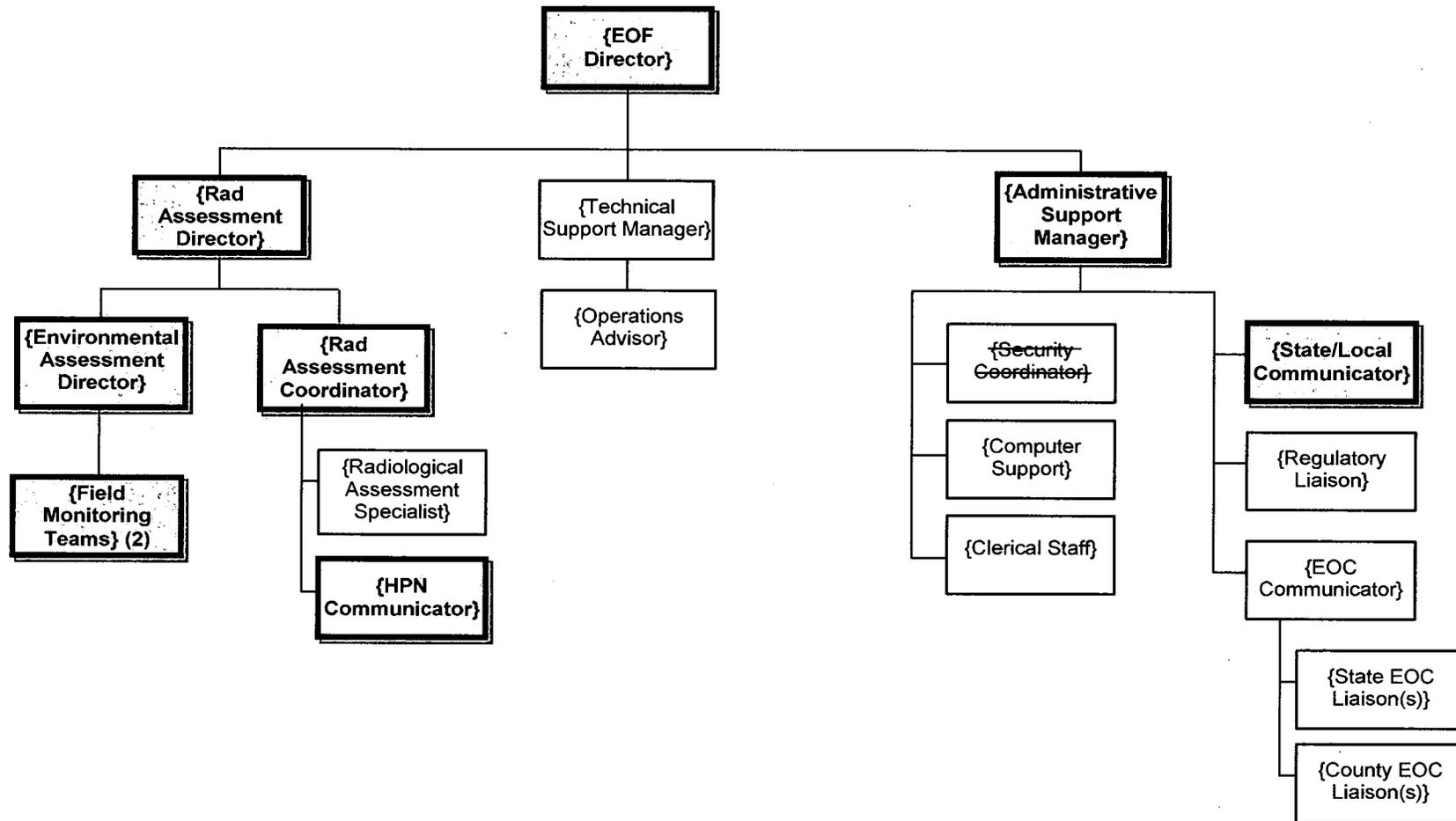
- Establish and maintain communications with the {Environmental Assessment Director}
- Perform equipment checks and inventories in preparation of deployment
- Perform and report results of radiation surveys and environmental sampling
- Track radiological plumes outside the Protected Area

COLA Part 5, Emergency Plan, Part II, Table B-1b, and Figures B-1c and B-1d will be revised as follows in a future COLA revision:

Table B-1b: Minimum Staffing Requirements for the {CCNPP Unit 3} ERO

Functional Area	Major Tasks	Emergency Positions	Minimum Staffing		Full Augmentation
			*60 Minute Augmentation	Other On-Call	
5. Plant System Engineering, Repair, and Corrective Actions	Technical Support / Accident Analysis	Shift Technical Advisor <sup>(e)</sup> (CR)			
		{Engineering Director} (TSC)	1		
		{Reactor Engineer} (TSC)	1		
		{Mechanical Engineer} (TSC)	1		
		{Electrical Engineer} (TSC)	1		
		{Operations Manager} (TSC)	1		
		{Radiation Controls Engineer} (TSC)			1
	{Technical Support Manager} (EOF)			1	
	Repair and Corrective Actions	Mechanical Maintenance (OSC)	2		(b)
		Electrical/I&C Maintenance (OSC)	3		(b)
		Operations Support (OSC)			(b)
{Maintenance Manager} (TSC)		1			
	{OSC Director} (OSC)	1			
	{OSC Leads <sup>(f)</sup> & Team Members} (OSC)			(b)	

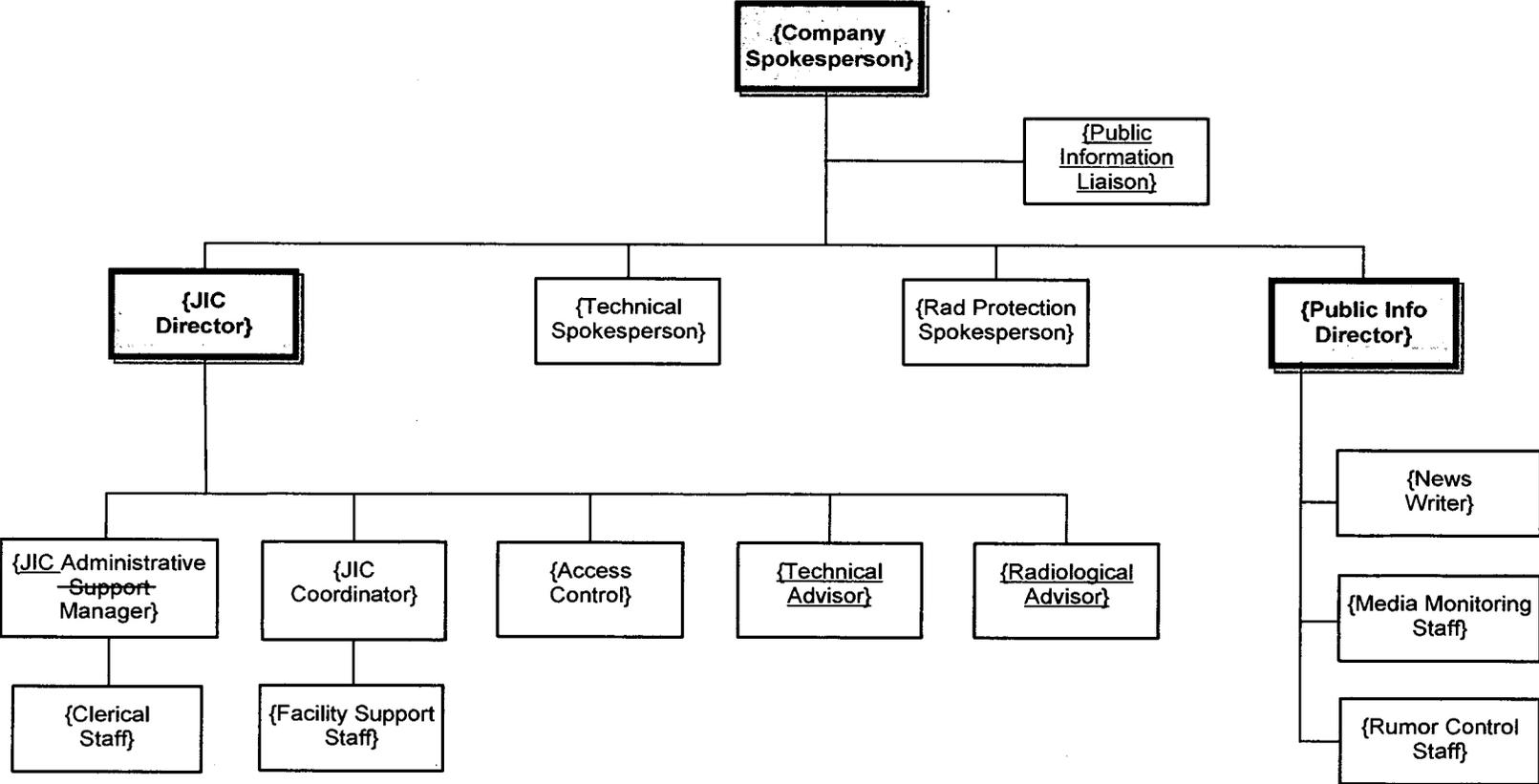
Figure B-1c: Emergency Offsite Organization



Shaded/Bold Boxes indicate minimum staffing positions.

ERO response pool personnel do not include the on-shift complement.

Figure B-1d: Emergency Public Information Organization



Shaded/Bold Boxes indicate minimum staffing positions.  
ERO response pool personnel do not include the on-shift complement.

**Question 13.03-9**

**SITE-51:** Requesting, using and accommodating emergency response support resources

**Basis:** 10 CFR 50.47(b)(3); 10 CFR 50, Appendix E.IV.A.6; Appendix E.IV.A.7; NUREG-0654/FEMA-REP-1, Evaluation Criterion C.1.a and b; Evaluation Criterion C.1.c; Evaluation Criterion C.3; Evaluation Criterion C.4;

**SRP ACCEPTANCE CRITERIA:** Requirement A and B; Acceptance Criteria 1 and 2

A. Section C.1, "Federal Response Support and Resources," (page C-1) of the CCNPP3 Emergency Plan states that Federal agency assistance is available through the National Response Plan (NRP) with the NRC as the lead agency. Revise the Plan to reflect the change to the NRP now known as the National Response Framework (NRF).

B. Section B.5.a, "Plant Emergency Response Organization," (pages B-5/18) states initial liaison with Federal, State and local authorities is performed by the Plant Emergency Response Organization. Revise the CCNPP3 Emergency Plan to address, by title(s) the licensee staff authorized to request Federal assistance.

C. Section C.3, "Radiological Laboratories," (pages C-1/2) describes the onsite laboratory capabilities for chemical and radiological analysis as well as contracted/backup laboratory services. Information regarding the location and availability of offsite radiological laboratories is needed in the CCNPP3 Emergency Plan.

**Response**

A. The CCNPP Unit 3 Emergency Plan will be revised to reflect the change from National Response Plan (NRP) to National Response Framework (NRF).

B. Section B.5.b.a provides the responsibilities for command and control, which is passed down from the Shift Supervisor to the Emergency Plant Manager to the Emergency Director. One of the responsibilities specific to command and control includes "Request assistance from non Licensee emergency response organizations, as necessary."

Section B.5.a does not state or imply that the initial liaison with the offsite agencies includes the authority to request assistance; it simply states that this function, which includes event communications, would be performed by the onsite organization until the EOF is established. Therefore, a revision to the CCNPP Unit 3 Emergency Plan is not necessary.

C. Section C.3 will be revised to indicate the location and availability of offsite radiological laboratories.

## **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section A.1 will be revised 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, {state}, and local organizations (and other local governmental agencies) that are involved in a response to an emergency at {CCNPP Unit 3}.
  - 1) Federal Agencies: The National Response PlanFramework (NRPNRF), Nuclear/Radiological Incident Annex outlines the statutory and regulatory responsibilities. The primary federal response for supporting an emergency at {CCNPP Unit 3} includes:
    - b) Department of Homeland Security (DHS): Per the National Response PlanFramework (NRPNRF), 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 {state} by coordinating the delivery of Federal non-technical assistance. DHS coordinates {state} 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.

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

### **Section C: Emergency Response Support and Resources**

#### **Federal Response Support and Resources**

Assistance is available from federal agencies through the National Response PlanFramework (NRPNRF). 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 {state} through implementation of the NRPNRF.

#### **Radiological Laboratories**

Support of the radiation monitoring and analysis effort is provided by an onsite laboratory. The onsite laboratory is the central point for receipt and analysis of all onsite samples and includes equipment for chemical analyses and for the analysis of radioactivity.

{Additional facilities for counting and analyzing samples can be provided by the CCNPP Unit 1/2 chemistry laboratory located in the CCNPP Unit 1/2 Auxiliary Building. This laboratory can act as backup in the event that the CCNPP Unit 3 counting room and laboratory become unusable or the offsite radiological monitoring and environmental sampling operation exceeds the CCNPP Unit 3 laboratory capacity during an emergency. Additionally, a fixed counting laboratory in the Fort Smallwood Road Shops Complex 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 laboratories can act as backup facilities in the event that the plant's counting room and 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 (state) and federal agencies.~~

COLA Part 5, Emergency Plan, Part III, Appendix 4 will be revised as follows in a future COLA revision:

**Appendix 4: Glossary of Terms and Acronyms**

NRPNRF..... National Response Plan Framework

**Question 13.03-10**

**SITE-52: Emergency Action Levels**

**Basis:** 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(4); Section IV.B of Appendix E to 10 CFR 50; NUREG-0654, FEMA-REP-1, Rev. 1, November 1980:

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criterion 3.

In response to RAI 13.03-4 (RAI No. 81 Emergency Planning) the applicant responded on April 14, 2009 (ADAMS Accession Number ML091060754) by stating that "Unistar will withdraw the submitted COLA Part 5 related Emergency Action Level (EAL) Enclosures A, B and C and use Option 2." However, in response to critical element 2, the applicant further states "UniStar will develop the remainder of its EAL scheme by utilizing NEI 99-01 Revision 5, or the most current NRC endorsed version available at the time of EAL submittal. The submitted EALs will be written with no deviations pending resolution of two U.S. EPR design specific FAQs concerning; (1) digital I&C and (2) automatic containment depressurization setpoint issued to NEI on 03/10/09."

The NRC can accept a commitment to a specific endorsed standard such as NEI 99-05 Revision 5 as a basis for a combined license (COL) but not to the "most current NRC endorsed version available at the time of EAL submittal."

Amend your response and delete the words from the response that commits to an as yet unapproved and unknown version of EALs.

**Response**

Critical Element 2 – UniStar Nuclear Energy will develop its EAL scheme by utilizing NEI 99-01, Revision 5. The submitted EALs will be written with the following deviations:

- NEI 99-01 Revision 5 EALs (SU3, SA4 and SS6), loss of safety system annunciation / indication are not applicable to the U.S. EPR plant design and are therefore deleted.
- New loss of digital I&C EALs have been developed by AREVA for the U.S. EPR consistent with the proposed NEI 07-01 Revision 0 digital I&C EALs for passive reactor designs.
- NEI 99-01 Revision 5 PWR containment potential loss fission product barrier 2.C is not applicable to the U.S. EPR plant design and is therefore deleted.

## **COLA Impact**

COLA, Part 5, Emergency Plan Annex, Section 3 will be revised as follows in a future COLA revision:

### **Section 3: Classification of Emergencies**

#### **3.1 Emergency Action Levels (EALs)**

An Emergency Action Level scheme based on Revision 5 of NEI 99-01, "Methodology for Development of Emergency Action Levels," currently approved for use by NRC letter from Christopher G. Miller to NEI dated 02/22/08, ~~or the most current NRC endorsed version available at the time of EAL submittal~~, is used for {CCNPP Unit 3}. The submittal EALs will be written with no deviations other than those attributable to specific U.S. EPR reactor design considerations.

#### **3.2 Maintenance of Emergency Action Levels**

The ~~details of EALs development~~ are documented in an Emergency Action Level Technical Basis Document. Revision of the EAL Technical Basis Document is controlled the same way as the {CCNPP Unit 3} Emergency Plan, requiring the same reviews including a review in accordance with 10 CFR 50.54(q).

COLA, Part 10, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and ITAAC Closure, Appendix A, will be revised as follows in a future COLA revision:

### **Appendix A- Proposed Combined License Conditions**

#### **2. COL Items**

#### **8. EMERGENCY ACTION LEVELS**

The {CCNPP Unit 3} Emergency Action Levels (EALs) and the associated Technical Bases Manual contains bracketed values requiring plant specific values to be provided that can not be determined until after the COL is issued. These bracketed values are associated with certain site specific values and detailed design information, such as setpoints and instrument numbers. In most cases, this information is necessary to determine EAL thresholds.

#### **PROPOSED LICENSE CONDITION:**

{Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall submit a complete set of plant-specific Emergency Action Levels (EALs) for {~~Calvert Cliffs Nuclear Power Plant~~ CCNPP Unit 3} in accordance with NEI 99-01 Revision 5, ~~or the most current NRC endorsed version available at the time of EAL submittal~~, to the NRC for approval confirmation at least 180 days prior to initial fuel load. The submitted EALs will be written with no deviations other than those attributable to specific U.S. EPR reactor design considerations.

**Question 13.03-11**

**SITE-54: Communication processes**

**Basis:** 10 CFR 50.47(b)(6); 10 CFR 50, Appendix E.IV.E.9; 10 CFR 50.72(a)(4); Generic Letter 91-14; NUREG-0654/FEMA-REP-1, Evaluation Criterion F.1.c; Evaluation Criterion F.1.e

**SRP ACCEPTANCE CRITERIA:** Requirements A, B and F; Acceptance Criteria 1, 2 and 29

A. Section F.1, "Communications/Notifications," (pages F-1/3) of the CCNPP3 Emergency Plan identifies the local commercial telephone system, Emergency Response Data System (ERDS), Emergency Notification System (ENS) and Health Physics Network (HPN) as communication systems established to ensure reliable and timely exchange of information between the site Control Room, Technical Support Center and Emergency Operations Facility and Federal emergency response organizations. Address in the CCNPP3 Emergency Plan provisions for communication with Federal emergency response organizations other than the NRC, such as the U.S. Coast Guard.

B. Section F.1, "Communications/Notifications," (pages F-1) states the automated Emergency Response Organization (ERO) notification system, consisting of a computer capable of initiating and receiving telephone calls and activating pagers, is used to rapidly notify ERO members. Implementing procedures include actions should the ERO notification system fail. Provide a procedure title in Appendix 2, "Procedure Cross-Reference to NUREG-0654," in the CCNPP3 Emergency Plan.

C. Section F.1, "Communications/Notifications," (pages F-1/3) discusses the ENS, HPN and the ERDS. There is no reference to the Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL), Local Area Network (LAN), Generic Letter 91-14 or NRC Bulletin 80-15. Discuss how the licensee is implementing Generic Letter 91-14 and NRC Bulletin 80-15 requirements.

**Response**

- A. A statement will be added to Emergency Plan, Section F.1.b-d.4, to specify that non-dedicated communications to offsite groups and organizations will be provided over the commercial lines.
- B. An implementing procedure reference is provided by number and title for ERO notification (EP-AN-400, Emergency Notifications) in the CCNPP Unit 3 Emergency Plan, Appendix 2.
- C. A regulatory basis for including a discussion in the COLA regarding utility to NRC communication/notification pathways for the Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL) and Local Area Network (LAN) could not be identified. NRC communications are channeled from the station through the Federal Telecommunications System (FTS), which is routed to the appropriated link or bridge by the NRC.

Generic Letter (GL) 91-14 discusses the NRC's plans to upgrade its communications systems to FTS 2000, which was completed in March of 1992 and has itself been subsequently upgraded. No utility action or reply was specified for this GL. When installed, the CCNPP Unit 3 connection to the FTS will be done using the equipment,

systems and processes in place at that time for FTS communications, not in accordance with GL 91-14 which is obsolete.

Bulletin 80-15 was addressed in response to NRC RAI 105 (UniStar Nuclear Energy Letter UN#09-277, dated June 5, 2009).

## **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section F.1.b-d.4 will be revised as follows in a future COLA revision:

### **Section F: Emergency Communications**

#### **1. Communications/Notifications**

b-d. The Licensee has established several communication systems that ensure reliable and timely exchange of information necessary to provide effective Command and Control over any emergency response; (1) between the site and {state} and local agencies within the EPZs, (2) with federal emergency response organizations, (3) between the plant, the EOF, and the {state} and local EOCs, and (4) between Emergency Response Facilities and Monitoring Teams. A general description of the systems is as follows:

- 4) Local Commercial Telephone System: This system provides standard commercial telephone service through the public infrastructure, consisting of central offices and the wire line and microwave carrier. The commercial telephone system includes connections to PBX, emergency telephone system, dedicated lines to emergency facilities, and lines to the JICs. The commercial vendor provides primary and secondary power for their lines at their central office.

Non-dedicated communications to offsite groups and organizations are provided over the commercial lines.

### Question 13.03-12

**SITE-55:** Distribution of public information

**Basis:** 10 CFR 50.47(b)(7); 10 CFR 50, Appendix E.IV.D.2; NUREG-0654/FEMA-REP-1, Evaluation Criterion G.1; Evaluation Criterion G.2; Evaluation Criterion G.3.a; ; Evaluation Criterion G.4.b

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

Section B.5.c states that the Public Information ERO operates out the Joint Information Center (JIC). Describe in the CCNPP3 Emergency Plan the physical location of the Joint Information Center (JIC) and any other locations for use by the news media during an emergency.

### Response

The Joint Information Center is located next to the EOF about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road. This information will be added to Emergency Plan, Section G.3.a.2.

### COLA Impact

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

### Section G: Public Education and Information

#### 3. Media Accommodations

- a. A {communications and public affairs group} is notified when an Unusual Event or higher Emergency condition exists. They will handle public and media inquires in the early stages of the event (until the JIC is activated) by distributing background information, news statements, and providing information to company management.
- 2) The Joint Information Center (JIC): The JIC is {located next to the EOF about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road. It is} the facility in which media personnel gather to receive information related to the emergency event. The JIC is the location established where approved news releases will be provided to the media for dissemination to the public. News releases are coordinated between the EOF and JIC personnel and {State} and/or Federal representatives in the JIC. Public information personnel operate from the EOF and the JIC, which is under the direction of the {Company Spokesperson} and functions as the single point contact to interface with Federal, {State}, and local authorities who are responsible for disseminating information to the public.

**Question 13.03-13**

**Site 56: Emergency facilities and equipment**

**Basis:** 10 CFR 50.47(b)(8); 10 CFR 50, Appendix E.IV.E.3; Appendix E.IV.E.4; Appendix E.IV.E.8; Appendix E.VI Emergency Response Data System; 10 CFR 52.79(a)(17); 10 CFR 50.34(f)(2)(iv); Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," NUREG-0654/FEMA-REP-1, Evaluation Criterion H.1; Evaluation Criterion H.2; Evaluation Criterion H.4; Evaluation Criterion H.6; Evaluation Criterion H.7; Evaluation Criterion H.9; Evaluation Criterion H.11

**SRP ACCEPTANCE CRITERIA:** Requirements A, B and F; Acceptance Criteria 1, 2, 4, 5, 12, 25, and 26

**A.** The CCNPP3 Emergency Plan does not state that the Technical Support Center (TSC) and Emergency Operations Facility (EOF) are built in accordance with the Uniform Building Code. Provide clarification that the TSC and EOF are built in accordance with the Uniform Building Code.

1. Annex, Section 4.1.B, "Technical Support Center," (page Annex p 4-1/2) states that the TSC has the same protection from radiological hazards as the Control Room.  
Will the CCNPP3 TSC meet the requirements in the FSAR for the EPR design of the TSC? If not, verify that any person working in the TSC would not exceed 5 rem whole body, or its equivalent to any part of the body, for the duration of an accident.

**B.** The physical location of the EOF is not identified. Provide the name of the facility, location of the EOF and describe its physical location in relation to the CCNPP3 Site and revise the CCNPP3 Emergency Plan to include the information. Reference where in the CCNPP Units 1 and 2 Emergency Plan that the information below can be found or provide information for the following items:

1. Section H.2, "Emergency Operations Facility (EOF)," page H-4 states that the EOF technical data system receives, processes, and displays information sufficient to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition. Provide additional information related to the equipment for gathering and displaying data and the technical data system inputs and outputs available in the EOF.
2. A summary of the radiation protection features described in Table 1 (NUREG-0737 Supplement 1) were not addressed in the CCNPP3 Emergency Plan. Provide a summary of the radiation protection features for the EOF in the CCNPP3 Emergency Plan.
3. Environmental controls to provide room air temperature, humidity, and cleanliness appropriate for personnel and equipment in the EOF were not addressed. Provide clarification that the EOF is environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment.
4. There is no discussion of security for the EOF when it is activated or when it is idle. Provide a summary of the security measures to exclude unauthorized personnel when it is active and maintaining readiness when it is idle.

**C.** Section H.6.b, "Radiological Environmental Monitors and Sampling," (page H-9) states that the offsite environmental monitoring program is described in the Offsite Dose Calculation Manual (ODCM). The ODCM states that it will be redeveloped following endorsement of NEI

07-09 by NRC. Explain how dosimetry for offsite monitoring and analysis meets the NRC Radiological Assessment Branch Technical Position for the Environmental Radiological Monitoring Program.

D. Section H.6.c, "Laboratory Facilities," (page H-9) states other Licensee sites or contracted laboratories can provide backup capabilities within a few hours of notification. Provide the names, locations and a discussion of the services each "other Licensee and contracted laboratory" will provide and include this information in the CCNPP3 Emergency Plan. Provide appropriate Letters of Agreements or Memoranda of Understanding.

E. Section H.9, "Operations Support Center Capabilities," (OSC) (page H-10) states that the OSC has sufficient respiratory protection gear, KI, protective clothing, and other health physics equipment and supplies. Section H.1.c, "Operations Support Center," (page H-3) states that a limited inventory of supplies, including respirators, protective clothing, flashlights and portable survey instruments are kept for the OSC. Clarify the inconsistencies between types and quantities (sufficient vs. limited) of supplies maintained for the OSC.

F. Section F.1.b-d.5, "Emergency Response Data System (ERDS)," (page F-2) addresses the ERDS system.

1. Discuss the compatibility of the ERDS link control and data transmission with the NRC receiving system.
2. Discuss the software and hardware maintenance of the Emergency Response Data System (ERDS).

G. Annex, Section 4.2.B, "Onsite Radiation Monitoring Equipment," (pages 4-3/5) discusses monitoring equipment and obtaining samples. No discussion was found regarding radiation exposures to individuals obtaining samples. Describe the capability to promptly obtain and analyze samples from the reactor coolant system and containment that may contain accident source term radioactive materials without radiation exposures to the individual exceeding 5 rems to the whole body or 50 rem to the extremities.

## Response

A. The CCNPP Unit 3 Emergency Plan states the TSC will be built in accordance with NUREG-0696, as stated in Appendix 1. Other state and local requirements for building codes and specifications are governed and followed outside the scope of the radiological emergency plan. Design aspects of the TSC are discussed in the U.S. EPR FSAR, which is incorporated by reference into the CCNPP Unit 3 COLA.

The EOF is already built and will be shared between Units 1 & 2 and Unit 3 and meets state and local requirements for building codes and specifications.

A.1 The CCNPP Unit 3 Emergency Plan Annex Section 4.1.B statement concerning the TSC protection factor is correct.

B. The Emergency Operations Facility is located about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road. This information will be added to Emergency Plan, Section H.2.

- B.1 Additional information related to the equipment for gathering and displaying data and the technical data system inputs and outputs available in the EOF are contained in Section H.5.c.
- B.2 The Emergency Operations Facility is located about twelve miles from the site, outside the plume exposure EPZ. No radiation protection features are designed into the EOF.
- B.3 The EOF is environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment. This information will be added to Emergency Plan, Section H.2.
- B.4 As documented in the Emergency Plan, Section B.5.b.10, the Administrative Support Manager maintains access control to the EOF when the facility is activated. Incoming personnel that do not have an access badge are required to show their ID at the entrance window and once authorized for entry, the door is electronically unlocked.

The facility remains locked when it is inactive and is monitored by the Security Operations Center (SOC). Additionally, access to the area surrounding the EOF is restricted by a locked gate which can also be opened by an access badge. The gate is equipped with an intercom and camera system (monitors are located on the JIC Security desk and the FFD desk) for individuals who want access and have not been issued an access badge.

- C. U.S. EPR FSAR Section 11.5.2 contains a COL Item that requires an applicant that references the U.S. EPR to fully describe, at the functional level, elements of the process and effluent monitoring and sampling programs required by 10 CFR Part 50, Appendix I and 10 CFR 52.79(a)(16). This program description, Offsite Dose Calculation Manual (ODCM), will specify how a licensee controls, monitors, and performs radiological evaluations of releases. The program will also document and report radiological effluents discharged to the environment.

This COL Item is addressed as follows in CCNPP Unit 3 FSAR Section 11.5.2:

{CCNPP Unit 3} will adopt NEI 07-09A, "Generic FSAR Template Guidance for Offsite Dose Calculation Manual (ODCM) Program Description," (NEI, 2009b). The milestone for development and implementation of the ODCM is addressed in Table 13.4-1.

Table 13.4-1, Operational Programs Required by NRC Regulations and Program Implementation, includes a line item for the ODCM, as described in FSAR Section 11.5, with a milestone of "prior to initial fuel load."

Finally, a proposed license condition is provided in Part 10, Appendix A, which states:

{Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall implement the programs or portions of programs identified in FSAR Table 13.4-1 on or before the associated milestones in FSAR Table 13.4-1.

Therefore, any site-specific information with respect to how dosimetry for offsite monitoring and analysis meets the NRC Radiological Assessment Branch Technical

Position for the Environmental Radiological Monitoring Program, that is not included in NEI 07-09A, will be provided in the final ODCM prior to initial fuel load.

- D. Emergency Plan, Section H.6.c will be revised to indicate that in the event the onsite CCNPP Unit 3 laboratory is unavailable for sample analysis, the CCNPP Unit 1/2 chemistry laboratory located in the CCNPP Unit 1/2 Auxiliary Building may be utilized. Capabilities of the CCNPP Unit 1/2 chemistry laboratory include:

- Radionuclide identification in various sample media.
- Analysis and measurement of radionuclides in samples taken within the plant and samples taken in the plant site and offsite environment.

Emergency Plan, Section B.8.d will be revised to indicate that the Laboratory Services Section, Technical Services Department, General Services Division, Constellation Generation Group maintains a fixed counting laboratory in the Fort Smallwood Road Shops Complex. It is available in about two hours. General capabilities include:

- Dosimetry of legal record processing.
- Radiological environmental monitoring equipment and sample media.
- Radiological environmental sampling, and analysis of soil, water, air, vegetation, etc.
- Radiological environmental consulting.

- E. Emergency Plan, Section H.1.c, will be revised to state that a sufficient inventory of supplies will be kept for the OSC.

F.1 CCNPP Unit 3 ERDS will be compatible with and capable of transmitting data to the NRC in accordance with 10 CFR 50 Appendix E.I.V, Emergency Response Data System.

F.2 CCNPP Unit 3 ERDS software and hardware will be maintained in accordance with 10 CFR 50 Appendix E.IV.3, Maintaining Emergency Response Data System.

G.1 Emergency worker exposure guidelines are discussed in the CCNPP Unit 3 Emergency Plan, Section K.1.

G.2 Reactor coolant and containment samples will not be taken if personnel exposures are expected to exceed the applicable guidelines. Since the NRC has approved the Post Accident Sampling Stations regulatory relaxations with utilities, there is no longer a requirement to promptly obtain and analyze samples. These activities will be performed in a methodic manner during the recovery phase.

## **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section B.8.d will be revised as follows in a future COLA revision:

### **Section B: Emergency Response Organization**

#### **8. Industry/Private Support Organizations**

d. Environmental Monitoring Services:

~~{Ft. Smallwood (REMP Laboratory). An environmental lab provides radiological environmental monitoring services in support of site and emergency Radiological Environmental Monitoring Programs (REMPs). In an emergency situation, Ft. Smallwood field personnel, at a minimum, would continue to maintain CCNPP Unit 3 air samplers and exchange TLDs under the supervision of the Environmental Assessment Director. The Ft. Smallwood lab would analyze the environmental samples for their radioactivity content and report results to CCNPP Unit 3}.~~

The Laboratory Services Section, Technical Services Department, General Services Division, Constellation Generation Group maintains a fixed counting laboratory in the Fort Smallwood Road Shops Complex. It is available in about two hours. General capabilities include:

- Dosimetry of legal record processing.
- Radiological environmental monitoring equipment and sample media.
- Radiological environmental sampling, and analysis of soil, water, air, vegetation, etc.
- Radiological environmental consulting.}

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

### **Section H: Emergency Facilities and Equipment**

#### **1. Control Room, Technical Support Center, and Operations Support Center**

c. Operations Support Center (OSC):

Each OSC is equipped with communication links to the Control Room and the TSC (see Section F). A ~~limited~~sufficient inventory of supplies will be kept for the OSC. This inventory will include respirators, protective clothing, flashlights and portable survey instruments.

COLA Part 5, Emergency Plan, Part II, Section H.2 will be revised as follows in a future COLA revision:

## **Section H: Emergency Facilities and Equipment**

### **2. Emergency Operations Facility (EOF)**

The EOF is {located about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road. It is} 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:

- Management of overall emergency response.
- Coordination of radiological and environmental assessments.
- Determination of recommended public protective actions.
- Management of recovery operations.
- Coordination of emergency response activities with Federal, {state}, and local agencies.

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, {State} and local organizations.
- The EOF is environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment.

COLA Part 5, Emergency Plan, Part II, Section H.6.c will be revised as follows in a future COLA revision:

## **Section H: Emergency Facilities and Equipment**

### **6. Monitoring Equipment Offsite**

- c. Laboratory Facilities: {In the event that the onsite CCNPP Unit 3 laboratory is unavailable for sample analysis, the CCNPP Unit 1/2 chemistry laboratory located in the CCNPP Unit 1/2 Auxiliary Building may be utilized. Capabilities of the CCNPP Unit 1/2 chemistry laboratory include: External facilities for counting and analyzing samples can be provided by the other Licensee sites or contracted laboratories. These laboratories can act as backup facilities in the event that the affected site's counting room and laboratory become unusable or the offsite radiological monitoring and environmental sampling operation exceeds the capacity of the site capabilities during

~~an emergency. It is estimated that these laboratories will be able to respond within several hours from initial notification.~~

- Radionuclide identification in various sample media.
- Analysis and measurement of radionuclides in samples taken within the plant and samples taken in the plant site and offsite environment.}

**Question 13.03-14**

**SITE-57: Plant systems and instrumentation**

**Basis:** 10 CFR 50.47(b)(9); NUREG-0654/FEMA-REP-1, Evaluation Criterion I.1; Evaluation Criterion I.2; Evaluation Criterion I.5; Evaluation Criterion I.7; Evaluation Criterion I.8; Evaluation Criterion I.10; Supplement 1 to NUREG-0737, Section 6.1.b.3. - Control Room Post-accident sampling capability; Regulatory Guide 1.97 (Rev. 2),

**SRP ACCEPTANCE CRITERIA:** Requirement A; Acceptance Criteria 1, 4, 5, 25, 27 and 28

**A.** Section I.1, "Plant Parameters and Corresponding Emergency Classification," (page I.1) of the CCNPP3 Emergency Plan states that plant system parameters that characterize an Emergency Action Level (EAL) are presented in EAL Technical Bases. Provide a specific reference to the EAL Technical Bases document in the CCNPP3 Emergency Plan.

**B.** Section I.2, "Onsite Accident Assessment Capabilities," (page I-1) states that resources are available to provide initial and continuing information for accident assessment throughout the accident until it is declared over. Confirm that the CCNPP3 Control Room will meet the requirements in the FSAR for the EPR design of the Control Room or summarize the Control Room radiological monitoring instrumentation and determine if the monitoring equipment meets the requirements of NUREG-0737 Supplement I. Include the result of the review in Section H.5 or I.2

**C.** Appendix 4, "Glossary of Terms and Acronyms," lists the PASS, Post Accident Sampling System. Provide additional information on PASS and include a summary in the CCNPP3 Emergency Plan.

**D.** Section A.1.a.1.i, "Federal Agencies," (page A-5) states that the National Weather Service (NWS) provides meteorological data including existing and forecasted wind speed, direction and ambient air temperature during emergency situations if required. Include verification of NWS's 24/7 availability in the CCNPP3 Emergency Plan.

**E.** Section H.5.a, "Geophysical Monitors," [onsite] (page H-6) and Section H.6.a, "Geophysical Monitors," [offsite] (page H-9) states the NWS, regional weather forecasters, contracted weather providers or the internet may be contacted to provide weather information.

1. Provide additional information on the method for adapting the NWS, regional weather forecasters, contracted weather providers or the internet data for onsite use.
2. Provide details regarding the contracted weather provider mentioned in Section H.6.a.

**F.** Section H.5.a.1, "Meteorological Instrumentation," (page H-6) states that the information is transferred onsite by means of the plant computer system. Provide information on how the Licensee provides meteorological data to the State(s) and include a statement in the CCNPP3 Emergency Plan.

**G.** A minimum of two offsite monitoring teams are dispatched by company or personal vehicles at an Alert or higher class. Include the estimated deployment time for Monitoring Teams in the CCNPP3 Emergency Plan.

H. Section I.10, "Dose Estimates," (page I-5) states that procedures exist for the correlation of air activity levels to dose rate for "key isotopes." Include key isotopes and a summary of the provisions for estimating integrated dose from the projected and actual dose rates and for comparing these estimates with the protective action guides in the CCNPP3 Emergency Plan.

### Response

- A. A reference to the EAL Technical Basis Manual will be added to the CCNPP Unit 3 Emergency Plan, Appendix 1.
- B. The CCNPP Unit 3 Control Room will meet the requirements in the FSAR for the EPR design.
- C. The CCNPP Unit 3 Emergency Plan does not rely on the Post Accident Sampling System (PASS). This abbreviation will be removed from Appendix 4, Glossary of Terms and Acronyms.
- D. National Weather Service (NWS) information is available 24/7 at [www.forecast.weather.gov](http://www.forecast.weather.gov) for the Calvert Cliffs area. A statement regarding the availability of NWS information will be added to the CCNPP Unit 3 Emergency Plan.
- E.1 NWS information is available 24/7 at [www.forecast.weather.gov](http://www.forecast.weather.gov) for the Calvert Cliffs area. In the event the station meteorological equipment becomes unavailable local NWS information, or information obtained from other local sources, can be directly used as a backup.
- E.2 CCNPP Unit 3 does not have a contracted meteorological service. Reference to a contracted meteorological service will be removed from the CCNPP Unit 3 Emergency Plan.
- F. Section E.3 of the CCNPP Unit 3 Emergency Plan specifies the information included in the notification to the State. Meteorological data is part of this information.
- G. Table B-1b of the CCNPP Unit 3 Emergency Plan specifies a 60 minute response time for field monitoring team personnel. Actual deployment would occur sometime after that at the discretion of the Environmental Assessment Director based on plant conditions. If the event is not radiological in nature or does not involve a potential for release, then the teams may not be deployed. Consequently, including a deployment time in the CCNPP Unit 3 Emergency Plan is not appropriate.
- H. A list of the key isotopes and a summary of the provisions for estimating integrated dose from the projected and actual dose rates and for comparing these estimates with the protective action guides will be contained in the Emergency Plan Implementing Procedures. COLA Part 10, ITAAC, Table 2.3-1 includes an EP ITAAC for submitting detailed Emergency Plan Implementing Procedures no less than 180 days prior to fuel load.

## COLA Impact

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

### Section A: Assignment of Responsibility

#### 1. Concept of Operations

a. Identified below are federal, {state}, and local organizations (and other local governmental agencies) that are involved in a response to an emergency at {CCNPP Unit 3}.

1) Federal Agencies:

i) National Weather Service (NWS): Provides meteorological information during emergency situations, if required. Local area Ddata, available 24 hours a day / 7 days a week via the forecast.weather.gov website, will include existing and forecasted wind directions, wind speed, and ambient air temperature.

COLA Part 5, Emergency Plan, Part II, Section H.6 will be revised as follows in a future COLA revision:

### Section H: Emergency Facilities and Equipment

#### 6. Monitoring Equipment Offsite

a. Geophysical Monitors: In the event that the onsite meteorological tower or monitoring instrumentation becomes inoperative ~~and the contracted weather provider cannot be contacted~~, meteorological data may be obtained directly from the National Weather Service or the internet.

COLA Part 5, Emergency Plan, Part III, Appendix 2 will be revised as follows in a future COLA revision:

### Appendix 2: Procedure Cross-Reference to NUREG-0654

Criteria	Planning Standard	Procedure/Document
NUREG-0654.II.D	Emergency Classification System	{EP-AN-300, Emergency Classification} {EAL Technical Basis Manual}

COLA Part 5, Emergency Plan, Part III, Appendix 4 will be revised as follows in a future COLA revision:

**Appendix 4: Glossary of Terms and Acronyms**

PASS.....Post Accident Sampling System

**Question 13.03-15**

**SITE-58:** Evacuation provisions and actions

**Basis:** 10 CFR 50.47(b)(10); 10 CFR 50, Appendix E.IV; NUREG-0654/FEMA-REP-1, Evaluation Criterion J.1; Evaluation Criterion J.2; Evaluation Criterion J.6; Evaluation Criterion J.7; Evaluation Criterion J.8; Evaluation Criterion J.10.a

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

**A.** Section J.1, "Notification of Onsite Personnel," (page J-1) of the CCNPP3 Emergency Plan states that provisions exist for notification of personnel in high noise areas and outbuildings and people outside of the Protected Area but within the Owner Controlled Area. Include an explanation of the provisions for notification of personnel in high noise areas and outbuildings and people outside of the Protected Area but within the Owner Controlled Area.

**B.** Annex, Section 5.1, "Unit Assembly Areas," (page 5-1) discusses site assembly areas but offsite relocation areas are not identified. Identify the location of offsite relocation areas in CCNPP3 Emergency Plan and, if offsite locations are not under the applicant's control, provide letters of agreement. State whether these are the same locations as used for CCNPP Units 1 and 2.

**C.** Section J.2, "Evacuation Locations," (page J-1) states that transportation is normally done by personal means using established evacuation routes. It is indicated that those without transportation will be provided transportation as necessary. Describe the process used to provide transportation for the evacuation of personnel without vehicles.

**D.** Section J.6.c, "Use of Potassium Iodide (KI)," (page J-3) states that, "The station(s) are responsible for maintaining a supply of KI at their respective site." Identify the location of the KI supply to be used by onsite personnel and the individual responsible for maintenance and distribution of KI.

**E.** Section J, "Protective Response," (pages J-1/7) discusses how to evaluate the need for and initiate a protective action recommendation (PAR). Provide additional information related to relaxing and extending PARs.

**F.** Appendix 5 only references the Evacuation Time Report (August 30, 2002 version) and states that, "The results are provided separately in Part 11 of the COL Application." Clarify the location of the referenced ETE report and revise the CCNPP3 Emergency Plan accordingly.

**G.** Section J.10.a, "Implementation of Protective Action Recommendations," (pages J-4/6) states that public evacuees leave the site on designated evacuation routes. Figure 1-2, "10-Mile (16 Kilometer) Emergency Planning Zone [EPZ]," (Part I, page 7) provides a map of regional evacuation areas in the 10-mile EPZ. However, maps, or a reference to the document that contains the maps, showing evacuation routes, pre-selected radiological sampling and monitoring points, relocation centers, and shelters are needed in the CCNPP3 Emergency Plan.

## Response

- A. Provisions for personnel in high noise areas may include flashing or strobe warning lights and area sweeps. Provisions for the warning of personnel on outbuildings and OCA areas may include PA announcements and area sweeps. These provisions will be provided in Emergency Plan Section J.1.
- B. Site evacuation is performed at or before a Site Area Emergency. If there are no radiological contamination concerns, personnel would be instructed to proceed home. If site evacuation is performed at a General Emergency or when there are radiological contamination concerns, personnel and vehicles would be monitored and decontaminated at the Farm Demo Building prior to being instructed to follow EPZ evacuation instructions and proceed to the established reception centers for the general public. The CCNPP Unit 3 Emergency Plan, Section K.7, states the following:
- Nonessential onsite personnel may be evacuated to an offsite relocation center or assembly area, as discussed in Section J. Radiological controls personnel at that location monitor evacuees and determine the need for decontamination. Existing and temporary facilities to limit contamination and exposure will be utilized and established at the site as necessary during an emergency situation. In the event that decontamination of evacuees locally is not possible, personnel will be sent to designated locations for monitoring and decontamination. Provisions for extra clothing are made and suitable decontaminates are available for the expected type of contaminations, particularly with regards to skin contaminations, including radioiodine contamination of the skin.*
- C. Personnel without transportation will be paired with employees who have room in their personal vehicle.
- D.1 KI storage will be provided in various locations which will be accessible to the ERO (refer to sections H.1.b and H.9. Specific storage locations will be provided in the implementing procedures. COLA Part 10, ITAAC, Table 2.3-1 includes an EP ITAAC for submitting detailed Emergency Plan Implementing Procedures no less than 180 days prior to fuel load.
- D.2 The {Emergency Preparedness Manager} is responsible to ensure that the Emergency Response Facilities are maintained in a constant state of readiness, which includes the maintenance of KI, as specified in CCNPP Unit 3 Emergency Plan Section P.3 and verified per Section H.10.
- D.3 The {Emergency Plant Manager} or {Emergency Director} has the responsibility for approval of issuing KI to Licensee emergency workers per CCNPP Unit 3 Emergency Plan Sections B and J.6.c. Instructions for distribution will be provided in the implementing procedures as appropriate for each area where KI is warranted.
- E.1 PARs once made, are not relaxed until the emergency state has been terminated and Recovery has been initiated per Emergency Plan sections D.1.f and M.1.b.

- E.2 Plant conditions, projected dose and dose rates, and/or field monitoring data are continuously evaluated during an event to assess and develop PARs (similar and in conjunction with continuous evaluation of EALs). Notification requirements for changes to PARs are described in Emergency Plan section E.2.b.1.

The CCNPP Unit 3 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 state of Maryland. This statement will be added to Emergency Plan, Section J.10.

- F. The ETE is in Part 5 of the COLA. This correction was previously provided in response to RAI 36 (UniStar Nuclear Energy Letter UN#08-096, dated December 19, 2008).
- G. Section J.10.a concerns the general public evacuees located within the 10 mile EPZ. As stated in Section J.10.a, the state and county plans contain official maps and information on the locations of offsite centers. Pre-selected radiological sampling and monitoring points are controlled and documented in the ODCM. As discussed in the response to Question 13.03-13, the ODCM will be implemented prior to initial fuel load.

### **COLA Impact**

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

### **Section J: Protective Response**

#### **1. Notification of Onsite Personnel**

For all emergency classifications, all personnel within the Protected Area are notified within 15 minutes of the initial classification or escalation of an emergency by recognizable alarms, and/or verbal announcements over the plant Public Address (PA) System. Announcements include the emergency classification and response actions to be taken by personnel onsite (such as ERO, non-ERO, contractor personnel, and visitors).

Provisions are made to alert personnel in high noise areas and outbuildings within the Protected Area as applicable. Provisions for personnel in high noise areas may include flashing or strobe warning lights and area sweeps. Provisions for the warning of personnel in outbuildings and OCA areas may include PA announcements and area sweeps.

COLA Part 5, Emergency Plan, Part II, Section J.10 will be revised as follows in a future COLA revision:

**Section J: Protective Response**

**10. Implementation of Protective Action Recommendations**

- m. At a General Emergency classification, the Licensee will provide the {state} with recommendations for protective actions for the public. 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.

Areas previously recommended for evacuation are retained when new PARs are issued for wind shifts.

**Question 13.03-16**

**SITE-59:** Contamination control and dose limits

**Basis:** 10 CFR 50.47(b)(11); NUREG-0654/FEMA-REP-1, Evaluation Criterion K.3.a; Evaluation Criterion K.3.b; Evaluation Criterion K.5.a; Evaluation Criterion K.5.b; Evaluation Criterion K.6; Evaluation Criterion K.7

**SRP ACCEPTANCE CRITERIA:** Requirement A; Acceptance Criterion 1

**A.** Section K.3.a, "Personnel Monitoring," (pages K-2) of the CCNPP3 Emergency Plan states emergency workers will receive Thermoluminescent Dosimeter (TLD) badges and personal self-reading dosimeters on a real time basis. Emergency processing of TLDs on a 24-hour per day basis exists. Include the 24-hour TLD processing organization name in the CCNPP3 Emergency Plan.

**B.** Section K.3.b, "Personnel Monitoring," (pages K-2) states emergency worker dose records are maintained in accordance with the emergency and radiological protection procedures.

1. Provide additional information regarding arrangements for alternative access to dose records when accident conditions do not allow normal access.
2. Explain how emergency doses are recorded and state whether dose limits are included as occupational exposure per 10 CFR 20.1201(a) or if they are treated as a once-in-a-lifetime exposure and not included as stated in EPA 400-R-92-001.

**C.** Section K.5.a, "Contamination Limits," (pages K-3) states that normal plant contamination control criteria will be followed during emergency conditions to the extent possible. Include details regarding action levels for determining the need for decontamination and contamination control criteria for returning areas and items to normal use in the CCNPP3 Emergency Plan.

**D.** Annex, Section 4.1E, "Decontamination Facilities," (page 4-2) identifies the Access Building as the location for the personnel decontamination. Provide additional information on the decontamination of personnel wounds, types of decontamination supplies and a reference to decontamination procedures and include a summary of that information in the CCNPP3 Emergency Plan.

**Response**

**A.** The Laboratory Services Section, Technical Services Department, General Services Division, Constellation Generation Group maintains a fixed counting laboratory in the Fort Smallwood Road Shops Complex. It is available in about two hours. General capabilities include:

- Dosimetry of Legal Record processing.
- Radiological Environmental monitoring equipment and sample media.
- Radiological Environmental sampling, and analysis of soil, water, air, vegetation, etc.
- Radiological Environmental Consulting.

The above information will be added to Emergency Plan, Section K.3.

- B.1 Information regarding arrangements for alternative access to dose records when accident conditions do not allow normal access will be contained in the Emergency Plan Implementing Procedures.
- B.2. Initially, exposure received during a declared event will be accounted for as normal occupational exposure. If exposure cannot be kept within occupational limits during the event, emergency worker exposure guidelines will be utilized in accordance with EPA-400, as stated in Emergency Plan, Section K.1.
- C. Station radiation protection procedures will provide onsite contamination and decontamination control measures for:
- Area access control.
  - Equipment, supplies, and instruments.
  - Personnel (including wounds).

These procedures will specify levels at which decontamination needs to be performed and provides for decontaminants suitable for expected contamination types including radioiodine skin contamination.

This information will be added to the Emergency Plan, Section K.5.

- D. Detailed inventory lists and instructions for the decontamination facility are provided in the implementing procedures. Waste disposal, subsequent to decontamination activities, is according to radiation protection procedures.

This information will be added to the Emergency Plan Annex, Section 4.1.E.

### **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section K.3 will be revised as follows in a future COLA revision:

### **Section K: Radiological Exposure Control**

#### **3. Personnel Monitoring**

- a. Emergency workers will receive TLD badges and personal self-reading dosimeters capable of measuring expected exposures on a real time basis. The capability exists for the emergency processing of TLDs on a 24-hour per day basis, if necessary. Refer to Section B.8.d for information on TLD laboratory capabilities.

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

## **Section K: Radiological Exposure Control**

### **5. Contamination and Decontamination**

During an emergency, the {Emergency Plant Manager} is responsible for preventing or minimizing personnel exposure to radioactive materials deposited on the ground or other surfaces. Special consideration should be given to setting up contamination control arrangements for personnel entering the OSC after completion of assigned activities.

a. Contamination Limits: During emergency conditions, normal plant contamination control criteria will be adhered to as much as possible. Station radiation protection procedures will provide onsite contamination and decontamination control measures for:

- Area access control
- Equipment, supplies, and instruments
- Personnel (including wounds)

These procedures will specify levels at which decontamination needs to be performed and provides for decontaminants suitable for expected contamination types including radioiodine skin contamination.

However, these limits may be modified by the applicable {Radiation Protection Manager} should conditions warrant.

COLA Part 5, Emergency Plan Annex, Section 4.1.E will be revised as follows in a future COLA revision:

## **Section 4: Emergency Response Facilities and Equipment**

### **4.1 Unit Specific Emergency Response Facilities**

#### **E. Decontamination Facilities**

The personnel decontamination facility is located the Access Building and contains provisions for radiological decontamination of personnel, their wounds, supplies, instruments and equipment. This facility has extra clothing and decontaminants suitable for the type of contamination expected, including radioiodine skin contamination.

Detailed inventory lists and instructions for the decontamination facility are provided in the implementing procedures. Waste disposal, subsequent to decontamination activities, is according to radiation protection procedures.

**Question 13.03-17**

**SITE-60:** Medical services for CCNPP3 workers and contaminated injured individuals

**Basis:** 10 CFR 50.47(b)(12); 10 CFR 50, Appendix E.IV.E.5; Appendix E.IV.E.6; Appendix E.IV.E.7; NUREG-0654/FEMA-REP-1, Evaluation Criterion L.1; Evaluation Criterion L.2; Evaluation Criterion L.4;

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

A. Section L.2, "Onsite First Aid Capability," (pages L-1/2) of the CCNPP3 Emergency Plan states that first aid supplies and equipment for treatment of contaminated injured are maintained however there is no discussion, list or reference to where the supplies and equipment information is located. Revise the CCNPP3 Emergency Plan to include a discussion, list or reference to where the first aid supplies and equipment information is located.

B. Section L.4, "Medical Transportation," (page L-2) of the CCNPP3 Emergency Plan states arrangements for 24-hour service for prompt ambulance transport of persons with injuries involving radioactivity to designated hospitals are confirmed by letter of agreement.

1. Letters identified in Appendix 3, "Letters of Agreements (Certification Letters)," (page A3-1) did not include statements that radiologically contaminated injured patients would be transported. Clarify that arrangements with support organizations include the transport of radiologically contaminated injured patients to medical support facilities.
2. Provide the name of the facility dedicated to receive CCNPP radiologically contaminated injured persons and include in the CCNPP3 Emergency Plan.

**Response**

- A. First aid supplies and equipment will be inventoried and stocked in accordance with {EP-AN-903, Maintenance of Emergency Response Facilities}. This statement will be added to Emergency Plan, Section L.2.
- B.1 In response to RAI 153, Question 14.03.10-1 (UN#09-428, dated October 19, 2009), an ITAAC was added to COLA, Part 10, Table 2.3-1, for acquiring the final and complete Letters of Agreement (LOA) listed in Appendix 3 of the CCNPP Unit 3 Emergency Plan. These LOA will ensure the execution of medical services and arrangements for the transport of radiologically contaminated injured patients to medical support facilities.
- B.2 Calvert Memorial Hospital is specified as the medical service facility under agreement to receive CCNPP Unit 3 radiologically contaminated injured persons in Section L.3 and Appendix 3 of the CCNPP Unit 3 Emergency Plan.

## **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section L.2 will be revised as follows in a future COLA revision:

### **Section L: Medical and Public Health Support**

#### **2. Onsite First Aid Capability**

The site maintains onsite first aid supplies and equipment necessary for the treatment of contaminated or injured persons. In general, physicians or nurses are not staffed at the site, and as such, medical treatment given to injured persons is of a "first aid" nature. Additionally, the Radiation Protection Technicians at the site are experienced in control of radioactive contamination and decontamination work. Site personnel are also trained and qualified to administer first aid. {At least two of these individuals} are available on shift at all times. The functions of site personnel in handling onsite injured people are:

- 1) Afford rescue;
- 2) Administer first aid including such resuscitative measures as are deemed necessary;
- 3) Begin decontamination procedures; and
- 4) Arrange for suitable transportation to a hospital when required.

Primary attention shall be directed to the actual factors involved in the treatment of casualties, such as: control of bleeding, resuscitation including heart and lung, control of bleeding after resuscitation, protection of wounds from bacterial or radioactive contamination and the immobilization of fractures.

Site personnel provide an initial estimate of the magnitude of surface contamination of the injured and preliminary estimates of total body dose to the injured. Primary rapid and simple decontamination of the surface of the body (when possible and advisable) before transportation to a designated hospital may be carry out as directed or performed by Radiation Protection personnel. When more professional care is needed, injured persons are transported to a local clinic or hospital. Contaminated and injured persons are transported to a dedicated facility specified for the site.

First aid supplies and equipment will be inventoried and stocked in accordance with {EP-AN-903, Maintenance of Emergency Response Facilities}.

**Question 13.03-18**

**SITE-61:** Recovery and reentry actions

**Basis:** 10 CFR 50.47(b)(13); 10 CFR 50, Appendix E.IV.H; NUREG-0654/FEMA-REP-1, Evaluation Criterion M.1; Evaluation Criterion M.3; Evaluation Criterion M.4

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

Section M.3, "Recovery Phase Notifications," (page M-7) of the CCNPP3 Emergency Plan states that all members of the ERO are informed of the decision to enter the recovery phase and instructed of the Recovery Organization and their responsibilities to the recovery effort. Describe the means for informing members of the response organizations that a recovery operation is to be initiated.

**Response**

Onsite members of the ERO will be notified by PA and facility announcements. ERO members not onsite at the time of event termination will be notified through other means such as broadcast pager announcement or phone call. Steps to perform these notifications will be documented in the CCNPP Unit 3 Emergency Plan Implementing Procedures. COLA Part 10, ITAAC, Table 2.3-1 includes an EP ITAAC for submitting detailed Emergency Plan Implementing Procedures no less than 180 days prior to fuel load.

**COLA Impact**

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

**Question 13.03-19**

**SITE-62: Drill and exercise evaluation and critiques**

**Basis:** 10 CFR 50.47(b)(14); 10 CFR 50, Appendix E.IV.F.2; Appendix E.IV.F.2.b; Appendix E.IV.F.2.f; NUREG-0654/FEMA-REP-1, Evaluation Criterion N.2; Evaluation Criterion N.3

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

A. Health Physics drills are conducted semi-annually and involve response to and analysis of, simulated airborne and liquid samples and direct radiation measurements within the plant. A demonstration of the sampling system capabilities, or the core damage assessment objectives as applicable are conducted at least annually. Clarify whether drills will include liquid samples with actual elevated radiation levels and address the use of the post-accident sampling system in health physics drills and provide an explanation of the provisions for including State and local response agencies in the drills.

B. Section N.5, "Resolution of Drill and Exercise Findings," (pages N-5/6) states that CCNPP3 will support remedial exercises if the Emergency Plan is not satisfactorily tested during the biennial exercise. Provide additional information regarding the extent of State and local participation for remedial exercises.

**Response**

- A.1 The drills will not include liquid samples with actual elevated radiation levels.
- A.2 The CCNPP Unit 3 Emergency Plan does not rely on the Post Accident Sampling System. Radiation protection procedures that provide for ad-hoc sampling capabilities in the recovery phase may be included in scenarios; however, the majority of health physics drills will include core damage assessment objectives based on parameters other than sample activity results.
- A.3 State and local response agencies are not included in semi-annual health physics drills.
- B. The extent of State and local participation for remedial exercises will depend on the type of deficiency given by FEMA and its requirements for redemonstration. Such an extent of play is determined on a case basis between FEMA and the offsite agency. CCNPP Unit 3 will support the necessary extent of play as required by FEMA for the specific deficiency.

**COLA Impact**

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

### **Question 13.03-20**

**SITE-63:** Training program for emergency responders, instructors and directors and coordinators

**Basis:** 10 CFR 50.47(b)(15); 10 CFR 50, Appendix E.IV. F.1; NUREG-0654/FEMA-REP-1, Evaluation Criterion O.3; Evaluation Criteria O.4.a through O.4.j

**SRP ACCEPTANCE CRITERIA:** Requirements A and B; Acceptance Criteria 1 and 2

Section O.3, "First Aid Response," (pages O-2) of the CCNPP3 Emergency Plan states that selected personnel are trained in accordance with the Licensee approved first aid program. Provide additional information on the First Aid program training, including its equivalency to the Red Cross Multi-Media course.

### **Response**

Training for individuals assigned to CCNPP Unit 3 first aid teams shall be equivalent to the Red Cross Multi-Media first aid training course. This statement will be added to Emergency Plan, Section O.3.

### **COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section O.4 will be revised as follows in a future COLA revision:

### **Section O: Emergency Response Training**

#### **4. Emergency Response Organization Training Program**

The Licensee ERO personnel who are responsible for implementing this plan receive specialized training. Training for individuals assigned to {CCNPP Unit 3} first aid teams shall be equivalent to the Red Cross Multi-Media first aid training course. ~~The training program for emergency response personnel is developed based on the requirements of 10 CFR 50, Appendix E and position specific responsibilities as defined in this document.~~

**Question 13.03-21**

**SITE-64:** Emergency preparedness program maintenance and implementing procedures  
**Basis:** 10 CFR 50.47; NUREG-0654/FEMA-REP-1; Evaluation Criterion P.2;  
**SRP ACCEPTANCE CRITERIA:** Requirement A; Acceptance Criterion 1

Section P.2, "Authority for the Emergency Preparedness Effort," (pages P-1) of the CCNPP3 Emergency Plan states that the Site Vice President shall have overall responsibility for issuance and control of the emergency plan and activities associated with emergency preparedness at CCNPP3. Section P.2 also states "these individuals are assigned the responsibility for overall implementation of the Licensee Emergency Plan and Unit Annex for CCNPP3," however there is only one individual mentioned, the Site Vice President. Clarify what is meant by "these individuals" in Section P.2 and revise the CCNPP3 Emergency Plan if necessary.

**Response**

The sentence, "These individuals are assigned the responsibility for overall implementation of the Licensee E-Plan and Unit Annex for {CCNPP Unit 3}," will be removed from Emergency Plan, Section P.2.

**COLA Impact**

COLA Part 5, Emergency Plan, Part II, Section P.2 will be revised as follows in a future COLA revision:

**Section P: Responsibility for the Maintenance of the Planning Effort**

**2. Authority for the Emergency Preparedness Effort**

The {Site Vice President} is responsible for the safe and reliable operation of the {CCNPP Unit 3} unit. The issuance and control of this plan and the activities associated with emergency preparedness at {CCNPP Unit 3} shall be the overall responsibility of the {Site Vice President}. ~~These individuals are assigned the responsibility for overall implementation of the Licensee E-Plan and Unit Annex for {CCNPP Unit 3}.~~