L-2011-416
10 CFR 52.3

September 30, 2011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Second Response to NRC Request for Additional Information Letter No. 035
(eRAI 5681) Standard Review Plan Section 13.03 – Emergency Planning

Reference:

1. NRC Letter to FPL dated August 15, 2011, Request for Additional Information Letter No.035 Related to SRP Section 13.03, Emergency Planning for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application
2. FPL Letter L-2011-384 to NRC dated September 14, 2011, Initial Response to NRC Request for Additional Information Letter No. 035 (eRAI 5681) Standard Review Plan Section 13.03 – Emergency Planning

Florida Power & Light Company (FPL) provides, as attachments to this letter, its initial responses to the Nuclear Regulatory Commission's (NRC) requests for additional information (RAI) RAI 13.03-5 (subparts B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, and B-12), RAI 13.03-8 (subparts H-2 and H-3), RAI 13.03-9 (subpart J-3), RAI 13.03-10 (subpart K-2), RAI 13.03-12 (subpart O-1), RAI 13.03-13 (subpart P-2), RAI 13.03-15 (subparts 1, 2, 3, 4, 5, 6, 7, 8, and 9), and RAI 13.03-16 (subparts A, B, and C) provided in the NRC Letter Reference 1. The attachments identify changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

FPL Letter L-2011-384, Reference 2, provided the responses to RAI 13.03-5 (subparts B-1, B-2, and B-3), RAI 13.03-6 , RAI 13.03-7 (subparts E-1 and E-2), RAI 13.03-8 (subparts H-1and H-4), RAI 13.03-9 (subparts J-1, J-2, J-4, and J-5), RAI 13.03-10 (subpart K-1), RAI 13.03-11 (subpart N-1), and RAI 13.03-13 (subpart P-1).

The response to RAI 13.03-14 (subparts a, b, and c) regarding emergency planning for hostile action considerations is scheduled to be provided by October 31, 2011. This response schedule was provided by Reference 2.

If you have any questions, or need additional information, please contact me at 561-691-7490.

D097
NRO

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

Executed on September 30, 2011

Sincerely,

William Maher
Senior Licensing Director – New Nuclear Projects

WDM/GRM

cc:
PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

Attachment Number	Attachment Title
1	FPL Response to NRC RAI No. 13.03-5 (subparts B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, and B-12) (eRAI 5681)
2	FPL Response to NRC RAI No. 13.03-8 (subparts H-2 and H-3) (eRAI 5681)
3	FPL Response to NRC RAI No. 13.03-9 (subpart J-3) (eRAI 5681)
4	FPL Response to NRC RAI No. 13.03-10 (subpart K-2) (eRAI 5681)
5	FPL Response to NRC RAI No. 13.03-12 (subpart O-1) (eRAI 5681)
6	FPL Response to NRC RAI No. 13.03-13 (subpart P-2) (eRAI 5681)
7	FPL Response to NRC RAI No. 13.03-15 (subparts 1, 2, 3, 4, 5, 6, 7, 8, and 9) (eRAI 5681)
8	FPL Response to NRC RAI No. 13.03-16 (subparts A, B, and C) (eRAI 5681)

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-5 (eRAI 5681)

SITE-2: Onsite Emergency Organization

[Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(2), Section IV.A.2.c of Appendix E to 10 CFR Part 50, NUREG-0654, Evaluation Criteria B.5, B.6, and B.7]

RAI B-4:

For COLA Part 5 Annexes 2 and 3, discuss the tasks expected to be performed by the Senior Reactor Operator (SRO) and the STA (who is also responsible for offsite dose assessment in Table 2-1). Address how the individual filling the dual role of SRO and STA can perform all of the tasks associated with both positions during an emergency.

RAI B-5:

NUREG-0654 Table B-1 identifies the need for six additional personnel to perform offsite and onsite (out-of-plant) surveys within 30 to 60 minutes. In Table B-1a of Annexes 2 and 3, clearly identify the number of personnel from unaffected units who will be available to perform offsite and onsite (out-of-plant) surveys.

RAI B-6:

NUREG-0654 Table B-1 identifies the need for two additional personnel to perform in-plant surveys within 30 to 60 minutes. In Table B-1a of Annexes 2 and 3, clearly identify the number of personnel available to perform in-plant surveys until additional support arrives within about 90 minutes. In addition, Table B-1a identifies a minimum staff size of two for in-plant surveys. Discuss how the third position called for in NUREG- 0654 Table B-1 will be filled with on-shift staff.

RAI B-7:

NUREG-0654 Table B-1 identifies the need for an individual with Senior Health Physics expertise to perform offsite dose assessment within about 30 minutes. Discuss how this expertise will be provided by on-shift personnel until expertise arrives in about 90 minutes. In Table B-1a of Annexes 2 and 3, clearly identify the on-shift individual with Senior Health Physics expertise.

RAI B-8:

NUREG-0654 Table B-1 identifies the need for five additional personnel to perform the maintenance, electrical and instrumentation and controls repair and corrective action functions within 30 to 60 minutes. Discuss how the three personnel identified in Table B-1a in Annexes 2 and 3 will compensate for the five additional individuals identified in NUREG-0654 Table B-1 until additional support arrives within about 90 minutes. In Table B-1a of Annexes 2 and 3, clearly identify the number of personnel available to perform repair and corrective actions (including mechanical maintenance/radwaste operator, and electrical maintenance/instrumentation and control), until support personnel arrive within about 90 minutes.

RAI B-9:

NUREG-0654 Table B-1 identifies the need for three additional personnel to perform the core/thermal hydraulics and electrical and mechanical technical support functions within 30 to 60 minutes. Discuss how the STA identified in Table B-1a in Annexes 2 and 3 will compensate for the three additional individuals identified in NUREG- 0654 Table B-1, until additional support arrives within about 90 minutes. In Table B-1a of Annexes 2 and 3, clearly identify the number of personnel available to perform technical support (including core/thermal hydraulics, and electrical and mechanical functions) within about 90 minutes.

RAI B-10:

Table 2-1, "Turkey Point Emergency Response Organization On-Shift Staffing," in Annex 2 identifies in footnote (a) that offsite and onsite surveys will be performed by (RP Technician) responders from an unaffected Unit. After fuel is loaded into Unit 6, will personnel from Units 3 and 4 support the response to an event at Unit 6? If they will, discuss in Annex 2 how personnel from Units 3 and 4 will maintain their knowledge of the Units 6 and 7 site, in order to perform their onsite and offsite survey tasks until Unit 7 is completed?

RAI B-11:

Table B-1b, "Staffing Requirements for the Turkey Point Plant Emergency Response Organization," indicates "90-Minute Augmentation" under the Facility Staffing column. For purposes of Units 6 and 7, explain the basis for the 90-minute augmentation time in Table B-1b, as compared to Table B-1 of NUREG-0654/FEMA-REP-1. Revise Table B-1b to be consistent with Table B-1, or explain why this is not required.

RAI B-12:

COL Part 5 (Emergency Plan) includes Annex 1, which addresses the existing Turkey Point Units 3 and 4. Footnnote (f) of Table B-1b states in part that "[a]ll shift ERO positions are listed in Table B-1a, contained in unit specific annexes." This includes Annex 1 for Units 3 and 4. Table 2-2a, "Shift and Emergency Staffing Capabilities," of the Turkey Point Plant Radiological Emergency Plan (Revision 47, approved March 25, 2008) identifies "30 min." and "60 min." as augment staffing capabilities and references Table B-1 of NUREG 0654 as the related guidance. Please address whether the COL application is requesting approval to extend the augmentation times from 30 and 60 minutes to 90 minutes for Units 3 and 4 when the COL emergency plan is put into effect. Note that any proposed changes related to Turkey Point Unit 3 and 4 should be in accordance with 10 CFR 50.54(q) and submitted in accordance with applicable processes as a licensing action associated with those units, including appropriate justification as specified in the "Smart Application Template for Requesting Emergency Plan Changes Related to On-shift Staffing Levels and Augmentation Times," ADAMS Accession No. ML042530011. Additional guidance can be found in RIS 2005- 002, "Clarifying the Process for Making Emergency Plan Changes," ADAMS Accession No. ML042580404. (See also, Southern Nuclear Operating Company's April 16, 2007, response to RAI Question 13.3-8 (AR-07-0656) (ADAMS Accession No. ML071100330); October 15, 2007, response to Safety Evaluation Report Open Item

13.3-2 (AR-07-1773); and issue discussion in NUREG-1923, Subsection 13.3.2.2, "Onsite Emergency Organization," pages 13-22 through 13-24 (July 2009, ADAMS Accession No. ML092290650).)

FPL RESPONSE:

RAI B-4:

The role of Offsite Dose Assessment was erroneously assigned to the Shift Technical Advisor (STA). On-shift Offsite Dose Assessment is the responsibility of the unaffected unit Chemistry Technician, who is suitably trained to perform the assessment. As indicated in RAI response 13.03-5, subpart B-2 (FPL Letter L-2011-384) (Reference 1), Table 2-1 of COLA Part 5 Annex 2 and Annex 3 will be revised in a future COLA revision to indicate that a Chemistry Technician from the affected unit is responsible for conducting on-shift Offsite Dose Assessment for the affected Unit.

Eliminating Offsite Dose Assessment as the responsibility of the STA and properly assigning it to the Chemistry Technician of the unaffected unit, the role of the STA is clarified. Section B.1 of the Emergency Plan states: "Shift Technical Advisor (STA): A qualified individual assumes an overview role as the STA with the specific responsibility of monitoring the maintenance of core cooling and containment integrity. An individual assigned the duty as the STA shall be available to the unit control room at all times. This position may be filled by a Senior Reactor Operator serving as STA/SRO for that shift."

FSAR Table 13.1-202, Minimum On-Duty Operations Shift Organization for Two-Unit Plant, states "In addition, one Shift Technical Advisor (STA) is assigned per shift during plant operation." The STA maintains his/her responsibility as an emergency responder as delineated in Table B-1a under Functional Area 5 - Plant System Engineering, Repair and Corrective Actions as Technical Support throughout shift. There is one exception that would divert the STA from that role. The STA will assume the duties of the Emergency Coordinator if the Shift Manager and the Unit Supervisor are incapacitated, as the STA /SRO becomes the Emergency Coordinator (EC) until he/she is relieved by another qualified EC.

RAI B-5:

FPL will incorporate in implementing procedures that qualified personnel from the unaffected units respond, as directed, to the affected unit. These personnel are on-shift and will respond within the NUREG-0654 (Reference 2) required response times of 30 minutes to the affected unit. In the event that Unit 6 is the affected unit, personnel will be dispatched from Units 3 & 4 or Unit 7, when available. In the event that Unit 7 is the affected unit, personnel will be dispatched from Units 3 & 4 or Unit 6.

Units 3 & 4 have a minimum staffing of three on-shift personnel trained in radiation protection, as listed below:

1. In-plant survey RP
2. RP Supervisor
3. Chemistry Technician (trained in radiological survey techniques)

Unit 6 will have a minimum staffing of four on-shift personnel trained in radiation protection, in addition to the two Chemistry Technicians, who are also trained in radiological survey techniques.

With the implementation of Annex 3, Units 6 & 7 also have a minimum staffing of three on-shift personnel per unit trained in radiation protection, including the Chemistry Technician, who is also trained in radiological survey techniques, as listed below.

1. In-plant survey RP
2. RP Supervisor
3. Chemistry Technician (trained in radiological survey techniques)

NUREG-0654 requires 2 additional RP personnel for offsite surveys and 1 additional RP person for onsite (out-of-plant) surveys for a total of 3 within 30 minutes. These personnel will dispatch from the unaffected units.

Implementing procedures will provide direction for the unaffected units on-shift management to dispatch personnel qualified to conduct radiological surveys to the affected unit with designated survey instrumentation and materials. Depending on the event, the RP Supervisor for the affected unit will prioritize and direct the actions of the responding radiological survey personnel. The affected unit RP Supervisor will follow procedural guidance for the dispatch of radiological personnel to the location needed, including filling the roles of offsite and onsite surveys.

Annex 2 (Unit 6) Table B-1a has been revised to indicate the increase of on-shift staffing to provide adequate personnel to respond to Radiological Accident Assessment and Support of Operational Accident Assessment.

Revisions to Table 2-1 of Annexes 2 and 3 were provided previously under FPL Letter L-2011-384.

RAI B-6:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI. The Emergency Plan will be revised in a future COLA revision to remove the reference to 90 minutes for the on-call ERO response. However, FPL maintains staff augmentation from the unaffected unit personnel to meet the requirements for 30-minute responders for offsite and onsite surveys. The remainder of the ERO augmentation will occur within the 60 minutes from notification. As indicated in the response to B-5, there are adequate numbers and types of personnel to fill the 30-minute Onsite and Offsite survey positions with qualified personnel from the unaffected units. These personnel will be onsite in the event of an emergency and will respond within the NUREG-0654 required response time of 30 minutes. In the event that Unit 6 is the affected unit, personnel will be dispatched from Unit 3 & 4 and Unit 7, when available. Personnel utilized from an unaffected unit will be paired as a team member with an affected unit representative for safety and accountability purposes. Annex 2 will be revised in a future COLA revision to address how the personnel that augment the on-shift response inside the Protected Area from the unaffected units will be dispatched as a member of a team that has at least one affected Unit responder. Personnel filling RP Technician positions that

perform onsite surveys will be provided an orientation of the other Units in preparation for a possible response.

RAI B-7:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI. The Emergency Plan will be revised in a future COLA revision to remove the reference to 90 minutes for the on-call ERO response. As indicated on Table 2-1 of each of the Unit Annexes (Emergency Plan Annexes 1 and 3), there is one Chemistry Technician on-shift. Annex 2 provides two Chemistry Technicians on-shift. Implementing Procedures will provide direction for one of the unaffected units' Chemistry Technicians to fill the NUREG-0654 Table B-1 requirement of the 30-minute responder for Offsite Dose Assessment. The Unaffected Unit Chemistry Technician assigned to the position will respond to and conduct Offsite Dose Assessment activities from the TSC, if at all possible.

The use of the Chemistry Technician as the On-shift Offsite Dose Assessor necessitates a change to Annex 3 (Units 6 & 7) Table B-1a and Annex 2 (Unit 6) Table 2-1 and Table B-1a. Annex 3 Table B-1a now provides for additional personnel On-shift to include: Shift Communicator position to provide for one responder per Unit; The RP Technicians to provide for two responders per Unit; and On-shift Chemistry Technicians to one per Unit. In addition, Annex 2, Table 2-1 will indicate that On-shift Offsite Dose Assessment will be conducted by an additional Unit Chemistry Technician. Table B-1a in Annex 2 (Unit 6) now provides two Chemistry Technicians on-shift to provide for personnel to conduct Offsite Dose Assessment and to conduct Chemistry Radiological Assessment.

RAI B-8:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI. The Emergency Plan will be revised in a future COLA revision to remove the reference to 90 minutes for the on-call ERO response. Each of the Unit Annexes indicates that Operations personnel will be utilized to perform limited maintenance, electrical and instrumentation and controls repair and corrective action functions in the affected unit. Performing these functions will be on an as-needed basis for a short period of time and will generally be within their training and experience as licensed operators. The implementing procedures will provide direction for the unaffected units to provide Operations personnel to be dispatched to the affected unit to provide the necessary support for mechanical maintenance/radwaste operator, and electrical maintenance/instrumentation and control until additional support arrives within approximately 60 minutes. There are two positions required to be staffed within 30 minutes (Electrical Maintenance and Instrument and Control (I&C) Technician) that will be filled with Operations personnel from the unaffected units, and these two personnel will remain available to perform their assigned function until additional augmentation personnel arrive. When Unit 6 is licensed, there will be multiple Operations personnel available from the unaffected Units 3 & 4 to provide the personnel to fill these two, 30-minute response positions listed in NUREG-0654 Table B-1.

RAI B-9:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI and in the PTN Emergency Plan. The Emergency Plan will be revised in a future COLA revision to remove the reference to 90 minutes for the on-call ERO response. Each of the Unit Annexes indicates that Operations personnel will be utilized to perform the core/thermal hydraulics for the affected unit. The implementing procedures will provide direction for the unaffected units to provide an STA to fill Core/Thermo Hydraulics 30-minute responder in NUREG-0654 Table B-1. The operators will be provided the necessary procedures and/or computer software to determine the status of the Core/Thermal Hydraulics for the affected unit on-shift. The STA assigned to the position will respond to and conduct Core/Thermo Hydraulics activities from the TSC, if at all possible.

RAI B-10:

RP Technicians from Units 3 & 4 will utilize the instrumentation that they are trained on and familiar with to conduct offsite and onsite surveys. In addition, these personnel will be oriented and trained on the locations where the onsite surveys are to be conducted. In the event of an emergency in Unit 6, the RP Technicians from Units 3 & 4 will respond to assist in conducting radiological activities in Unit 6. This is also true if there is an event in Unit 7 after its completion. Personnel dispatched during an emergency are dispatched in teams of at least two personnel. This is done to enhance the safety of the personnel responding to the assignment and for accountability purposes. Each individual that responds from an unaffected unit will report to a location where they will be paired with an affected Unit responder. Personnel from the unaffected units will be briefed on the task or assignment and provided with the required personnel protective equipment and dosimetry required for the assignment. Offsite monitoring teams may be composed of two or more personnel from the unaffected units without an individual from the affected unit. Their activities are outside of the protected area are directed by the TSC or EOF. The directing facility is responsible for their safety and accountability.

In a future COLA revision, the Emergency Plan Annex 2 will be revised in the future to address how the personnel from Units 3 & 4 will be dispatched as a member of a team with at east one member from the affected unit. Although there will be an orientation of Units 6 & 7 for the Units 3 & 4 personnel, there will not be any required training to maintain their knowledge of the Units 6 & 7 site.

RAI B-11:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI and in the PTN Emergency Plan.

In a future COLA revision, the Emergency Plan will be revised to address the change from the 90-minute response time to 60-minute response time consistent with NUREG-0654 for the on-call ERO.

RAI B-12:

FPL has determined that the 60-minute augmentation response time request consistent with NUREG-0654 will replace the 90-minute response time referred to in this RAI and in the PTN Emergency Plan.

FPL intends that the proposed Emergency Plan will be in effect for Units 3 & 4 when it is implemented for Units 6 & 7. FPL intends to submit a licensing action concerning the Emergency Plan for Units 3 & 4 approximately 12 months prior to the scheduled full participation exercise associated with Unit 6.

This response is PLANT SPECIFIC.

References:

1. FPL Letter L-2011-384 to NRC dated September 14, 2011, Initial Response to NRC Request for Additional Information Letter No. 035 (eRAI 5681) Standard Review Plan Section 13.03 – Emergency Planning

2. NUREG-0654 FEMA-REP-1 Rev.1, dated November 1980, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants

ASSOCIATED COLA REVISIONS:

RAI B-6 and RAI B-10

A sentence will be added to the first paragraph of COLA Part 5, Annex 2, Section 2.3 in a future COLA revision, as shown below:

The Unit 6 Annex, Table B-1a outlines shift ERO positions required to meet minimum staffing and the major tasks assigned to each position in all modes. In the event that Unit 6 declares an emergency and it is the affected unit, the Unit 6 Shift Manager will assume the duties of the Emergency Coordinator. The Unit 6 on-shift personnel will be augmented by shift personnel from the other site unit(s). Personnel from the other site unit(s) may be dispatched to assist the Unit 6 on-shift personnel when it is safe to do so. These additional personnel will provide the needed resources to enhance the response to the event until the on-call ERO personnel respond, and are ready to activate the emergency response facilities. **Personnel that augment the on-shift response inside the Protected Area from the unaffected units will be dispatched as a member of a team that has at least one affected Unit responder. Personnel filling RP Technician positions that perform onsite surveys will be provided an orientation of the other Units.** Unit 3 is typically the lead unit for declaring and responding to an emergency that affects the entire site, such as a security or natural phenomena related event, or if there are multiple units in an independently declared emergency simultaneously. Should one of these events occur, the Shift Manager from Unit 6 would direct the operational response of the emergency/event when it is safe to do so. The Unit 6 Shift Manager would provide the needed information to the Units 3 & 4 Shift Manager who declares the emergency and assumes the role of Emergency Coordinator and all of the duties associated with that position.

RAI B-6, -7, -8, -9, and -11

COLA Part 5 will be revised in a future COLA revision, as shown below:

The first sentence of the fourth paragraph of Section B5.a:

> Those individuals identified to augment the on-shift personnel within ~~90~~**60** minutes of the notification of an Alert or higher classifications are part of the on-call ERO.

Section B, Table B-1b:

Table B-1b: Staffing Requirements for the Turkey Point Plant Emergency Response Organization

Functional Area	Major Tasks	Emergency Positions	Facility Staffing		Full Augmentation
			[a]~~90~~60-Minute Augmentation	Other On-Call	
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	See Table B-1a located in Unit-Specific Annexes for Shift Staffing. [f]			
2. Emergency Direction and Control	Command and Control	Emergency Coordinator [f] (CR) Control Room Operations Manager (CR) Emergency Coordinator (TSC) Recovery Manager (EOF)	 1 1	 1 	
3. Notification & Communication	Emergency Communications	Plant Shift Personnel [f] State/County Communicator (TSC) State/County Communicator (EOF) ENS Communicator (EOF) Communications Manager (EOF) TSC Manager (TSC) Emergency Offsite Manager (EOF) ENS Communicator (TSC) HPN Communicator (EOF)	 1 1 1 1 1	 1 1 1 1	
	Plant Status	Recovery Manager Ops. Adv. (EOF)	1	1	
4. Radiological Assessment	Offsite Dose Assessment	Plant Shift Personnel [f] Radiation Protection Manager (TSC) Protective Measures Manager (EOF) Dose Assessor (EOF)	 1 1 1	 1 	
	Offsite Surveys	Dose Assessor (TSC) Field Monitoring Team Personnel RP(or others trained) Driver	1 2 2		
	Onsite Surveys	Onsite Field Team Personnel	2		(c)
	In-plant Surveys	RP Personnel [f]	1		(c)
	Chemistry	Chemistry Personnel [f]	1		(c)
	RP Supervisory	Rad/Chem. Coordinator (OSC)	1		

Table B-1b: Staffing Requirements for the Turkey Point Plant Emergency Response Organization

Functional Area	Major Tasks	Emergency Positions	Facility Staffing		Full Augmentation
			[a] ~~90~~60-Minute Augmentation	Other On-Call	
5. Plant System Engineering, Repair, and Corrective Actions	Technical Support/Accident Analysis	Shift Technical Advisor [f] (CR) Emergency Coordinator Asst (SRO) (TSC) Core/Thermal Engineer (TSC) Mechanical Engineer (TSC) Electrical Engineer (TSC) I&C Engineer (TSC)	 1 1 1 1 1		
	Repair and Corrective Actions	Mechanical Maintenance [b] (OSC) Electrical/I&C Maintenance [b] (OSC) OSC Manager (OSC)	1 2 1		(c) (c)
6. In-Plant Protective Actions	Radiation Protection	RP Personnel [f]	4		(c)
7. Fire Fighting	—	Fire Brigade	(d)		
8. First Aid and Rescue Ops	—	Plant Personnel	(b)		(c)
9. Site Access Control and Personnel Accountability	Security & Accountability	Security Team Personnel	(e)		
10. Public Information	Media Interface	FPL Public Information Officer (ENC) Technical Assistant (ENC) Chief Nuclear Spokesperson (ENC)		1 2 1	
	Information Development	ENC Liaison News Writer (EOF)		1 1	
	Media Monitoring and Rumor Control	Media Monitoring Staff (ENC) Rumor Control Staff (ENC)			(c) (c)
	Facility Operation and Control	ENC Manager (ENC)		1	
TOTAL:			**34**	**14**	**0[c]**

The note at the beginning of Section H.5:

> NOTE: NUREG-0654 Criterion II.B.5 states that the "licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency." It further defines that short period as 30 and 60 minutes. Turkey Point will use unaffected unit on-shift personnel to augment the affected unit on-shift personnel upon declaration of an A*lert* or higher classification (or at a lower classification if conditions warrant). This staffing augmentation will fulfill the NUREG-0654 Criterion II.B.5 for 30-minute responders and provides additional support to the On-shift ERO to permit a ~~90~~**60**-minute response for on-call ERO personnel. The time frames for rapid augmentation of a nuclear power plant staff in the event of an emergency are not rigid inviolate requirements but rather goals. It is Turkey Point's intent to expend its best efforts to meet the augmentation criteria goals regarding staffing Emergency Response Facilities with sufficiently skilled individuals capable of handling an emergency. Both the NRC and FPL realize that due to diversity of normal residential patterns for the plant's staff, possible adverse weather conditions and road congestion, these time frames might be exceeded.

The first sentence of the second paragraph of Section H.5:

> Although the response time will vary due to factors such as weather and traffic conditions, a goal of ~~90~~**60** minutes for minimum staffing, following the notification of an Alert or higher emergency classification, has been established for the ERO personnel responding to the plant's emergency response facilities and the EOF. Additionally, plans have been developed to ensure timely functional activation and staffing of the ENC when the classification of *Alert* is declared.

The first sentence in the fourth paragraph of Section H.5:

> The ~~90~~**60**-minute response time and 15-minute activation times are not applicable to the ENC. ENC personnel must first coordinate the decision to activate the ENC with the appropriate offsite authorities responding to the facility.

The third paragraph of Annex 1, Section 4.1.a:

> The OSC is activated with a minimum staff within ~~90~~**60** minutes after the notification of an A*lert*, *Site Area Emergency*, or *General Emergency*.

Annex 2, Table 2-1:

Table 2-1 Turkey Point Emergency Response Organization On-Shift Staffing

Functional Area	Major Tasks	On-Shift Positions	On-Shift Emergency Plan Positions
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	Senior Reactor Operator (CR) Reactor Operator (CR)	
2. Emergency Direction and Control	Command and Control	Shift Manager (CR)	Emergency Coordinator
3. Notification and Communication	Emergency Communications	Non-Licensed Operator	State and County Communicator ENS Communicator
	In-Plant Team Control	Shift Manager (CR)	Emergency Coordinator
4. Radiological Assessment	Offsite Dose Assessment	Chemistry Technician[(a)]	Dose Assessment
	Offsite Surveys	RP Technician	Field Monitoring Team Personnel
	Onsite Surveys	RP Technician	Onsite Monitoring Team Personnel
	In-plant Surveys	RP Technician	Onsite Monitoring Team Personnel
	Chemistry	Chemistry Technician	Chemistry Team
	RP Supervisory	RP Lead[(b)]	Direct RP Team Personnel
5. Plant System Engineering, Repair, and Corrective Actions	Technical Support/Accident Analysis	Operations Personnel	Operations Personnel
6. Fire Fighting	—	Fire Brigade	Fire Brigade
7. First Aid and Rescue Operations	—	Plant Personnel	Plant Personnel

(a) A designated shift Radiation Protection Technician

Annex 2, Table B-1a:

Table B-1a Shift Emergency Response Organization

	Functional Area	Major Tasks	Emergency Positions		Minimum Shift Size
1.	Plant Operations and Assessment of Operational Aspects	Control Room Staff	Shift Manager Control Room Supervisor Reactor Operator Non-licensed Operator Assistant Non-licensed Operator	(CR) (CR) (CR)	1 1 2 2 1
2.	Emergency Direction and Control	Command and Control/Emergency Operations	Emergency Coordinator	(CR)	1[(a)]
3.	Notification & Communication	Emergency Communications	Shift Communicator	(CR)	1
4.	Radiological Accident Assessment and Support of Operational Accident Assessment	In-plant Surveys	~~HP~~RP Technicians		~~2~~4
		Chemistry	Chemistry Personnel		~~1~~2
5.	Plant System Engineering, Repair and Corrective Actions	Technical Support	Shift Technical Advisor/Incident Assessor	(CR)	1[(b)]
		Repair and Corrective Actions	Operations Personnel		1[(b)] 1[(b)] 1[(b)]
6.	In-Plant Protective Actions	Radiation Protection	~~HP~~RP Personnel		2[(b)]
7.	Fire Fighting	—	Fire Brigade		[(c)]
8.	First Aid and Rescue Operations	—	Plant Personnel		2[(b)]
9.	Site Access Control and Personnel Accountability	Security and Accountability	Security Team Personnel		[(d)]
				TOTAL	~~11~~14[(e)]

(a) The Shift Manager shall function as the Emergency Coordinator until relieved by the on-call Emergency coordinator in the TSC, when the TSC is activated.
(b) May be provided by personnel assigned other functions. Personnel can fulfill multiple functions.
(c) In accordance with FSAR and plant fire protection plan.
(d) In accordance with Turkey Point Physical Security Plan.
(e) This number represents the total number of personnel on shift available to fill response positions (non-superscript positions).

The third paragraph of Annex 2, Section 4.1.a:

> The OSC may be activated when "minimum staffing positions" are filled and all positions will be staffed within ~~90~~60 minutes after the notification of an *Alert*, *Site Area Emergency*, or *General Emergency*.

Annex 3, Table B-1a:

Table B-1a Shift Emergency Response Organizatio

Functional Area	Major Tasks	Emergency Positions	Minimum Shift Size
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	Shift Manager (CR) Control Room Supervisor (CR) Reactor Operator (CR) Non-licensed Operator Assistant Non-licensed Operator	1 1/Unit 2/Unit 2/Unit 1/Unit
2. Emergency Direction and Control	Command and Control/ Emergency Operations	Emergency Coordinator (CR)	1[a]
3. Notification & Communication	Emergency Communications	Shift Communicator (CR)	1/Unit
4. Radiological Accident Assessment and Support of Operational Accident Assessment	In-plant Surveys	~~HP~~RP Technicians	2/Unit
	Chemistry	Chemistry Personnel	1/Unit
5. Plant System Engineering, Repair and Corrective Actions	Technical Support	Shift Technical Advisor/Incident Assessor (CR)	1[b]
	Repair and Corrective Actions	Operations Personnel	1[b] 1[b] 1[b]
6. In-Plant Protective Actions	Radiation Protection	~~HP~~RP Personnel	2[b]
7. Fire Fighting	—	Fire Brigade	[c]
8. First Aid and Rescue Operations	—	Plant Personnel	2[b]
9. Site Access Control and Personnel Accountability	Security and Accountability	Security Team Personnel	[d]
TOTAL:			~~17[e]~~21[e]

(a) The Units 6 & 7 Shift Manager shall function as the Emergency Coordinator until relieved by another qualified Unit 6 & 7 Shift Manager in the TSC, when the TSC is activated.
(b) May be provided by personnel assigned other functions. Personnel can fulfill multiple functions.
(c) In accordance with plant fire protection plan.
(d) In accordance with Turkey Point Physical Security Plan.
(e) This number represents the total number of personnel on shift available to fill response positions (non-superscript positions).

The third paragraph of Annex 3, Section 4.1.a:

> The OSC may be activated when "minimum staffing positions" are filled and all positions will be staffed within ~~90~~60 minutes after the notification of an *Alert*, *Site Area Emergency*, or *General Emergency*.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-8 (eRAI 5681)

SITE 8: Emergency Facilities and Equipment

[Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(8), Section IV.E of Appendix E to 10 CFR Part 50, NUREG-0654 Evaluation Criteria H.1, H.4, H.5 and H.6, Supplement 1 to NUREG-0737 (Subsections 6.1.c, 8.2.1.b, 8.2.1.h, and 8.4.1.g)]

RAI H-2:

Describe in the Emergency Plan how the plant parameter variables based on the guidance provided in Regulatory Guide 1.97 are made available in the TSC.

RAI H-3:

COLA Part 5 Section H.6, "Monitoring Equipment Onsite," states in Subsection H.6.c.2 that the Safety Parameter Display System (SPDS) provides a display of plant parameters from which the safety status of plant operation may be assessed in the Control Room, TSC, and EOF for the plant. Describe in the Emergency Plan or FSAR the plant parameter variables of the SPDS, and discuss whether those plant parameter variables are based on the guidance provided in Regulatory Guide 1.97.

FPL RESPONSE:

RAI H-2:

The TSC is equipped with voice and data communications to each of the Unit Control Rooms. The data that is provided to the Control Room is provided to the TSC to enable the TSC staff to support the technical response to the emergency. The AP1000 Design Control Document (DCD) provides the information in Section 7.5.1 and DCD Table 7.5-1. In addition, FPL has provided the site-specific information in FSAR Table 7.5-201. This issue is also addressed in the submittal of the information supporting the response to RAI 14.03.10-1 d, in FPL Letter L-2011-356 (Reference 1). This response states, "The plant and environmental information/parameters listed in DCD Table 7.5-1 and FSAR 7.5-201 will be available in the TSC. ITAAC 5.1.5 Acceptance Criteria will be updated in a future COLA revision to provide a reference to DCD Table 7.5-1 and FSAR Table 7.5-201, which identify the plant and environmental information/parameters available in the TSC. Additionally, an editorial change will be made to delete the last sentence of ITAAC 5.1.5 Acceptance Criteria of Table 3.8-1."

RAI H-3:

The AP1000 Design Control Document (DCD) provides the information in Section 7.5.1 and DCD Table 7.5-1. In addition, FPL has provided the site-specific information in FSAR Table 7.5-201. This issue is also addressed in the submittal of the information supporting the response to RAI 14.03.10-1 d, in FPL Letter L-2011-356 (Reference 1). This response states, "The plant and environmental information/parameters listed in DCD Table 7.5-1 and FSAR 7.5-201 will be available in the TSC. ITAAC 5.1.5 Acceptance Criteria will be updated in a future COLA revision to provide a reference to DCD Table 7.5-1 and FSAR Table 7.5-201, which identify the plant and environmental

information/parameters available in the TSC. Additionally, an editorial change will be made to delete the last sentence of ITAAC 5.1.5 Acceptance Criteria of Table 3.8-1."

This response is PLANT SPECIFIC.

References:

1. FPL Letter L-2011-356 to NRC dated August 29, 2011, Response to NRC Request for Additional Information No. 033 (eRAI 5682) Standard Review Plan Section 14.3.10 Emergency Planning – Inspection, Tests, Analyses, and Acceptance Criteria

ASSOCIATED COLA REVISIONS:

No COLA changes have been identified as a result of this response.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-9 (eRAI 5681)

SITE-10: Protective Response [Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(10), Sections III and IV of Appendix E to 10 CFR Part 50, NUREG-0654 Evaluation Criteria J.1, J.3, J.10.a, and J.10.m]

RAI J-3:

Provide a map in the Emergency Plan that shows the pre-selected radiological sampling and monitoring points. The map should include the designators in NUREG-0654 Table J-1, or an equivalent uniform system described in the Emergency Plan.

FPL RESPONSE:

RAI J-3:

FPL has enhanced the Units 3 & 4 field monitoring team map with pre-determined radiological sampling and monitoring points, as illustrated in Figure I-1. The map provides designators similar to those in Table J-1 of NUREG-0654. The map will be incorporated into a future revision of the Emergency Plan.

This response is PLANT SPECIFIC.

References:

1. NUREG-0654 FEMA-REP-1 Rev.1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants

ASSOCIATED COLA REVISIONS:

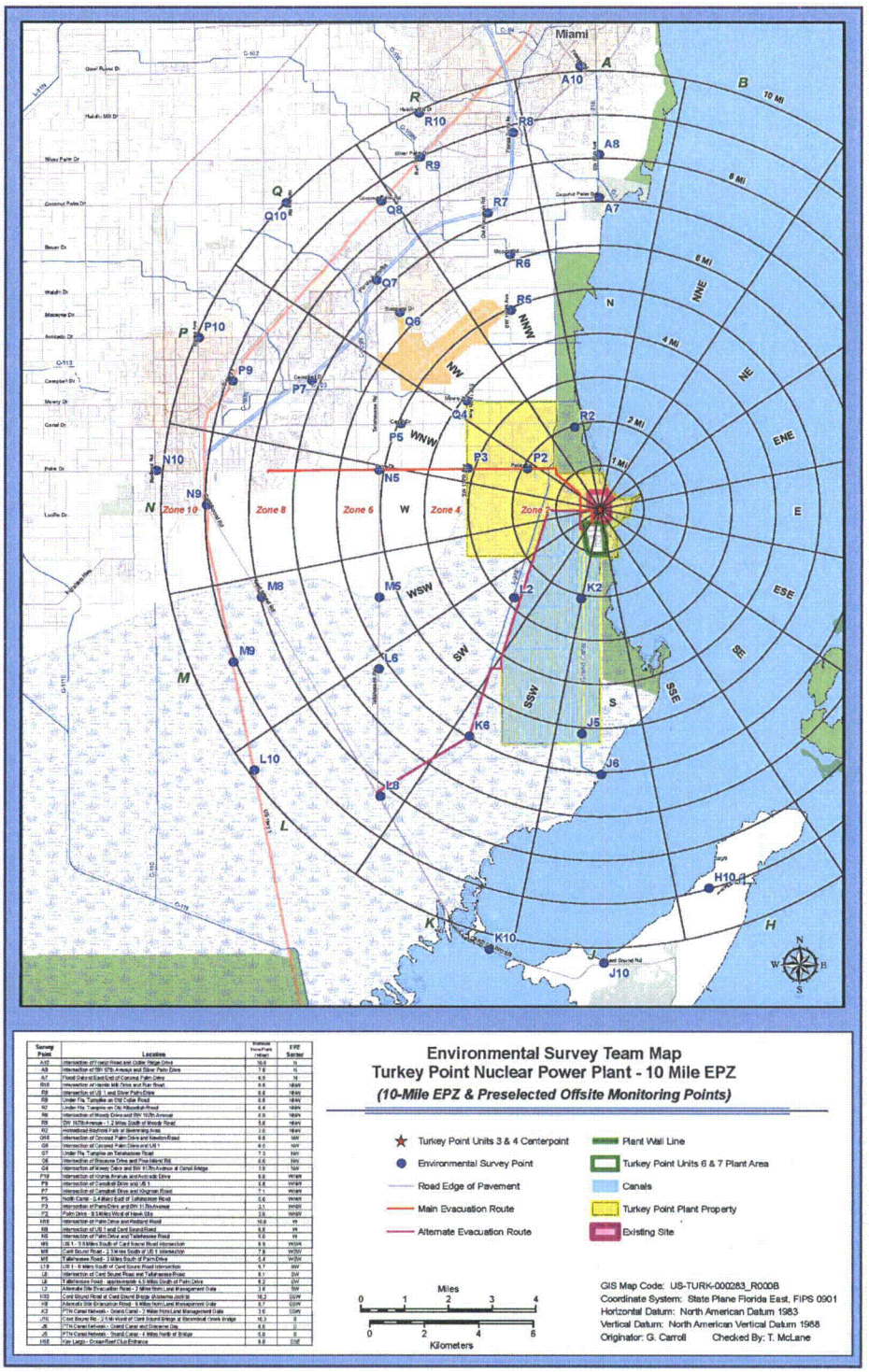
RAI J-3:

The second sentence of the second paragraph of COLA Part 5, Section I.7 will be revised in a future COLA revision, as shown below:

The environmental monitoring equipment, as described in Section H, includes portable survey, counting, and air sampling instrumentation and other radiological monitoring equipment and supplies to be used by the field monitoring teams. Samples are taken at predetermined locations, **as illustrated in Figure I-1,** as well as those specified both during and after a release. Environmental measurements are used as an aid in the determination and assessment of protective and recovery actions for the general public.

In a future COLA revision, the Emergency Plan will incorporate into Section I.8 Figure I-1, as shown below:

Figure I-1
Environmental Survey Team Map Turkey Point Nuclear Power Plant – 10 Mile EPZ



ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-10 (eRAI 5681)

SITE-11: Radiological Exposure Control [Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(11), NUREG-0654 Evaluation Criteria K.3.b and K.5.a]

RAI K-2:

In the Emergency Plan, provide the action levels used for determining the need for decontamination.

FPL RESPONSE:

RAI K-2:

PTN radiological procedure 0-HPS-021.3, Identification, Survey and Release of Material for Unrestricted Use, sets a standard of no detectable radioactivity for releasing material from a radiologically controlled area. This is the standard that is currently used at PTN 3 & 4 and will be adopted for Units 6 & 7.

This response is PLANT SPECIFIC.

References:

1. PTN 3 & 4 procedure O-HPS-021.3, Identification, Survey and Release of Material for Unrestricted Use

ASSOCIATED COLA REVISIONS:

No COLA changes have been identified as a result of this response.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-12 (eRAI 5681)

SITE-15: Radiological Emergency Response Training [Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(15), NUREG-0654 Evaluation Criteria O.1, O.1.a and O.4.a]

RAI O-1. Describe in the Emergency Plan the establishment of a training program that includes specialized training and periodic retraining of (1) Directors and/or coordinators; (2) personnel responsible for accident assessment, including control room shift personnel; (3) radiological monitoring teams; (4) fire control teams; (5) repair and damage control teams; (6) first aid and rescue teams; (7) the licensee's headquarters support personnel; (8) security personnel; and (9) personnel responsible for transmission of emergency information and instructions.

FPL RESPONSE:

RAI O-1

FPL delineates the training requirements for the Emergency Response Organization in an EPIP, "Radiological Emergency Plan Training." In a future COLA revision, the Emergency Plan will include the reference to the implementing procedure for ERO training. Enclosure 1 to RAI O-1 provides the essence of the training procedure.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

RAI O-1

A sentence will be added to the end of the first paragraph of COLA Part 5, Section O in a future COLA revision, as shown below:

This section describes the radiological emergency response training program which ensures the training, qualification, and requalification of individuals who will be required to provide assistance during an emergency at Turkey Point. FPL implements a training program that provides for initial training and retraining for individuals who have been assigned emergency response duties, including both Turkey Point ERO personnel and offsite support agencies that may be requested to provide assistance. **Training requirements for the Emergency Response Organization are delineated in an implementing procedure.**

ASSOCIATED ENCLOSURES:

Enclosure 1, NRC RAI 13.03-12 Subpart O-1, Emergency Response Organization Training Program

NRC RAI 13.03-12 Subpart O-1

Enclosure 1

Emergency Response Organization Training Program

(6 Pages)

Emergency Response Organization Training Program

PTN ERO personnel who are responsible for implementing this plan receive specialized training. 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.

On-shift emergency response personnel perform emergency response activities as an extension of their normal duties and are trained annually as part of their duty specific training. Additional Emergency Preparedness information is provided as part of the General Employee Training.

New ERO personnel receive an initial overview course that familiarizes them with the Emergency Plan by providing basic information in the following areas as well as specific information as delineated in the sections below:

- Planning Basis
- Emergency Classifications
- Emergency Response Organization and Responsibilities
- Call-out of Emergency Response Organization
- Emergency Response Facilities
- Communications Protocol/Emergency Public Information
- Offsite Organizations

Emergency response personnel in the following categories receive knowledge and/or performance based training initially and retraining thereafter on an annual basis:

a. Director, Managers and Coordinators within the Station ERO: Personnel identified by the Emergency Planning Telephone Directory as a Director, Managers and Coordinators for the Station ERO receive training appropriate to their position in accordance with the approved ERO Training Program. These personnel receive specialized training in the areas of:

    - Notifications
    - Emergency Classifications
    - Protective Action Recommendations
    - Emergency Action Levels
    - Emergency Exposure Control

    The Emergency Coordinators and Recovery Managers along with other selected Managers, and Coordinators receive training in accordance with the approved ERO Training Program. Training in accident assessment sufficient to classify an event and to mitigate the consequences of an event is also covered.

b. Personnel Responsible for Accident Assessment:

The skills and knowledge required to perform plant stabilization and mitigation are a normal function of operations specific positions, as identified in Section B of this plan. Power changes and planned and unplanned reactor shutdowns are handled on a normal operation basis. Subsequent plant stabilization and restoration is pursued utilizing normal operating procedures. Licensed Operators receive routine classroom and simulator training to ensure proficiency in this area.

1) Active Senior Licensed Control Room Personnel: Shall have training conducted in accordance with the approved ERO Training Program such that proficiency is maintained on the topics listed below. These subjects shall be covered as a minimum on an annual basis.

- Event Classification
- Protective Action Recommendations
- Radioactive Release Rate Determination
- Notification form completion and use of offsite notification equipment
- Federal, State and county notification procedures as appropriate
- Site specific procedures for activating the onsite and offsite ERO

2) Core Damage Assessment Personnel: During an emergency when core/cladding damage is suspected, a specialized group of trained individuals perform core damage assessment. At a minimum, personnel responsible for core damage assessment receive classroom and hands-on training in the following areas:

- Available Instrumentation and Equipment
- Isotopic Assessment and Interpretation
- Core Damage Assessment Methodology and/or proceduralized assessment methods.

c. Radiological Monitoring Teams and Radiological Analysis Personnel

1) Offsite Radiological Monitoring: Offsite radiological monitoring is performed by trained individuals who provide samples and direct readings for dose assessment calculations and dose projection comparisons.

Personnel identified as members of Field Monitoring Teams receive training in accordance with the approved training program. Field Monitoring Team members receive classroom and hands-on training in the following areas:

- Equipment and Equipment Checks
- Communications
- Plume Tracking Techniques

2) Personnel Monitoring: Personnel monitoring is performed by trained individuals who monitor Station personnel and their vehicles for contamination during an emergency. Personnel Monitoring Team members receive classroom and hands-on training in the following areas:

- Personnel Monitoring Equipment and Techniques
- Decontamination Techniques for Personnel
- Decontamination Techniques for Vehicles

3) Dose Assessment: Dose Assessment training includes the skills and knowledge necessary for calculation and interpretation of an offsite release and its impact on the environment under varying meteorological conditions. Individuals responsible for performing dose assessment are trained in the following areas:

- Computerized Dose Assessment
- Protective Action Recommendations
- Field Monitoring Team Interface
- Protective Action Guidelines associated with offsite plume exposure doses
- Basic Meteorology

d. Police, Security, and Fire Fighting Personnel

1) Local Police and Fire Fighting Personnel: The local Police and Fire Departments are invited to receive training as outlined in Part 1.a of this section.

2) Security Personnel: Station security personnel are trained in accordance with training defined by the General Employee Training and PTN Security Program.

3) Fire Brigade Teams: Station fire brigade members are trained in accordance with training defined by the PTN Fire Protection Program.

e. Repair and Damage Control Teams: Operations, Maintenance and Radiation Protection personnel are trained as part of their normal job specific duties to respond to both normal and abnormal plant operations.

Operations personnel are trained to: (1) recognize and to mitigate degrading conditions in the plant, (2) mechanically and electrically isolate damaged or malfunctioning equipment, (3) isolate fluid leaks, and (4) minimize transients.

Maintenance personnel are trained to troubleshoot and repair damaged or malfunctioning electrical, mechanical, or instrumentation systems as appropriate to their job classification.

Radiation Protection personnel are trained to assess the radiological hazards associated with equipment repair and instruct personnel as to the appropriate protective clothing requirements, respiratory protection requirements, stay times, and other protective actions specific to the conditions present.

A portion of personnel from those departments, who are potential responders to the OSC as Damage Control Team members, are required to be qualified in the

use of respiratory protection equipment. This includes in-plant supervision and craft/technicians for the following departments:

- Operations
- Radiation Protection
- Chemistry
- Maintenance (mechanical, electrical and I&C)

f. First Aid Team and Rescue Personnel: First aid and rescue team members receive training as outlined in Part 3 of this section, First Aid Response.

g. Local Support Service Personnel: Local support service personnel providing assistance during an emergency are invited to receive training as outline in Parts 1.a and 1.b of this section.

h. Medical Support Personnel: Onsite medical personnel receive specialized training in the handling of contaminated victims and hospital interface. Offsite ambulance and hospital personnel are offered annual training in accordance with a program provided by Emergency Preparedness.

i. Emergency Public Information Personnel: Corporate and station personnel responsible for disseminating emergency public information and responding to media and public information requests receive specialized public information training.

j. Communications Personnel: ERO personnel receive training on communications protocol as a part of the initial Emergency Response Overview Course. Personnel using specialized communications equipment that is not part of their normal daily function receive initial and requalification training on the equipment. Personnel involved in notifications to offsite agencies receive specialized training in the notification process.

General, Initial, and Annual Training Program Maintenance

Station Departments and Emergency Preparedness share the responsibility for ensuring that the ERO receives all necessary training and retraining. In order to carry this out, responsibilities are assigned as follows:

a. Station Responsibilities for Station ERO Personnel

- Station management shall ensure the attendance of onsite personnel for training, including required Emergency Planning courses.
- The Station shall conduct onsite emergency personnel initial and retraining for station Emergency Response Personnel using approved lesson plans.

- The Station Training Department shall provide those shift personnel included in a continuing training program an annual review of the following items as a minimum:
  - Assembly Areas
  - Emergency Response Facility assignment
  - Potential Hazards (radiological and non-radiological)
  - Anticipated actions including assembly requirements, protective equipment requirements (clothing, masks, SCBA, etc.), the use of KI, emergency exposure limits and accountability requirements.

b. Initial and Requalification ERO Training:

The proficiency of emergency response personnel (as defined in 10 CFR 50 Appendix E) is ensured by the following means:

- Assigning persons to emergency duties that are similar to those performed as a part of their regular work assignment or experience.
- Initial training and annual retraining on applicable generic and site-specific portions of the emergency plan and the corresponding implementing procedures. Individuals not demonstrating the required level of knowledge in initial or retraining classes receive additional training on the areas requiring improvement. Annual retraining is conducted on a calendar year basis.
- Training on Emergency Plan changes shall be completed within one hundred twenty (120) days of implementation of the change.
- Participation in exercises and/or drills as developed or authorized by the Emergency Preparedness Department and designed to sharpen those skills that they are expected to use in the event of an actual emergency.

All personnel assigned position specific responsibilities in the ERO are documented by inclusion in the Emergency Planning Telephone Directory listing of positions and personnel.

c. General Employee Training (GET):

All personnel with unescorted Station access are provided with initial orientation training on the notification and instruction methods used in the event of an emergency. Additionally, all badged individuals also receive initial orientation on the basic principles of radiological safety including the effects of radiation and the theory and use of radiation detection devices. Appropriate actions for escorted individuals shall be the responsibility of the escort. GET provides initial and annual requalification training on the basic elements of the Emergency Plan for all personnel working at the plant. Specifically, these elements include:

- Station emergency alarms and their meaning
- Assembly areas
- Site and Exclusion Area Evacuation procedures
- Special precautions and limitations during an emergency
- Purpose of the Emergency Plan

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-13 (eRAI 5681)

SITE-16: Responsibility for Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans. [Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(16), NUREG-0654 Evaluation Criteria P.6 and P.9]

RAI P-2:

COLA Part 5 Section P.9, "Audit/Assessment of the Emergency Preparedness Program," states that reviews of audits will be submitted to management. Describe in the Emergency Plan the retention of the results of independent reviews of the emergency preparedness program, including whether recommendations for improvement will be retained for a period of five years.

FPL RESPONSE:

The PTN Emergency Plan will be revised in a future COLA revision to include that the results of independent reviews of the emergency preparedness program, including recommendations for improvement, will be retained for a period of five years.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

RAI P-2

A sentence will be added to the end of the third paragraph of COLA Part 5, Section P.9 in a future COLA revision, as shown below:

Results of the audit are submitted to Turkey Point management, the Director, Emergency Preparedness, and other members of senior management, as appropriate. The Turkey Point Emergency Preparedness Manager ensures that any findings that deal with offsite interfaces are reviewed with the appropriate agencies. The part of the review involving the evaluation of adequacy of interface with state and local governments is made available to the state and local governments. **The results of independent reviews of the emergency preparedness program, including recommendations for improvement, will be retained for a period of five years.**

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-15 (eRAI 5681)

SITE-18: Emergency Plan Considerations for Multi-Unit Sites [Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47, Regulatory Guide 1.206, Section C.I.13.3.2] Regulatory Guide 1.206 states in Section C.I.13.3.2, "Emergency Plan Considerations for Mulit-unit Sites," that if the new reactor is located on, or near, an operating reactor site with an existing emergency plan (i.e., multiunit site), and the emergency plan for the proposed new reactor includes various elements of the existing plan, the applicant should do the following:

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

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

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

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

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

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

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

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

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

Please discuss how and/or where each of the nine elements listed above is addressed in the COL application. If appropriate, revise the application (e.g., Emergency Plan or FSAR) to reflect your responses.

FPL RESPONSE:

(1) The Units 3 & 4 Emergency Plan does take credit for Units 6 & 7 equipment or personnel resources with regard to providing support to the existing program.

The Units 6 & 7 Emergency Plan will only have separate Emergency Action Levels (EAL) and the Operations Support Center (OSC) will be specific to Units 6 & 7.

All units will share the ERO, the EP Staff, TSC, EOF, ENC, Near Site Assembly Areas, meteorological monitoring system and Alert and Notification System (ANS).

A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Units 6 & 7 from Units 3 & 4.

(2) A preliminary 10 CFR 50.54(q) evaluation was performed and is available for review. The evaluation includes a review of the proposed extension of existing site's emergency plan pursuant to 10 CFR 50.54(q) and specifically addresses the effectiveness of the existing plans considering the addition of the new reactors. The preliminary evaluation concludes onsite protective actions are altered for the PTN site as they will be extended to the new operating units or to the existing operating units due to an event at Units 6 & 7.

(3) All units will share the ERO, the EP Staff, TSC, EOF, ENC, Near Site Assembly Areas, metrological monitoring system and Alert and Notification System (ANS). This will require a licensing action to implement the COLA emergency plan to reflect shared response activity.

A human factors evaluation will be performed to ensure the shared systems used for event assessment are appropriately designed to distinguish Units 6 & 7 from Units 3 & 4.

A task analysis will be performed to ensure communications, accommodations and administrative resources in the EOF, TSC, ENC, and near site assembly areas are appropriately laid out to support Units 6 & 7 response requirements and address any impact to the existing Units 3 & 4 emergency plan.

Facility layout and furnishings will be evaluated and modified to the extent necessary to allow for combined use if concurrent events are declared at Units 3 & 4 and Units 6 & 7.

A drill requiring mobilization and response activities for a multiple unit event will be conducted prior to operation of Units 6 & 7 to demonstrate the ability of all utility emergency facilities to support a concurrent event. This drill will evaluate the adequacy of space, furnishing, communications, monitoring systems and shared resources to ensure response functions.

Siting of Units 6 & 7 will not require modification of the Emergency Planning Zone (EPZ), therefore no changes to the ANS are necessary. The previous 12 months data for the Units 3 & 4 NRC ANS Reliability Performance Indicator will be reviewed to ensure system performance is sufficient for Units 6 & 7 prior to initial loading of fuel.

As EPZ for PTN will remain the same as it is for Units 3 & 4, the Alert Notification System, previously accepted by FEMA, adequately provides notification for personnel in the 10-Mile EPZ. The equipment and emergency facilities are outlined in Section H of the Emergency Plan.

(4) No changes to the Units 3 & 4 onsite emergency response arrangements or capabilities have been identified concerning the state and local or private organizations.

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

Changes to the existing state and local offsite emergency response arrangements will be necessary to account for Units 6 & 7 liaisons sent to the offsite agency EOCs in support of an event.

Initial discussions for the construction of Units 6 & 7 have been conducted with state and local authorities. As a result of these discussions, agreement letters were obtained from both state and local authorities with emergency planning responsibilities indicating a commitment to participate in further development of the emergency response plans for Units 6 & 7, including any required training and field demonstrations, and working with the licensee to identify any needed changes to their current commitment to execute their responsibilities per the Letters of Certification.

(5) The current EPZ is adequate to meet the criteria for the 10-Mile Plume Exposure Zone as well as the 50-Mile Ingestion Pathway Zone. Both of these EPZs have been accepted by the local and state authorities as evidenced by the submittal of the Letters of Certification provided with the initial application and the Emergency Plan. This information is located in Part 1 Section B of the PTN Emergency Plan. Moreover, the offsite radiological consequences for the Units 6 & 7 design basis accident are below those of the Units 3 & 4 design basis accident. In addition, the NRC requested FEMA review of the Turkey Point Nuclear Units 6 and 7 Combined License (COL) Application (References 1 and 2). FEMA issued an interim finding for reasonable assurance for the Offsite Emergency Response Plans for the Turkey Point Nuclear Units 6 and 7 COL Application (Reference 3).

(6) The current ETE study report conducted for the PTN site is dated July, 2011 and is sufficient for the operation of Units 6 & 7 (Reference 4).

(7) This element is not applicable – The PTN Emergency Plan (Units 3 & 4 and Units 6 & 7) includes discussion that the offsite plans specify a FEMA evaluated full participation exercise for the PTN site is performed biennially.

(8) Emergency Plan ITAAC's for Unit's 6 & 7 are provided in COLA Part 10, as modified by FPL response to eRAI 5682, dated 8/29/2011 (Reference 5).

(9) The Emergency Plan included in COLA Part 5 is a site emergency plan that is fully integrated in all aspects of the response to any radiological emergency including security related events. It provides:

- Consistency with the emergency response organization and support for the initial phases of the emergency through the use of on-shift personnel for the unaffected plants, as indicated in Section B of the Plan,

- Consistency in staffing the emergency response facilities with personnel trained and qualified to respond to the particular technology that is experiencing an emergency, as indicated in Section B of the Plan,
- Consistency in the implementing procedures utilized by the on-shift and augmented ERO personnel, as indicated in Appendix 3, Procedure Cross-Reference to the Emergency Plan,
- Consistency in the management structure of the response organization, as indicated in Section B of the Plan,
- Consistency in emergency classifications, as indicated in Section D of the Plan,
- Consistency in planning, notification, and communication with offsite authorities, as indicated in Sections E & F of the Plan,
- Consistency in providing emergency preparedness information to the public, as indicated in Section G of the Plan,
- Consistency in the use availability of the Alert Notification System for the public, as indicated in Section E of the Plan,
- Consistency in the Site wide personnel protective actions (notifications, assembly, evacuation, etc) including those during Security's actions, Section J of the Plan,
- Proper scheduling of full participation exercises with the offsite authorities, as indicated in Section N of the Plan.

Portions of the Plan that are not consistent are outlined in the Annexes. They are due to either the physical location of the Units which effect items such as the location of the Operations Support Centers and the different technology that requires unit specific emergency action levels.

This response is PLANT SPECIFIC.

References:

1. NRC (Chief Operating and New Reactor Licensing Branch) Letter to FEMA (Chief Radiological Emergency Preparedness Branch) dated July 2, 2009, Request for Federal Emergency Management Agency Review of a Combined License Application from Florida Power And (sic) Light for Two New Reactor Units at the Turkey Point Site
2. NRC (Chief Operating and New Reactor Licensing Branch) Letter to FEMA (Chief Radiological Emergency Preparedness Branch) dated July 23, 2009, Request for Federal Emergency Management Agency Review of a Combined License Application – Florida Power And (sic) Light Turkey Point Site – Supplement to Original Submittal
3. FEMA (Chief Radiological Emergency Preparedness Branch) Letter to NRC (Chief Licensing & Inspection Branch) dated December 23, 2010, Federal Management Agency's (FEMA) Interim Finding (IFR) for Reasonable Assurance (RA) the Offsite Emergency Response Plans for the Turkey Point Nuclear (Turkey Point) Units 6 and 7 Combined License (COL) Application
4. FPL Letter L-2011-352 to NRC dated August 29, 2011, Voluntary Submittal of Turkey Point Units 6 and 7 Evacuation Time Estimate Report, Revision 2

5. FPL Letter L-2011-356 to NRC dated August 29, 2011, Response to NRC Request for Additional Information Letter No. 033 (eRAI 5682) Standard Review Plan Section 14.03.10 Emergency Planning - Inspections, Tests, Analyses, and Acceptance Criteria

ASSOCIATED COLA REVISIONS:

No COLA changes have been identified as a result of this response.

ASSOCIATED ENCLOSURES:

None

NRC RAI Letter No. PTN-RAI-LTR-035

SRP Section: 13.03 – Emergency Planning

Question from Licensing and Inspection Branch

NRC RAI Number: 13.03-16 (eRAI 5681)

SITE-19: FSAR Table 13.4-201, Item 14, Emergency Planning Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47, 10 CFR 30.32(i)(1)(i) and (ii), 10 CFR 40.31(j)(1)(i) and (ii), 10 CFR 70.22(i)(1)(i) and (ii)]

A. Identify the physical form of the byproduct material that will be received, possessed, or used at Units 3 and 4. If the byproduct material is in unsealed form, on foils or plated sources, or sealed in glass, does it exceed the quantities in Schedule C in 10 CFR 30.72? If the quantities exceed Schedule C, provide either (1) an evaluation showing the maximum dose to a person offsite would not exceed 1 rem effective dose equivalent or 5 rem to the thyroid (see 10 CFR 30.32(i)(2)), or (2) an emergency plan that meets the requirements of 10 CFR 30.32(i)(3). If compliance through the requirements of 10 CFR 30.32(i)(3) is chosen, discuss how the implementation of the emergency plan prior to the receipt of byproduct material will be accomplished. If appropriate, revise FSAR Table 13.4-201, "Operational Programs Required by NRC Regulations," to reflect the emergency plan implementation.

B. Pursuant to 10 CFR 40.31(j)(1), discuss whether the request for a 10 CFR Part 40 license involves authorization to receive, possess, or use uranium hexafluoride in excess of 50 kilograms in a single container or 1000 kilograms total? If either of these two quantities of uranium hexafluoride [sic] are exceeded, provide either (1) an evaluation showing that the maximum intake of uranium by a member of the public due to a release would not exceed 2 milligrams (see 10 CFR 40.31(j)(2)), or (2) an emergency plan for responding to the radiological hazards of an accidental release of source material and to any associated chemical hazards directly incident thereto (see 10 CFR 40.31(j)(3)).

C. 10 CFR 70.22(i)(1) states that each application to possess enriched uranium or plutonium for which a criticality accident alarm system is required, uranium hexafluoride in excess of 50 kilograms in a single container or 1000 kilograms total, or in excess of 2 curies of plutonium in unsealed form or on foils or plated sources, must contain either (1) an evaluation showing that the maximum dose to a member of the public offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or an intake of 2 milligrams of soluble uranium (see 10 CFR 70.22(i)(2)), or (2) an emergency plan for responding to the radiological hazards of an accidental release of special nuclear material and to any associated hazards directly incident thereto (see 10 CFR 70.22(i)(3)). Discuss whether an exemption from 10 CFR 70.24 will be requested regarding the installation of a criticality accident alarm system. If a criticality accident alarm system will not be installed, and an exemption is not requested, provide either (1) the required evaluation identified above (see 10 CFR 70.22(i)(1)(i)), or (2) a discussion as to how an emergency plan that meets the requirements of 10 CFR 70.22(i)(3) will be implemented to support the receipt, possession, and use of enriched uranium. For the emergency plan option, discuss how the requirements of 10 CFR 70.22(i)(3)(xiii)

and 10 CFR 70.22(i)(4) are (or will be) met. Finally, update FSAR Table 13.4-201 to reflect your response, if appropriate.

FPL RESPONSE:

(A) and (B)

Responses to these questions were provided by Southern Nuclear Company (SNC), Vogtle Generating Plant Units 3 and 4, the AP1000 RCOLA. The response was provided as a standard content response by SNC Letter ND-10-2002 to NRC dated October 15, 2010 (Reference 1) and further modified by SNC Letter ND-11-0435 dated March 16, 2011 (Reference 2). SNC Letter ND-11-0522 dated March 31, 2011 (Reference 3), provided a summary identification of the RCOLA standard content submittals including the standard response to VEGP RAI 01.05-1. FPL endorsed the SNC response to VEGP RAI 01.05-1 in FPL Letter L-2011-152 dated April 20, 2011 (Reference 4). FPL endorsed the additional modifications from Reference 3 in FPL Letter L-2011-391 dated September, 2011 (Reference 5).

VEGP RAI 01.05-1 Subparts (A) and (B) addressed the response to PTN RAI 13.03-16 Subparts (A) and (B) as standard content and were endorsed by FPL in Reference 3.

This response is STANDARD.

(C)

FPL will be storing the new fuel in the new fuel rack (stored dry) or in the spent fuel racks prior to loading into the reactor. The safety analysis included in the AP1000 DCD Sections 9.1.1.3 and 9.1.2.3 provides a safety analysis that indicates that: (1) the design of the new fuel rack is such that K_{eff} remains less than or equal to 0.95 with full density unborated water and less than or equal to 0.98 with optimum moderation and full reflection conditions; and (2) the design of the spent fuel rack is such that K_{eff} remains less than or equal to 0.95 under design basis conditions. This criticality evaluation meets the requirements of 10 CFR 50.68(b). Therefore, a criticality accident alarm system to meet the requirements of 10 CFR 70.24, Criticality Accident Requirements, is not required. As a result, an emergency plan (to receive and possess) pursuant to 10 CFR 70.22(i) is also not required. In addition, an emergency plan for the fission chambers (to receive and possess) pursuant to 10 CFR 70.22(i) is not required due to the small quantity of SNM (less than 100 grams) associated with fission chambers.

This response is consistent with the resolution to standard content Confirmatory Item 1.5-2, a discussed on page 1-66 of the Vogtle FSER (Reference 6).

This response supplements STANDARD content.

References:

1. SNC Letter ND-10-2002 to NRC dated October 15, 2010, Southern Nuclear Company, Vogtle Electric Generating Plant Units 3 and 4 Combined License Application– Response to Request for Additional Information Letter No. 62
2. SNC Letter ND-11-0435 to NRC dated March 16, 2011, Southern Nuclear Company, Vogtle Electric Generating Plant Units 3 and 4 Combined License Application– Supplemental Information in Support of 10 CFR Part 30 Byproduct Material and 10 CFR Part 40 Source Material License

3. SNC Letter ND-11-0522 dated March 31, 2011, Vogtle Electric Generating Plant Units 3 and 4 Combined License Application Summary Identification of Reference Combined License Application Standard Content Submittals
4. FPL Letter L-2011-152 to NRC dated April 20, 2011, Third Endorsement of Vogtle Electric Generating Plant Units 3 and 4 AP1000 R-COLA Standard Content Submittals
5. FPL Letter L-2011-391 to NRC dated September 14, 2011, Fourth Endorsement of Vogtle Electric Generating Plant Units 3 and 4 AP1000 R-COLA Standard Content Submittals
6. Final Safety Evaluation Report for Combined Licenses for Vogtle Electric Generating Plant, Units 3 and 4, Section 1.5, "Additional Regulatory Considerations," dated August 2011

ASSOCIATED COLA REVISIONS:

The following Emergency Plan changes are provided for the staff's information and will be made in the next revision of the COLA based on the FPL endorsement of the Standard Content changes submitted by SNC in References 1 and 2.

1. COLA Part 2 FSAR Chapter 13, Section 13.4, Table 13.4-201, Item 14, Emergency Planning, will be revised to remove the following information related to materials.

Item	Program Title	Program Source (Required by)	FSAR Section	Implementation	
				Milestone	Requirement
14	Emergency Planning	10 CFR 50.47, 10 CFR Part 50, Appendix E	13.3	Full participation exercise conducted within 2 years of scheduled date for initial loading of fuel. Onsite exercise conducted within 1 year before the schedule date for initial loading of fuel. Applicant's detailed implementing procedures for its emergency plan submittal at least 180 days prior to scheduled date for initial loading of fuel.	10 CFR Part 50, Appendix E, Section IV.F.2.a(ii) 10 CFR Part 50, Appendix E, Section IV.F.2.a(ii) 10 CFR Part 50, Appendix E, Section V
	~~(portions applicable to radioactive material)~~	~~10 CFR 30.32(i)(3)~~ ~~10 CFR 40.31(j)(3)~~ ~~10 CFR 70.22(i)(3)~~		~~Prior to initial receipt of byproduct, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18)~~	~~10 CFR 30.32(i)(1)~~ ~~10 CFR 40.31(j)(1)~~ ~~10 CFR 70.22(i)(1)~~

2. COLA Part 2, FSAR Chapter 12, Subsection 12.2.1.1.10, Miscellaneous Sources, will be updated to include a new final paragraph in a future revision to the COLA to read:

During the period prior to the implementation of the Emergency Plan (in preparation for the initial fuel loading following the 52.103(g) finding), no specific materials related emergency plan will be necessary because:

a) No byproduct material will be received, possessed, or used in a physical form that is "in unsealed form, on foils or plated sources, or sealed in glass," that exceeds the quantities in Schedule C in 10 CFR 30.72, and

b) No 10 CFR Part 40 specifically licensed source material, including natural uranium, depleted uranium, and uranium hexafluoride will be received, possessed, or used during this period.

3. COLA Part 10, proposed License Condition 3, Operational Program Implementation, Item C, Receipt of Materials, will be revised from:

   C.4 – Emergency Planning (applicable portions)

   To read:

   C.4 – Deleted

ASSOCIATED ENCLOSURES:

None