

## PMVictoriaESPPEm Resource

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**From:** Govan, Tekia  
**Sent:** Tuesday, May 17, 2011 12:03 PM  
**To:** 'david.distel@exeloncorp.com'  
**Cc:** VictoriaESP Resource  
**Subject:** FW: E110517t080004 from vivia.gallimore@exeloncorp.com  
**Attachments:** E110517t080004\_051311 Resp to RAI Letter No. 06.pdf

FYI

Tekia V. Govan, Project Manager  
U.S. Nuclear Regulatory Commission  
Office of New Reactors  
MS T-6-D48  
Washington DC 20555-0001  
301-415-6197  
[Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov)

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**From:** Rieta, Melissa  
**Sent:** Tuesday, May 17, 2011 11:25 AM  
**To:** [vivia.gallimore@exeloncorp.com](mailto:vivia.gallimore@exeloncorp.com); Govan, Tekia; Govan, Tekia  
**Cc:** Buan, Angelina; Collins, Michael; Khamphoui, Orada; King, Mike; Neely, Mary; Nguyen, Kenny; Repetto, John; Tennille, Eric  
**Subject:** E110517t080004 from [vivia.gallimore@exeloncorp.com](mailto:vivia.gallimore@exeloncorp.com)

Good morning,

The att'd EIE submittal was not submitted in accordance with specifications contained in NRC's electronic submission rulemaking (and its associated guidance document; effective January 1, 2004) which can be accessed at the following webpage:

<http://www.nrc.gov/site-help/e-submittals/guide-electronic-sub-r6.pdf>

Specifically the PDF file has image **Scanned at <300DPI on pages 41, 46, 47, 78-80, 92, 102.**

Please **correct the images** and re-submit in accordance with NRC Submission Guidance. Please include in the comment field that this is a re-submittal.

If you have any questions, please contact me at 301-415-5442 or e-mail [mtr1@nrc.gov](mailto:mtr1@nrc.gov) .

We appreciate your participation in the NRC EIE program.

**PS. If you're using Adobe 7.0 Pro, you might want to download and install the latest revision. As we found out, if you're using 7.0.0-7.0.3, you will get a wrong result, such as Fast Web View is enabled while in fact it is NOT enabled.**

*Thanks*  
*Melissa R. Delgado*

**Hearing Identifier:** Victoria\_ESP\_Public  
**Email Number:** 198

**Mail Envelope Properties** (F5A4366DF596BF458646C9D433EA37D780CCD5FE14)

**Subject:** FW: E110517t080004 from vivia.gallimore@exeloncorp.com  
**Sent Date:** 5/17/2011 12:03:14 PM  
**Received Date:** 5/17/2011 12:03:20 PM  
**From:** Govan, Tekia

**Created By:** Tekia.Govan@nrc.gov

**Recipients:**

"VictoriaESP Resource" <VictoriaESP.Resource@nrc.gov>  
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NP-11-0014  
May 13, 2011

10 CFR 52, Subpart A

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

Subject: Exelon Nuclear Texas Holdings, LLC  
Victoria County Station Early Site Permit Application  
Response to Request for Additional Information Letter No. 06  
NRC Docket No. 52-042

Attached are responses to NRC staff questions included in Request for Additional Information (RAI) Letter No. 06, dated March 31, 2011, related to Early Site Permit Application (ESPA), Part 2, Sections 02.04.04 and 13.03. NRC RAI Letter No. 06 contained twenty (20) RAIs. This submittal comprises a partial response to RAI Letter No. 06, and includes responses to the following seventeen (17) Questions:

02.04.04-2	13.03-20	13.03-28
	13.03-21	13.03-29
	13.03-22	13.03-30
	13.03-23	13.03-31
	13.03-24	13.03-32
	13.03-25	13.03-33
	13.03-26	13.03-34
	13.03-27	13.03-35

When a change to the ESPA is indicated by a Question response, the change will be incorporated into the next routine revision of the ESPA, planned for no later than March 31, 2012.

Of the remaining three RAIs associated with RAI Letter No. 06, Questions 15-1 and 15-2 were submitted to the NRC in Exelon Letter NP-11-0012, dated April 26, 2011. The response to RAI Question 02.04.04-1 will be provided by August 12, 2011.

Regulatory commitments established in this submittal are identified in Attachment 21. If any additional information is needed, please contact David J. Distel at (610) 765-5517.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13<sup>th</sup> day of May, 2011.

Respectfully,



Marilyn C. Kray  
Vice President, Nuclear Project Development

Attachments:

1. Question 02.04.04-2
2. Question 13.03-20
3. Question 13.03-21
4. Question 13.03-22
5. Question 13.03-23
6. Question 13.03-24
7. Question 13.03-25
8. Question 13.03-26
9. Question 13.03-27
10. Question 13.03-28
11. Question 13.03-29
12. Question 13.03-30
13. Question 13.03-31
14. Question 13.03-32
15. Question 13.03-33
16. Question 13.03-34
17. Question 13.03-35
18. Letters of Agreement
19. VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation
20. Exelon Nuclear Radiological Emergency Plan Annex For Victoria County Station, EP-AA-1011, Revision C, May 2011
21. Summary of Regulatory Commitments

cc: USNRC, Director, Office of New Reactors/NRLPO (w/Attachments)  
USNRC, Project Manager, VCS, Division of New Reactor Licensing  
(w/Attachments)  
USNRC, Region IV, Regional Administrator (w/Attachments)

**RAI 02.04.04-2:****Question:**

The staff has reviewed the application in accordance with the requirements of “Factors to be considered when evaluating sites” 10 CFR 100.20(c), and “Contents of application: technical information in the final safety analysis report” 10 CFR 52.79(a). The application does not provide detailed information discussing the cooling basin pool elevation selected for analysis and does not provide the background on the selection of the Manning’s  $n$ . Please provide additional information showing the selection of the cooling basin initial water surface elevation and the selection of Manning’s  $n$  in the vicinity of the breach, where applicable, considering that there are more conservative assumptions available.

**Response:****Part 1 - Selection of the Manning’s  $n$** 

As described in SSAR Subsection 2.4.4.2.2.5, the Manning’s  $n$  for the Cooling Basin (CB) breach analysis was selected based on the suggested values in SSAR Reference 2.4.4-14. The selected Manning’s  $n$  of 0.030, the normal value of the suggested range with a minimum of 0.025 and a maximum of 0.035, corresponds to flood plain type of terrains occupied by pastures with short grasses, which is comparable to the general characteristics of the existing conditions at the power block area and vicinity. After construction, the ground between the CB and the power block would consist of paved areas, such as parking lots (see SSAR Figure 1.2-2), and gravel/grass covered areas, with lower surface roughness. For example, the suggested Manning’s  $n$  values range from 0.013 to 0.016 for asphalt lined channels and 0.022 to 0.033 for engineered channels with gravel and grass covers (SSAR Reference 2.4.4-14). To address the differences in the surface roughness and potential impact on flow resistance, a sensitivity analysis was performed, as discussed in SSAR Subsection 2.4.4.2.2.5, to evaluate the effect of the Manning’s  $n$  on the flood water level at the power block area. Manning’s  $n$  values of 0.025 and 0.035, which correspond to the minimum and maximum values of the suggested roughness of the existing terrain, were tested and the results show that the flood water levels at the power block area are not sensitive to the Manning’s  $n$  values as shown in Figure 1.

**Part 2 - Cooling Basin Initial Water Level**

The discussion below provides additional information on the selection of the initial water level of the CB for the postulated CB embankment failure flooding analysis.

As described in SSAR Subsection 2.4.4.2.2.4, an initial condition of the breach model is determined based on the postulation that the cooling basin would be initially filled to elevation 93.9 feet (28.62 meters) NAVD 88, which corresponds to the one-half Probable Maximum Precipitation (PMP) condition on top of the CB normal maximum operating water level of 91.5 feet NAVD 88. Details of the CB design water levels are provided in SSAR Subsection 2.4.8. The selection of the one-half PMP is based on the guideline provided in ANSI/ANS-2.8-1992 (SSAR Reference 2.4.4-3). According to the guideline, combined events for the evaluation of potential flood risks as a result of dam failures should also consider a coincidental flood event equal to a 500-year flood or one-half

PMF, whichever is less. In cases where the 500-year flood is lower than the one-half PMF, adopting the one-half PMF leads to a conservative initial water level. As described in SSAR Subsection 2.4.8, the full PMP has a total rainfall depth of 55.7 inches (1415 millimeters) in 72 hours. The corresponding one-half PMP is 27.9 inches (708 millimeters).

According to SSAR Subsection 2.4.8, the CB has a 31.5-foot wide (9.6 meters) ogee emergency spillway with four slide gates, each 6 feet (1.83 meters) wide and 7 feet (2.13 meters) high. The gates rest on top of the spillway that has a crest elevation of 87 feet (26.5 meters) NAVD 88, and the top of the gates when closed is at elevation 94 feet (28.65 meters) NAVD 88. The spillway gates are designed to open and release flood water when 1 foot (0.31 meters) or more of precipitation occurs. For the purpose of the CB breach analysis, the spillway gates are assumed closed (or out of service) when considering the coincidental event of the one-half PMP, thus resulting in a higher (conservative) initial water level in the CB.

With the normal maximum operating water level of the CB at 91.5 feet (27.9 meters) NAVD 88, the maximum water level in the CB from routing the one-half PMP; i.e., the initial CB water level, is 93.9 feet (28.62 meters). This value is slightly higher than the direct summation of the normal maximum operating water level of the CB and the one-half PMP falling on the CB; i.e., 93.8 feet (28.59 meters). The difference is due to the runoff contribution from the embankments and dikes to the CB water body.

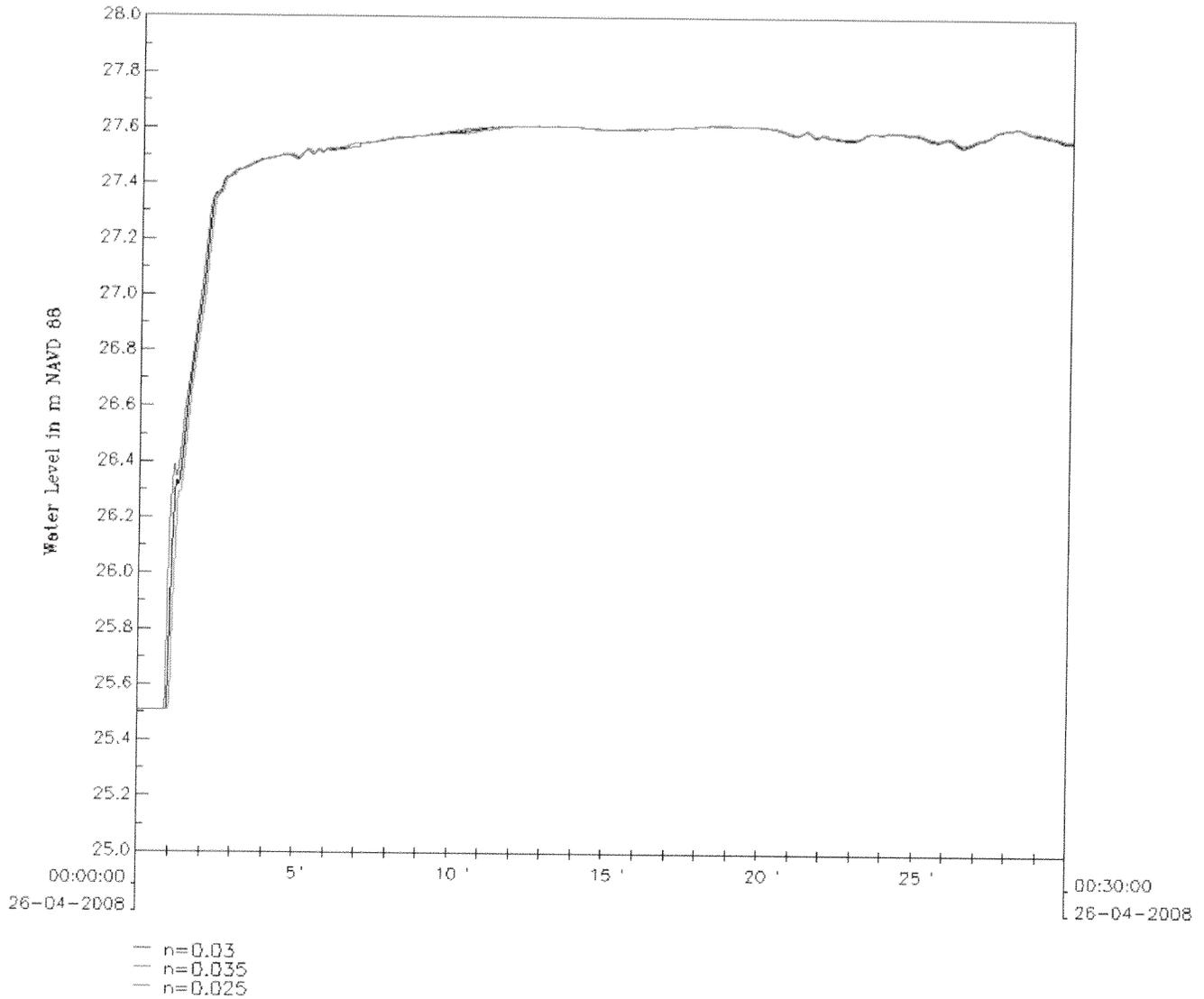


Figure 1. Time History of Water Level at the Southwestern Corner of the Security Wall for Manning's  $n$  Sensitivity Test (The water level for  $n=0.03$  is the same as SSAR Figure 2.4.4-21, and the starting time is arbitrarily selected.)

**Associated ESPA Revisions:**

In response to this RAI, the first paragraph of SSAR Subsection 2.4.4.2.2.5 (page 2.4.4-11), Revision 0 will be revised as follows:

The surface roughness in the model was represented by Manning's  $n$  values. Based on the suggested values in Reference 2.4.4-14, Manning's  $n$  was specified as 0.030 uniformly in the two principal directions (east-west and north-south) throughout the model domain. ~~This value corresponds to pasture flood plains with no brush but short grasses, which are representative of the VCS site. The selected Manning's  $n$  corresponds to flood plain type of terrains occupied by pastures with short grasses, comparable to the general characteristics of the existing conditions at the power block area and vicinity. After construction, the ground between the CB and the power block would consist of paved areas, such as parking lots (see SSAR Figure 1.2-2), and gravel/grass covered areas, with lower surface roughness. For example, the suggested Manning's  $n$  values range from 0.013 to 0.016 for asphalt lined channels and 0.022 to 0.033 for engineered channels with gravel and grass covers (SSAR Reference 2.4.4-14). To address the differences in the surface roughness and potential impact on flow resistance, a sensitivity analysis was performed to evaluate the effect of the Manning's  $n$  on the flood level at the power block area. Manning's  $n$  values of 0.025 and 0.035, which correspond to the minimum and maximum values of the suggested roughness of the existing terrain, were tested and the results show that the flood water levels at the power block area are not sensitive to the Manning's  $n$  values. However, Manning's  $n$  values of 0.025 and 0.035 were also evaluated as part of the sensitivity testing. The results show that for the range of the Manning's  $n$  values evaluated, the flood levels are not sensitive to the Manning's  $n$  value.~~

In response to this RAI, the first paragraph of SSAR Subsection 2.4.4.2.2.4 (page 2.4.4-11), Revision 0 will be revised as follows:

The breach model used to study the flood elevations considered ~~sed~~ that the cooling basin would be initially filled to elevation 93.9 feet (28.6 meters) NAVD 88, which corresponds to the one-half PMP condition ~~on top of the normal maximum operating water level of 91.5 feet NAVD 88 in the cooling basin (Subsection 2.4.8). The one-half PMP is selected based on the guideline provided in ANSI/ANS-2.8-1992 (Reference 2.4.4-3) for combined-events criteria for the evaluation of flooding due to failure of water impounding embankments. The one-half PMP is routed through the CB by conservatively assuming that the starting water level is the normal maximum operating water level of 91.5 feet (27.9 meters) NAVD 88. In addition, it is assumed that all the emergency spillway gates are closed or not in service. The maximum water level of 93.9 feet (28.6 meters) NAVD 88 obtained from the routing process is specified as the initial water level of the CB for the breach model.~~

Three initial, downstream flood levels were considered as part of a sensitivity analysis: (1) elevation 82.0 feet (25.0 meters), (2) elevation 84.0 feet (25.6 meters), and (3) dry conditions. The sensitivity analysis concluded that the maximum flood level at the power block area is not sensitive to the initial downstream flood levels.

**RAI 13.03-20:****Question:**

13.03-20

SITE-1: Assignment of Primary Responsibilities for Emergency Response

[Basis: NUREG-0654/FEMA-REP-1, Evaluation Criterion A.1.a, 10 CFR 50, Appendix E.IV.A.8, A.1.b, A.1.c, A.3]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2.

- RAI A-1. The National Response Plan (NRP) was changed to the National Response Framework (NRF). Explain the continued reference to the NRP throughout the Emergency Plan, or update the Emergency Plan to refer to the NRF or justify why this is not necessary.
- RAI A-2. In the Emergency Plan, identify the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, or justify why this is not necessary.
- RAI A-3. In Section A.1 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Concept of Operations," the NRC is described as the lead Federal agency with regards to technical matters and the Chairman is identified as the senior NRC authority who shall transfer control of emergency response activities to the Director of Site Operations when deemed appropriate.
- A. Clarify that the NRC Chairman may transfer selected authority to the Site Team Director rather than 'shall' transfer authority.
  - B. Change the reference to the Director of Site Operations to read Site Team Director.
- RAI A-4. Section A.1 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Concept of Operations," describes NRC responsibilities to include recommending adequate protective actions to State and local authorities. In the Emergency Plan, clarify the NRC's responsibilities to indicate that NRC develops an independent assessment of the PAR and reviews the licensee's PAR, but only makes a recommendation to State or local officials if requested to do so by these agencies.
- RAI A-5. Section A.1 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Concept of Operations," describes FEMA as having the responsibility for coordinating the overall Federal response. In the Emergency Plan, discuss the role of FEMA with regard to the Department of Homeland Security (DHS), and describe the DHS role as the Coordinating Agency under the National Response Framework (NRF) if an event is classified as a General Emergency.
- RAI A-6. In the Emergency Plan or Annex, identify the county agencies and their roles and responsibilities as part of the ERO, or justify why this is not necessary.

- RAI A-7. Include the Department of Homeland Security (DHS) in Figure A-2 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Agency Response Organization Interrelationships" or justify why this is not necessary.
- RAI A-8. Section A.3 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Agreements in Planning Effort," explains that written agreements have been developed that establish the concept of operations between the applicant and other support organizations having an emergency response role. Provide copies of the Letters of Agreement established with local support agencies in the Emergency Plan or Annex, or describe where these documents are maintained.

**Response:**

- RAI A-1 Section 1.1 of the VCS Annex has been revised to include information describing the National Response Framework.
- RAI A-2: Section 1.3 of the VCS Annex has been revised to include information to identify the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions.
- RAI A-3: Section 1.1 of the VCS Annex was revised to address the interface between the Chairman of the Commission and the Site Team Director to read, "During an incident, the Chairman of the Commission is the senior NRC authority for all aspects of a response. The Chairman may transfer control of emergency response activities to the Site Team Director when deemed appropriate by the Chairman."
- RAI A-4: Section 1.1 of the VCS Annex was revised to state, "The NRC shall be prepared through an independent assessment to recommend appropriate protective actions for the public and technical actions to the licensee. For Protective Action Recommendations (PAR), the NRC reviews the licensee's PAR, but only makes a recommendation to State or local officials if requested to do so by these agencies. FEMA shall act as the lead Federal agency for offsite, non-technical concerns."
- RAI A-5 Section 1.1 of the VCS Annex was revised to include the following statement: "The Department of Homeland Security under Homeland Security Presidential Directive 5 assumes the incident management responsibilities if the event is classified as a General Emergency."
- RAI A-6 Section V of the respective County Emergency Plans describe responsibilities for emergency response. To summarize this, Section 1.3 of the VCS Annex has been revised to state: "Each county agency has a responsibility as outlined in the County Emergency Plan. An example of those responsibilities includes; Command and Control is the responsibility of the County Judge or their designee; communications, warning and

notifications are the responsibility of the Sheriff; public health and sanitation is the responsibility of the county health official; fire protection and rescue is assigned to the fire chief.”

- RAI A-7      Figure A-1 in the VCS Annex has been revised to replace FEMA with DHS/EPR/FEMA.
- RAI A-8      The Letters of Agreement obtained during the development of this Annex are provided in Attachment 18.
- Victoria Fire and Rescue – fire protection and ambulance response.
  - The Victoria County Sheriff's Office – law enforcement.
  - Citizens Medical Center – medical services.
  - DeTar Hospital Navarro – back-up medical services
  - Victoria County – EOF and JIC location
  - Crossroads Chapter Red Cross – congregate care facilities.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-21:****Question:**

13.03-21

SITE-2: On-Site Emergency Organization

[Basis: NUREG-0654/FEMA-REP-1, Evaluation Criterion B.7]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2.

RAI B-2. Section B, "Exelon Nuclear Emergency Response Organization," of the Exelon Nuclear Standardized Radiological Emergency Plan states that Table B-1, "Minimum Staffing Requirements for the Exelon ERO," provides an outline of the minimum staffing requirements for emergencies, including on-shift and augmentation. Guidance in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants," details minimum requirements for on-shift and augmentation staffing for emergency response. Address the following questions regarding Table B-1:

- A. Augmentation staffing times in Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan are indicated as 60 minutes versus 30 minutes and 60 minutes as stated in NUREG-0654/FEMA-REP-1. Provide augmentation staffing times consistent with NUREG-0654/FEMA-REP-1 or explain why 30 minute staffing times are not necessary.
- B. Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan identifies several minimum staffing positions with footnotes indicating that these positions may be performed by shift personnel assigned other functions. For each of the following positions, identify specifically which on-shift personnel will be assigned the associated functions (e.g., Chemistry personnel performing First Aid activities) and provide a discussion of their respective collateral duties, including their ability to perform multiple roles with potentially competing priorities during an emergency situation:
  - i. Shift Emergency Director
  - ii. Offsite Dose Assessment Station Personnel
  - iii. Mechanical Maintenance/RadWaste Operator
  - iv. Electrical/I&C Maintenance
  - v. Radiation Protection Personnel (Protective Actions In-Plant)
  - vi. First Aid and Rescue Operations Plant Personnel

- C. Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan identifies the minimum shift staffing for Fire Fighting as consisting of 5 personnel per the FSAR. Provide a discussion regarding the specific team makeup of the fire brigade. Discuss how the fire brigade, with on-shift staffing, will be able to perform collateral duties if an emergency situation were to arise that warranted activation of the emergency response organization and fire brigade simultaneously.

The Table 2.1 provides a note (i) in the On Shift column under Fire Fighting. Note (i) has been revised to state, " (i) Fire Brigade per UFSAR / TRM, as applicable when developed for the COLA."

- D. Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan identifies the Emergency Communicator function as being filled by plant shift personnel. Discuss who specifically will assume this function in the event of an emergency, including collateral duties and potentially competing priorities.

2.1.1 Shift Communicator

The Shift Communicator performs notifications to the State and County organizations until relieved by the TSC and assists in the initiation of the ERO Callout System as directed. This position is filled by the shift clerk who performs the duties upon approval of the information by the Shift Emergency Director.

- E. Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan identifies the Offsite Dose Assessment function as being filled by station personnel. Discuss who specifically will assume this function in the event of an emergency, including collateral duties and potentially competing priorities.

2.1.2 Shift Dose Assessment

The on-shift dose assessment function will be performed by a shift Radiation Protection Technician (RPT) at Victoria County Station.

- F. Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan identifies the First Aid and Rescue Operations function as being filled by plant personnel. Discuss who specifically will assume this function in the event of an emergency, including collateral duties and potentially competing priorities.

2.1.9 First Aid and Rescue Operations Personnel

On-shift maintenance personnel, chemistry personnel, plant equipment operators, and radiation protection technicians are trained in basic first aid and are able to support offsite agencies in rescue activities.

**Response:**

RAI B-2 A: Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan contains standard information for the Exelon fleet. Part 1 / Section A "Purpose" of the standard E-plan states that the "Station Annexes contain information and guidance that is unique to the station", which includes deviations from the E-Plan. The Victoria County Station Annex, Table VCS 2.1 has been revised to provide response personnel with augmentation times of 30 minutes and 60 minutes to address those positions as stated in NUREG-0654/FEMA-REP-1. There are eleven (11) 30 minute responders designated and thirty one (31) 60 minute responders designated.

RAI B-2 B: Section 2.1 of the VCS Annex has been updated to identify which on-shift personnel will be assigned the associated functions. Emergency response responsibilities will typically take precedence over any collateral duties, and such direction will be provided by the Emergency Director based upon plant conditions. The site staffing plan will be developed at the COL stage, and will assure adequate staffing for all plant operations, e.g. normal and emergency response. Emergency drills will confirm the developed ER staffing plans.

RAI B-2 C: Table B-1 of the Exelon Nuclear Standardized Radiological Emergency Plan contains standard information for the Exelon fleet. Part 1 / Section A "Purpose" of the standard E-plan states that the "Station Annexes contain information and guidance that is unique to the station", which includes deviations from the E-Plan. The FSAR / Technical Requirements Manual (TRM) for VCS have not been developed at the ESP stage, thus Fire Brigade staffing has not been determined. This evaluation will be completed at the COL stage.

VCS Annex Table VCS 2.1 was revised to provide a note (i) in the On Shift column under Fire Fighting. Note (i) has been revised to state, " (i) Fire Brigade per UFSAR / TRM, as applicable when developed for the COLA."

RAI B-2 D: 2.1.3 Shift Communicator

The Shift Communicator performs notifications to the State and County organizations until relieved by the TSC and assists in the initiation of the ERO Callout System as directed. This position is filled by the shift clerk when that position is staffed. When the shift clerk position is not available, any available on-shift personnel (e.g. equipment operator) may be used to fill this function. The Shift Communicator performs all communication upon approval of the information by the Shift Emergency Director.

RAI B-2 E: 2.1.2 Shift Dose Assessment

The on-shift dose assessment function will be performed by a shift Radiation Protection Technician (RPT) at Victoria County Station. The Shift Dose Assessor is available to assist with radiological survey functions unless dose assessment activities are required.

RAI B-2 F: 2.1.9 First Aid and Rescue Operations Personnel

On-shift maintenance personnel, chemistry technicians, plant equipment operators, and radiation protection technicians are trained in Red Cross First Aid/CPR/AED or equivalent and are able to support offsite agencies in rescue activities.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-22:**

**Question:**

SITE-3: Emergency Response Support and Resources

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion C.1.a (1 of 3), Criterion C.1.b (2 of 3), 10 CFR 50, Appendix E, IV.A.7.]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2.

RAI C-1. In the Emergency Plan, identify the specific persons, by title, authorized to request Federal assistance, or justify why this is not necessary.

**Response:**

RAI C-1: The position that is authorized to request federal assistance for Victoria County Station is the Emergency Director (ED). There are three positions designated as ED: the Shift ED, the Station ED, and the Corporate ED. The authority to request federal assistance transfers to the appropriate ED during the formal turnover of command and control during the emergency response.

VCS Annex section 2.1.1 has been revised to describe this responsibility.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-23:****Question:**

SITE-5: Notification Methods and Procedures

[Basis: 10 CFR 50, Appendix E.IV.D.1, NUREG-0654/FEMA-REP-1; Evaluation Criterion E.4, NUREG-0654/FEMA-REP-1; Evaluation Criterion E.6.]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirement A, B, D, F; Acceptance Criterion 1, 2, 6.

- RAI E-1. In the Emergency Plan, identify the appropriate State and local government officials, by title and agency, who will be notified of an emergency within the Ingestion Pathway EPZ, or justify why this is not necessary.
- RAI E-2. Explain in the Emergency Plan whether follow up messages contain information on the location, date, and time of incident; class of emergency; type of actual or projected release; estimate of quantity of radioactive material release or being released; chemical and physical form of released material; meteorological conditions, actual or projected dose rates, projected dose rate and integrated dose rate at the projected peak and at 2, 5, and 10 miles; estimate of any surface radioactive contamination in-plant, onsite or offsite; licensee emergency response actions underway; recommended emergency actions, including protective measures; request for any needed onsite support by offsite organizations; and prognosis for worsening or termination of event.
- RAI E-3. In the Emergency Plan, provide the time required for notifying and providing prompt instructions to the public within the plume exposure pathway EPZ, or justify why this is not necessary.

**Response:**

- RAI E-1: Section 4.1 of the VCS Annex has been revised to state that VCS will notify the Texas Governor's Division of Emergency Management (GDEM) at the State Operations Center (SOC) in Austin of an emergency within the Ingestion Pathway EPZ. The State of Texas has the responsibility for the notifications of counties and other agencies, other than the NRC through the State Warning Point. In the State of Texas Emergency Management Plan, Annex A, Warning, Section IV.B.1.a it states,

"State Warning Point (SWP): Located in the State Operations Center (SOC) in Austin. This facility is operated 24 hours a day by Governor's Division of Emergency Management (GDEM) personnel and is equipped with a variety of primary, alternate, and redundant telecommunications systems. The facility receives warning information and incident reports from a variety of sources to include federal, state, and local agencies; commercial transportation, utility, and petro-chemical companies; the media, and the general public. The SWP is primarily responsible for dissemination of warning information and instructions to Area Warning Centers and for providing emergency notification to headquarters-level Emergency Management Council member agencies. The SWP also provides information to the EAS for dissemination to the public. Based on urgency and level of potential risk, warning information and instructions are also delivered directly to affected Local Warning Points operated by local governments."

RAI E-2: The VCS Annex has been revised to include new section 6.1 for Notifications. This section contains direction for follow-up notifications, which will include the following topics:

- Location, date, and time of incident;
- Class of emergency;
- Type of actual or projected release;
- Estimate of quantity of radioactive material release or being released and chemical / physical form of released material;
- Meteorological conditions,
- Actual or projected dose rates,
- Projected dose rate and integrated dose rate at the projected peak and at 2, 5, and 10 miles;
- Estimate of any surface radioactive contamination in-plant, onsite or offsite;
- Licensee emergency response actions underway;
- Recommended emergency actions, including protective measures;
- Request for any needed onsite support by offsite organizations; and
- Prognosis for worsening or termination of event.

RAI E-3 This information is not included in the VCS Emergency plan as it is the responsibility of the local government to disseminate warning/notification to the public (within 15 minutes) after the issuance of or change to a Protective Action Recommendation (PAR) for the general public. This information resides in the Exelon Standardized Radiological Emergency Plan, the State of Texas Emergency Plan and the county emergency plans for the VCS EPZ counties.

Per the Exelon Standardized Radiological Emergency Plan, State / Local notifications are made per Section E.2.b.1) "State/Local Agencies: A notification shall be made within fifteen (15) minutes of: The issuance of or change to a Protective Action Recommendation (PAR) for the general public."

The State of Texas Emergency Plan Annex D, Fixed Nuclear Facility Accident Response under Tab 1 Section VII.F.1 it states, "LOCAL GOVERNMENT - Under the State of Texas Emergency Management Plan, local government is responsible for emergency management within their local jurisdictions. Specific to this plan local government will:

1. Disseminate warning/notification to the public.

In the EPZ counties Annex W, Fixed Nuclear Facilities Response under Section V.C.2 it states: "Disseminate notification to the public in timely manner (approximately 15 minutes) of the decision to recommend protective actions by the County Judge. The primary source of notification of emergency classification is VCS.

No change or addition to the VCS Emergency Plan is required.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-24:****Question:**

SITE-6 Emergency Communications

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion F.1, F.2, Generic Letter 91-14, "Emergency Communications"]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A, B and F;

Acceptance Criteria 1, 2, 6, 12, 23, 29, 30

RAI F-1. Section F.1 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Communications/Notifications," describes the Nuclear Accident Reporting System (NARS) as the dedicated communications system for notifying State and county authorities of emergencies. The applicant proposed ITAAC 3.1.3 to demonstrate communications between the TSC, State of Texas, Victoria County, Refugio County, and Goliad County, via the Operational Hotline. Explain whether the NARS or Operational Hotline is the primary communication system between the applicant and offsite State and local emergency operations centers. Additionally, provide a description of the Operational Hotline in the Emergency Plan.

RAI F-2. Discuss whether the Reactor Safety Counterpart Link, Protective Measures Counterpart Link, Management Counterpart Link, and Local Area Network will be established.

RAI F-3. Describe the guaranteed power, or backup power, available for the emergency communications equipment, or justify why this is not necessary.

RAI F-4. Section F.1.8 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Emergency Response Data System (ERDS)," describes ERDS and its activation. Describe the testing frequency of ERDS and include this information in the Emergency Plan.

**Response:**

RAI F-1: There is no "Operational Hotline" in the Standard E-Plan. The Nuclear Accident Reporting System (NARS) is the dedicated communication system for notification of the offsite authorities. No change or addition to the VCS Emergency Plan is required. ITAAC 3.1.3 in SSAR Section 13.3 will be revised to list NARS as the dedicated offsite notification system.

RAI F-2: Company tie lines are utilized to route NRC communications (e.g., ENS, HPN and counterpart circuits) between Exelon Nuclear emergency response facilities and existing plants. The counterpart circuits include: Reactor Safety Counterpart Link, Protective Measures Counterpart Link, Management Counterpart Link, and Local Area Network. These same counterpart circuits will be established for the Victoria County Station.

The VCS Emergency Plan will include the following statement in Section 5.5.1, "Company tie lines are utilized to route NRC communications (e.g., ENS, HPN and counterpart circuits) from between Exelon Nuclear emergency response facilities for Victoria County Station."

RAI F-3: Back-up power will be available for the communications equipment at VCS. VCS Emergency Plan Section 5.5.1 is revised to include the following information: "VCS will have direct offsite Commercial Phone system lines in each ERF, which will be supplied by phone company backup power. PBX power supplies will support in-plant lines in each onsite ERF as follows: reliable offsite power circuits, backup onsite power supplies (e.g. diesel generators) and backup battery power for 8 hours. In-plant emergency circuits will also be on the PBX and have an additional 8 hour battery backup. Offsite emergency circuits will be carried by both dedicated T-1 lines and commercial business phone systems. The EOF and JIC will be provided with communications back-up power through an onsite diesel generator. The Commercial Phone system circuits will have the same backup power as other such circuits

RAI F-4: The NRC ERDS system, which currently utilizes dial up telephone modems, is being replaced by an Internet based system (see NRC RIS 2009-13, Emergency Response Data System Upgrade from Modem to Virtual Private Network Appliance, ML091350153).

At this time the level of plant design information is not detailed enough to identify the type of equipment used to transmit ERDS data or its specific location. Detailed plant design information will be provided at the COL stage. When installed, the Victoria County Station equipment used to provide plant data to the ERDS will comply with all applicable regulations for primary and backup power. Testing of ERDS will be in accordance with approved procedures that are compliant with ERDS testing requirements or guidelines provided by the NRC. No change to the VCS Emergency Plan is required.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

SSAR ITAAC Table 13.3-1 will be revised to list NARS as the dedicated offsite notification system in a future revision of the ESPA.

**RAI 13.03-25:****Question:**

SITE 8: Emergency Facilities and Equipment

[Basis: NUREG-0737 (8.2.1.b, 8.2.1.e, 8.2.1.f, 8.2.1.h, 8.2.1.k, 8.4.1.a, 8.4.1.c, 8.4.1.e, 8.4.1.g, 8.4.1.j, 8.4.1.k, 8.4.1.i), NUREG-0654/FEMA-REP-1; Evaluation Criterion H.5, H.6]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1, 2, 4, 5, 12, 25, and 26

RAI H-1. Discuss in the Emergency Plan whether the TSC will be within a 2 minute walk of the Control Rooms for Units 1 and 2, or justify why this is not necessary.

RAI H-2. Describe in the Emergency Plan, the environmental control system serving the TSC and explain whether it provides room air temperature, humidity and cleanliness appropriate for personnel and equipment.

RAI H-3. Section H.1.b of the Exelon Nuclear Standardized Radiological Emergency Plan, "Technical Support Center (TSC)," states that personnel in the TSC shall be protected from radiological hazards, including both direct radiation and airborne radioactive contaminants during accident conditions. Describe in the Emergency Plan the process to ensure exposure to any person in the TSC would not exceed 5 rem whole body, or its equivalent to any part of the body, for the accident duration.

RAI H-4.

A. Section H.5.c.2 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Safety Parameter Display (SPDS) & Plant Parameter Display (PPDS) Systems," states that these systems provide a display of plant parameters in the Control Room, TSC and EOF. In the Emergency Plan or Annex, discuss the plant parameter variables of the SPDS and explain whether they are based on the guidance in Regulatory Guide 1.97, or justify why this is not necessary.

B. Discuss whether the indicators and circuitry that provide the TSC and EOF data are of a reliable design, or justify why this is not necessary.

RAI H-5. Section 5.2, "Assessment Resources," of the Victoria Annex, provides a summary of the Onsite Radiation Monitoring and Process Monitor Equipment, Onsite Fire Detection Instrumentation, Facilities and Equipment for Offsite Monitoring, and Site Hydrological Characteristics, and references Chapter 7, "Instrumentation and Control Systems" and Chapter 12, "Radiation Protection," of the FSAR.

A. Describe the details of the monitoring systems that provide appropriate Table 1 or 2 data identified in Regulatory Guide 1.97 (Rev. 2).

B. Provide the referenced FSAR Chapters 7 and 12 that describe the details of the monitoring systems.

RAI H-6. Section 5.1.4, "Emergency Operations Facility," of the Victoria Annex, states that the VCS Emergency Operations Facility (EOF) is of sufficient size to

accommodate about 50 people including NRC representatives. Explain how the minimum size of 2625 square feet (identified in ITAAC 5.2.1) for the EOF meets NUREG-0696 guidance which requires 75 square feet per person.

RAI H-8. Describe the security provided for the EOF when it is activated and when it is idle, or justify why this is not necessary.

RAI H-9. Section H.4, "Activation," states that response times will vary due to weather and traffic, and a goal of 60 minutes for minimum staffing following declaration of an Alert or higher has been established, with a goal of activation within 15 minutes of achieving minimum staffing. Discuss in the Emergency Plan how the 60 minute augmentation time goal for EOF staffing meets the goals of 30 and 60 minutes in Table 2 NUREG-0737, Supplement 1.

RAI H-10. Section H.6, "Monitoring Equipment Offsite," states that the plant has contracted with a company to conduct an extensive offsite environmental monitoring program to provide data on radiation in the environment. Provide a letter of agreement in the Emergency Plan, describe where such a letter is maintained, or demonstrate a contract is in place to support the offsite monitoring program. Document maintenance of this contract. Describe the availability of this contracted service during a response to an emergency regarding support of ERO functions.

**Response:**

RAI H-1: VCS will utilize a common TSC for responding to emergencies declared at an Alert of higher classification. At the discretion of the Shift Emergency Director, it can be activated at a Notification of Unusual Event (NOUE). The TSC will be equipped with state-of-the-art voice and data communications in support of the Control Room activities. These communication capabilities will provide the necessary support to meet the needs of the Control Room without requiring a transit time of within 2 minutes. No change to the VCS Emergency Plan is required.

RAI H-2: Section 5.1.2 of the VCS Emergency Plan has been revised to state, "The TSC will meet all habitability requirements outlined in NUREG-0737, Supplement 1, Section 8.2."

RAI H-3: Section 5.1.2 of the VCS Emergency Plan has been revised to include: "In addition, the TSC will be equipped with area radiation monitors (ARMs) that will be monitored for radiological conditions in the facility. The exposure of the TSC personnel will be monitored to ensure that personnel do not exceed 5 rem whole body, or its equivalent to any part of the body, for the accident duration without authorization by the Emergency Director. In the event that the exposure level is elevated, personnel may be relocated to another facility to support the technical response to the emergency."

RAI H-4A: Section 5.2.7 of the VCS Emergency Plan has been added to include: "Safety Parameter Display System (SPDS) and Plant Parameter Display (PPDS) – In accordance with the Exelon Standardized Radiological Emergency Plan, SPDS and PPDS will be displayed in the Control Room, TSC and EOF. The plant parameter variables will include, at a minimum, the requirements of NUREG 0737 Supplement 1, section 4.1.f. These systems will meet the guidance in Regulatory Guide 1.97. The indicators and the circuitry for these systems will be of reliable design to provide data to the TSC and EOF."

The actual variables selected for the SPDS and PPDS will be in compliance with the approved version of Regulatory Guide 1.97 in place at the COL stage.

RAI H-4B: As stated above Section 5.2.7 has been added to discuss SPDS and PPDS. In addition, Section 5.1.2 for the Technical Support Center (TSC) of the VCS Annex has been revised to include: "The indicators and circuitry that provide the TSC data will be of a reliable design and meet the guidance provided in the appropriate revision of Regulatory Guide 1.97."

Section 5.1.4 Emergency Operations Facility (EOF) has also been revised to include: "The indicators and circuitry that provide the EOF data will be of a reliable design and meet the guidance provided in the appropriate revision of Regulatory Guide 1.97."

The actual design will be in compliance with the approved version of Regulatory Guide 1.97 in place at the COL stage.

RAI H-5A&B An ESP application includes the Site Safety Analysis Report (SSAR). The SSAR does not include plant design information, so there are no FSAR chapters 7 or 12 at the ESP stage. Additionally, a reactor design technology has not been selected for the VCS site. Section 5.2.2 of the VCS Emergency Plan has been revised to remove information and references to the FSAR. In lieu of those references and associated information, the following information has been inserted: "Information regarding onsite radiation monitoring and process monitoring equipment will be provided at the COL stage."

The monitoring systems will be in compliance with the approved version of Regulatory Guide 1.97 in place at the COL stage.

RAI H-6: The proposed location of the VCS EOF is the Victoria County Annex Building, which is located at 205 N. Bridge Street in Victoria, TX. That location has approximately 5000 ft<sup>2</sup> of working area for the EOF and Joint Information Center (JIC) as stated in the Victoria County Letter of Agreement dated August 1, 2008. That is sufficient space to meet the criteria of NUREG-0696 of 75 ft<sup>2</sup> per person. It has been determined that the ITAAC submitted was incorrect with the estimated square footage of 2625 ft<sup>2</sup>. This ITAAC was corrected as part of Exelon submittal letter

NP-11-0011, dated April 12, 2011 that addressed RAIs related to EP ITAAC. The Letters of Agreement are submitted with the response to RAI 13.03-20 A-8 and included in Attachment 18. No change to the VCS Emergency Plan is required.

- RAI H-8: The EOF security is provided by the EOF Access Coordinator as discussed in the VCS Annex Section 2.3. It states "An EOF Access Controller has been added to the Full Augmentation complement to support existing facility access control measures." In addition, Section 5.1.4 of the VCS Annex has been revised to include: "The EOF will be secured while idle with a locking mechanism on each entry and exit point for the facility. While activated, the EOF security will be provided by the Security Coordinator in the EOF."
- RAI H-9 The second paragraph of Section 2 of the VCS Annex addresses minimum staffing goals for the station emergency response facilities and the EOF. This section has been revised to include: "At VCS a goal of 30 minute and 60 minutes for minimum staffing has been established for the ERO personnel responding to the station emergency facilities and the EOF following notification of the declaration of an Alert or higher classification. This is illustrated in VCS Annex, Table VCS 2.1.

RAI H-10: As stated in Section H.6.b of the Exelon Standardized Radiological Emergency Plan Exelon has a contract with a company to conduct an extensive environmental monitoring program. This contract is a "blanket" contract (Contract #35) for all Exelon sites with Environmental Incorporated of Chicago, Illinois for the Radiological Environmental Monitoring Program (REMP). This contract will be revised to include the VCS site at the COL stage. Environmental monitoring during a declared emergency will be provided by VCS personnel assigned those duties as members of the VCS ERO. No change to the VCS Emergency Plan is required.

**Associated EPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-26:**

**Question:**

SITE-9: Accident Assessment

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion I.2, I.4, I.5, I.8.]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirement A; Acceptance Criteria 1, 4, 5, 25, and 27

- RAI I-1. Explain whether a Post-accident Sampling System (PASS) or capability is provided, and describe the PASS or capability in the emergency plan as appropriate.
- RAI I-2. In the Emergency Plan, provide the estimated deployment time for field teams, or justify why this is not necessary.

**Response:**

RAI I-1: VCS Annex, Section 5.2.3 has been added to provide the following information concerning the Post-accident Sampling capability. "The onsite laboratory sampling system is designed to provide gas and liquid samples of the containment atmosphere following an accident. Chemistry personnel supporting the ERO will conduct analysis on these samples and provide the results to the TSC staff for evaluation. Additional detailed design information will be provided at the COL stage."

RAI I-2: VCS Annex, Table VCS 2.1 - Functional Area 4 Radiological Accident Assessment and Support of Operational Accident Assessment, provides for two (2) Off-site Field Team Personnel to respond to the EOF within 30 minutes of notification. Upon their arrival in the EOF, the team will contact the activated facility where the Emergency Director (ED) is located (Control Room for the Shift Emergency Director; the TSC for the Station Emergency Director; or the EOF for the Corporate Emergency Director) and support the needs of the ED. Based on the need for off-site monitoring, a briefing will be provided and the team will be deployed within 30-60 minutes after initial contact with the ED.

VCS Annex Section 2.3 is added to state that field teams are deployed as needed to conduct environmental monitoring with a goal of 30-60 minutes upon arrival in the EOF.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-27:****Question:**

SITE-10: Protective Response

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion J.1, J.2, J.3, J.4, J.5, J.10.A, J.10.m]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2

- RAI J-1. Section 4.4, "Protective Actions for Onsite Personnel," of the Victoria Annex states that Figure 9, "Evacuation Map and Routes," from the IEM evacuation time estimate study identifies the evacuation routes. Figure 9 of the IEM study is called "VCS Sector and Ring Transient Populations Map." Revise the Annex to clarify the apparent discrepancy.
- RAI J-2. Section J.3 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Radiological Monitoring of Evacuees," states that personnel evacuating the site will be monitored for contamination using portal monitors or will be sent to offsite monitoring locations if needed. Describe in the Emergency Plan or Annex the offsite monitoring locations.
- RAI J-3. Section J.3 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Radiological Monitoring of Evacuees," states that personnel evacuating the site will be monitored for contamination using portal monitors as they exit the Protected Areas, monitored with friskers in assembly areas, or will be sent to offsite monitoring locations if needed. In the Emergency Plan, discuss whether decontamination capabilities are provided near the personnel monitoring points.
- RAI J-4. Provide a map in the Emergency Plan that identifies the preselected radiological sampling and monitoring points, or justify why this is not necessary.
- RAI J-5. Figure 4-1, "Victoria County Station PAR Determination Flowchart," of the Victoria Annex provides the steps considered in making the PAR determination. Explain in the Annex how the Evacuation Time Estimate is used in conjunction with PARS to develop the evacuation plan or justify why this is not necessary.

**Response:**

- RAI J-1: VCS Annex, Section 4.4 has been revised to refer to Figure 12, "Evacuation Map and Route" from the IEM Evacuation Time Estimate (ETE) study.
- RAI J-2: VCS Annex, Section 4.4 provides the following information regarding the radiological monitoring of evacuees as follows: "If a site evacuation of non-essential personnel is required by Section J of the Exelon Nuclear Standardized Emergency Plan, personnel will be either relocated and monitored at the relocation centers or sent home if there is no release or radiological/safety concerns. The designated relocation center for VCS is the Victory County Reception Center located at 2905 East North Street, Victoria, Texas."

RAI J-3: VCS Annex, Section 5.4 states: "VCS has an in-plant first aid/decontamination room. This room is provided with a sink, a shower, and a supply cabinet. First aid kits, stretchers, sinks, eyewashes, and emergency showers have been placed in strategic locations throughout the station." In addition, the VCS Annex Section 4.4 also states: "Equipment and personnel would be available at the relocation center for monitoring, decontamination and bioassay of evacuated personnel."

RAI J-4: Radiological sampling and monitoring locations during an emergency are determined by the Dose Assessment Coordinator in the EOF, or by the individual filling the role of Emergency Director at the time of dispatch and in accordance with the appropriate Emergency Preparedness Implementing Procedure. This provides the ERO an opportunity to track the plume by surveying and finding the edge and center line without the constraints of fixed sampling locations that may or may not be on the edge or on the centerline of the plume for monitoring purposes.

RAI J-5: NUREG-0654, Supplement 3 provides guidance on the issuing of Protective Action Recommendations (PARs) for the general public. Unless determined by Exelon during a declared General Emergency that the release of radioactive material is a "puff release" the ETE will not be considered when making protective action recommendations. The Plant operators may not have information regarding the environmental concerns regarding the off-site areas surrounding the site. The county or state officials will take into consideration the ETE for the current environmental conditions and make a decision to utilize the VCS PARs or to modify them based on additional information that they have concerning the evacuation routes.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-28:****Question:**

SITE-11: Radiological Exposure Control

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion K.1, K.2, K.3.b]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2

- RAI K-1. Describe in the Emergency Plan the Emergency Exposure Guidelines for emergency workers for removal of injured persons, undertaking corrective actions, performing assessment actions, providing first aid, performing personnel decontamination, providing ambulance service, and providing medical treatment services.
- RAI K-2. Address in the Emergency Plan the radiation protection program procedure(s) that would be implemented during emergency conditions, including those that would govern expeditious decision-making to allow volunteers to receive doses in excess of routine limits during emergencies.
- RAI K-3. Section K.3, "Personnel Monitoring," states that emergency worker dose records are maintained by the Radiation Protection Managers in accordance with emergency and radiological protection procedures. Since power supply to the TSC is not addressed in the Emergency Plan:
- A. Provide information in the Emergency Plan or Annex on the capability to access to personnel dose records during an emergency when off-normal accident conditions, such as loss of AC power, computer network failure or high background dose rates, prevents access to a primary records computer system.
  - B. Describe how doses received by emergency workers are recorded and under what conditions would they be treated as planned special exposures resulting in a once-in-a-lifetime exposure, as discussed in 10 CFR 20.1201(a).

**Response:**

- RAI K-1: The Emergency Exposure Guidelines listed in Section K.1 of the Exelon Standardized Radiological Emergency Plan (shown below) provide the Emergency Worker Dose Limits as approved by the Station Emergency Director. All activities including removal of injured persons, undertaking corrective actions, performing assessment actions, providing first aid, performing personnel decontamination, providing ambulance service, and providing medical treatment services are limited to no greater than 5 Rem TEDE unless activities fall into one of the other three categories listed in the Table below for: (1) Protecting valuable property (5-10 Rem TEDE); (2) Lifesaving or protection of large populations (10-25 Rem TEDE); or (3) Lifesaving or protection of large populations (>25 Rem TEDE) and only volunteers that are fully aware of the risks involved are utilized.

Dose Limit (Rem TEDE)	Activity	Condition
0-5	All	Personnel should be kept within normal 10 CFR 20 limits during bona fide emergencies, except as authorized for activities as indicated below.
5-10	Protecting valuable property	Lower dose not practicable.
10-25	Lifesaving or protection of large populations	Lower dose not practicable.
> 25	Lifesaving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

RAI K-2: Exelon Procedure EP-AA-113 Personnel Protective Actions provides guidance for the ERO for expeditious decision making for emergency exposures. These procedures are standard Emergency Preparedness Implementing Procedures and are considered a part of the Emergency Plan and are governed by the 10 CFR 50.54(q) process to ensure their effectiveness is not reduced.

RAI K-3A: VCS Annex, Section 5.1.2 is revised to describe that the TSC will have reliable backup power available to it in the event of a loss of offsite power through both an UPS and diesel power source. Therefore, dosimetry records are available during an emergency. In the event that the TSC is uninhabitable, the Control Room or the EOF will have the capability to access dosimetry records during an emergency.

RAI K-3B: Exelon Procedure EP-AA-113 provides guidance on the use of special planned exposures, which are only permitted when alternatives are not available. Written authorization by the Station Emergency Director for the special exposure includes the purpose of the task, the estimated doses, and measures that are taken to keep the dose ALARA. Any special planned exposure may not exceed the 10 CFR 20.1206 criteria and will be reported in accordance with 10 CFR 20.1205. As stated above, dosimetry records are available during an emergency.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-29:**

**Question:**

SITE-12: Medical and Public Health Support

[Basis: 10 CFR 50, Appendix E.IV.E.5]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2

RAI L-1. Section L.2 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Onsite First Aid Capability," states in general, physicians or nurses are not staffed at the site. In the Emergency Plan, discuss the arrangements for the services of physicians and other medical personnel qualified to handle radiation emergencies on-site, or justify why this is not necessary.

**Response:**

RAI L-1: Section 5.4 of the VCS Annex provides an explanation regarding the treatment of injured personnel at the Station. It states, "When more professional care is needed, injured persons are transported to a local hospital. Citizens Medical Center in Victoria, Texas is the designated primary support hospital for evaluation and treatment of persons suffering from traumatic injury, medical illness, radiation exposure, radiological uptake, and handling contaminated injured persons. DeTar Hospital Navarro in Victoria, Texas is the backup medical facility for evaluation and treatment of persons suffering from traumatic injury, medical illness, radiation exposure, uptake, and contaminated injured persons." These hospitals are within minutes of the Victoria County Station. Letters of Agreement have been established with each of these facilities to support and treat injured personnel from the Station.

**Associated ESPA Revisions:**

No revisions to the ESPA are required as a result of this response.

**RAI 13.03-30****Question:**

SITE-14: Exercises and Drills

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion N.1.b, 10 CFR 50, Appendix E.IV.F.2.a, 10 CFR 50, Appendix E.IV.F.2.b, 10 CFR 50, Appendix E.IV.F.2.d, 10 CFR 50, Appendix E.IV.F.2.e, 10 CFR 50, Appendix E.IV.E.9(b) (2 of 2)]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2

- RAI N-1. Section N.1.a of the Exelon Nuclear Standardized Radiological Emergency Plan, "Biennial Exercises," describes that full participation exercises will include appropriate offsite local and State authorities and applicant personnel physically and actively taking part in testing the integrated capability to adequately assess and respond to an accident at the plant. Propose an ITAAC to demonstrate that a full participation exercise will be conducted before fuel load.
- RAI N-2. Section N.4 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Critique and Evaluation," describes a formal written critique report is prepared by Emergency Preparedness following a drill. Explain in the Emergency Plan whether remedial drills will be conducted after an unsatisfactory biennial exercise (such that NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency) and describe State and local participation in these remedial exercises.

**Response:**

- RAI N-1: Revised VCS SSAR Table 13.3-1, ITAAC, Section 14, submitted in Exelon letter to the NRC, NP-11-0011, dated April 12, 2011 addresses the full participation exercise that will be conducted prior to fuel load.
- RAI N-2: The VCS Annex, Section 6.2 has been revised to address the use of remedial drills and exercises to demonstrate the emergency response capabilities that were evaluated as unsatisfactory during a biennial exercise in Section 6.2, Drills and Exercises. The following information has been incorporated:
- In the event that there is a need to perform a remedial demonstration due to a determination that there was an unsatisfactory biennial exercise (such that the NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency) remedial drills will be conducted to demonstrate these emergency response capabilities. If this demonstration involves the state or local participation negotiations will be conducted to provide an opportunity to demonstrate their capability to respond to an event or to interface with the Victoria County Station ERO, Any remedial demonstration, drill, or exercise scenario will be provided to the NRC and FEMA, if necessary, for approval prior to conducting the remedial activity.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-31:****Question:**

SITE-15: Radiological Emergency Training

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion O.1. and 1.a, O.3, O.4.d;  
Appendix E.IV.F.1(b)(iv)]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance  
Criteria 1 and 2

- RAI O-1. Section O.3 of the Exelon Nuclear Standardized Radiological Emergency Plan, "First Aid Response," states that selected station personnel are trained in accordance with the Exelon Nuclear approved First Aid. Explain whether first aid training is equivalent to Red Cross Multi-Media or "First Responder" training.
- RAI O-2. Describe in the Emergency Plan or Annex the scope and nature of the Fire Control Team (Fire Brigade) training.

**Response:**

RAI O-1: VCS Annex, Section 2.1.9 is added to address First Aid and Rescue Operations Personnel. On-shift maintenance personnel, chemistry technicians, plant equipment operators, and radiation protection technicians are trained in Red Cross First Aid/CPR/AED or equivalent and are able to support offsite agencies in rescue activities.

RAI O-2: Fire Brigade training will be conducted in accordance with the Exelon Nuclear Fire Brigade Training Programs. The training is established to satisfy the intent of Sections III.I.1 and III.I.2 of 10 CFR 50 Appendix R and the guidance for fire brigade training provided in the NRC supplemental guidance document titled "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance," dated August 29, 1977. The training will also satisfy the fire brigade training requirements contained in 29 CFR 1910.156. The detailed scope and nature of the Fire Control (Fire Brigade) Training will be described in the Exelon Nuclear Fire Protection Program to be provided at the COL stage.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response.

**RAI 13.03-32:****Question:**

SITE-16: Responsibility for Planning Effort: Development, Periodic Review, and Distribution of Emergency Plan.

[Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion P.6, P.8]

Acceptance Criteria: (NUREG-0800, Section 13.3): Requirements A and B; Acceptance Criteria 1 and 2

- RAI P-1. Section P.6 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Supporting Emergency Response Plans," contains a listing of supporting plans. Include a list of appropriate county supporting plans in the Emergency Plan, or explain why these plans do not need to be listed.
- RAI P-2. In the Emergency Plan, provide a cross reference between the Emergency Plan and Appendix E to 10 CFR 50, or explain why this is not needed.
- RAI P-3. In an appendix to the Annex, provide a list of procedures, by title, required to implement the Emergency Plan and Annex. Include the section(s) of the plan to be implemented by each procedure.

**Response:**

RAI P-1: VCS Annex, Section 6.3 has been added to include a listing of the supporting emergency plans for the state of Texas and the local counties. Other plans that support this E-Plan are:

- State of Texas Emergency Management Plan – Annex D: Radiological Emergency Management.
- Victoria County, Texas Emergency Plan
- Refugio County, Texas Emergency Plan
- Goliad County, Texas Emergency Plan
- Calhoun County, Texas Emergency Plan

RAI P-2: VCS Annex, Appendix 3 has been added to provide a cross reference to Appendix E to 10 CFR 50.

RAI P-3: VCS Annex, Appendix 4 has been added to provide a list procedures required to implement the E-Plan and Annex.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response

**RAI 13.03-33:****Question:**

SITE-17: Security-Based Event Considerations

[Basis: 10 CFR 50.47; Appendix E to 10 CFR 50; Regulatory Guide 1.206, Section C.I.13.3.1]

Acceptance Criteria: 1, 2, and 30

RAI Q-1. Section J.4 of the Exelon Nuclear Standardized Radiological Emergency Plan, "Evacuation", states that in the event of a hostile attack against the site, implementation of protective actions other than those used for radiological emergencies may be appropriate. In the Emergency Plan, describe the decision making process for implementing alternate onsite protective measures, including who has the authority to make such decisions.

RAI Q-2. NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," provides guidance for identifying alternative facilities to support emergency response organization augmentation during hostile-action events. Describe in the emergency plan, or provide reference to where this information is contained, an alternative facility to support rapid response to a hostile-action event, or provide justification as to why this information is not necessary.

As stated in BL 2005-02, the alternative facility should include the following characteristics:

- Accessibility even if the site is under threat or attack;
- Communication links with the emergency operations facility, control room, and security;
- Capability to notify offsite response organizations if the emergency operations facility is not performing this action;
- Capability for engineering and damage control teams to begin planning mitigative actions (e.g., general drawings and system information)

Describe in the emergency plan -- procedures or process that Emergency Response Organization (ERO) staff has been identified to support the rapid response from ERO members to mitigate site damage from a security-based event once the site is secured.

RAI Q-3. NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," provides guidance that Emergency Preparedness (EP) drill and exercise programs maintain the key skills necessary for mitigating security-based events. The Emergency Response Organization demonstrates security-based EP program activities under the schedule as committed to in their emergency plans. Discuss in the emergency plan/procedures whether EP drills and exercises will be scheduled to address security-based events or justify why this information is not required.

RAI Q-4. Section 13.3.1.1, "Site Description," of the VCS ESP SSAR provides a discussion regarding the potential effect on the plant from damage to nearby hazardous facilities, dams, and other nearby sites, however, the potential

effect to onsite staffing with augmentation, and onsite evacuation strategies in consideration of a security event is not addressed.

Clarify whether this evaluation has been performed and provide the location of where this evaluation has been considered in the Emergency Plan. If this evaluation has not been performed, discuss the potential effect to onsite staffing with augmentation, and onsite evacuation strategies in consideration of a security event from damage to nearby hazardous facilities, dams, and other nearby sites. Address this evaluation in the Emergency Plan accordingly, or justify why this information is not required.

**Response:**

RAI Q-1: VCS Annex, Section 4.4 has been revised to include the following decision making process for implementing alternate onsite protective measures, including who has the authority to make such decisions. "Per NRC Bulletin 2005-02 "Emergency Preparedness and Response Actions for Security-Based Events," VCS has established the implementation of alternate onsite protective actions for security-based events that are more appropriate than the actions for radiological emergencies. These alternate protective actions could include taking immediate cover, immediate protected area evacuation, immediate owner controlled area evacuation, and dispatch of the ERO to their alternate reporting center. In the event that the Security-Based Event occurs prior to a classification and activation of the TSC, the Shift Emergency Director is responsible for determining and issuing protective actions for the Site personnel in response to the hostile activity. If the TSC is activated at the time of the threat or hostile activity, the Station Emergency Director is responsible for determining and issuing protective actions for the Site personnel."

RAI Q-2: Per NRC Bulletin 2005-02 "Emergency Preparedness and Response Actions for Security-Based Events," VCS will establish the implementation of alternate onsite protective actions for security-based events that are more appropriate than the actions for radiological emergencies. These alternate protective actions could include taking immediate cover, immediate protected area evacuation, immediate owner controlled area evacuation, and dispatch of the ERO to their alternate reporting center. In the event that the Security-Based Event occurs prior to a classification and activation of the TSC, the Shift Emergency Director is responsible for determining and issuing protective actions for the Site personnel in response to the hostile activity. If the TSC is activated at the time of the threat or hostile activity, the Station Emergency Director is responsible for determining and issuing protective actions for the Site personnel.

VCS Annex, Section 2.10 has been added to include the following direction for the ERO to respond to the EOF in the City of Victoria to support emergency response organization augmentation during hostile-action events during off-hours or when they are away from the site. In the event that hostile action occurs during normal working hours, the ERO will be directed to respond to locations that do not endanger their well being while responding.

As stated in Section 2.10, "In the event that an emergency is declared based on Hostile Actions during normal working hours, the ERO is expected to take immediate protective actions such as "take cover" as directed by the Shift Emergency Director (ED). If other protective actions of shelter or evacuation have been issued the ERO personnel will respond to their assigned emergency response facility when directed by the Shift ED. During an off-hours response to a hostile action emergency classification, the ERO will be directed to respond to the EOF located in the City of Victoria. This facility is outside of the EPZ and is accessible if the site is in a hostile action event. The ERO will provide support from the EOF as it has the communications links to the Control Room and site security. It also has data links, and other support materials (general drawings and systems information) for the TSC Staff. There are other rooms in the Victoria County Annex Building that would be utilized for staging of OSC personnel until they can safely respond to the site to support and augment the station ERO personnel. When it is determined that it is safe to respond to the Station, selected ERO personnel would be escorted or transported by local law enforcement personnel to ensure that they are protected during their response to the Station to conduct mitigative actions.

Drill and Exercise information added in Section 6.2 of the VCS Annex requires that Drills and Exercises for security related events are included in the VCS Annex Drill and Exercise Program. Security events are to be included in the six-year plan for demonstration of all major objectives.

Notifications information is added in Section 6.1 of the VCS Annex requires that during a security event the NRC will be notified with a statement of the event within approximately 15 minutes of the identification of a security based event.

RAI Q-3: VCS Annex, Section 2.4 has been added to describe Training in the form classroom sessions/Computer Based Training (CBT) and drills to be provided to the ERO to demonstrate their key skills necessary for mitigating security-based events. Security based event drills will be included in the drill schedule rotation to ensure that their skills and knowledge is maintained accordingly.

RAI Q-4: The VCS Annex, Section 2.4 has been added to describe Training to be provided to the ERO that will focus on events external to VCS (transportation, nearby hazardous facilities, dams, and other nearby site hazards) that may cause an event to become a classifiable emergency for VCS. The Shift Emergency Director or Station Emergency Director if the TSC has been activated will direct personnel protective actions for the ERO. ERO personnel that are offsite when notified will be directed where to go and to await further instructions prior to attempting to respond to the Station and their assigned emergency response facility. The EOF is the back-up location for personnel to support and stage in the event that the Station is not safe location to respond.

**Associated ESPA Revisions:**

The associated changes discussed above are shown on the revised VCS Annex, which is Attachment 20 of this RAI response

**RAI 13.03-34:**

**Question:**

SITE-19: Plume Exposure EPZ

Basis: 10 CFR 50.33(g), 10 CFR 52.77, and 10 CFR 50.47(c)

SRP Acceptance Criteria: Requirement A, Acceptance Criterion 10

- RAI S-1. Section 13.3.3, "Emergency Planning Zones," of the VCS ESP application and Section 1.2, "Emergency Planning Zone," of the VCS Annex describe the plume exposure pathway and ingestion exposure pathway emergency planning zones (EPZs). Discuss in the VCS Annex whether the exact sizes and configurations of the EPZs surrounding VCS were determined in relation to the local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. Discuss why Calhoun County was not included in the Plume Exposure Pathway EPZ.

**Response:**

- RAI S-1: The plume exposure pathway emergency planning zone (EPZ) for the counties were determined by the county emergency management personnel and approved by the respective County Judge. The Letters of Certification submitted with the ESPA provides evidence that the county officials are in concurrence with the boundaries of and the subareas depicted in the EPZ.

At the time of ESPA development, Calhoun County had decided not to participate as the portion of the county that lay within the 10 radius of the Victoria County Station was uninhabited. Therefore, they determined there was no need to plan for that area. Exelon respected the county's determination and excluded them from the planning process. However, a formal letter of declination from Calhoun County documenting their decision had not been processed. In addressing the RAIs, Calhoun County was contacted and an inquiry was made concerning their earlier decision not to participate in the planning process. Calhoun County indicated that they would now like to be a part of the planning process and were interested in having a portion of the county included in the plume exposure pathway EPZ. Exelon is currently working with Calhoun County to determine and incorporate a portion of the county into the VCS plume exposure pathway EPZ. The Emergency Plan documentation reflecting the addition of Calhoun County will be provided by August 15, 2011.

The counties included in the ingestion exposure pathway were determined based on the counties, or portions of counties, within a 50 mile radius of VCS site. Those counties within 50 miles, no matter how small the portion of the county was, were included in the listing of counties in the ingestion exposure pathway EPZ. This listing was accepted and approved by the State of Texas as evidenced by their Letter of Certification submitted with the ESPA.

**Associated ESPA Revisions:**

The Emergency Plan documentation reflecting the inclusion of Calhoun County in the plume exposure pathway EPZ will be provided by August 15, 2011.

**RAI 13.03-35:**

**Question:**

SITE-20: Standard Review Plan

Basis: 10 CFR 52.79(a)(41), 10 CFR 50.34(h)(1)(i), 10 CFR 50.34(h)(2 and 3)

RAI T-1. Evaluate the VCS Annex and corresponding Exelon Nuclear Standardized Radiological Emergency Plan against NUREG-0800 and identify all differences between the VCS Annex and corresponding Exelon Nuclear Standardized Radiological Emergency Plan and NUREG-0800 Section 13.3 "Emergency Planning".

**Response:**

RAI T-1: An evaluation of the VCS Annex and corresponding Exelon Nuclear Standardized Radiological Emergency Plan against NUREG-0800 is provided in Attachment 19, and all differences have been identified.

**Associated ESPA Revisions:**

No ESPA revision is required as a result of this response.

**ATTACHMENT 18**

**Letters of Agreement**



## CITY OF VICTORIA

Established 1824, Founded By Congress, Republic of Texas, 1839

**FIRE DEPARTMENT**  
606 E. Goodwin

30 June 2008

Exelon Victoria County, Texas Station

Keith Kemper  
Director of Emergency Preparedness  
Exelon Generation Company  
200 Exelon Way  
Kennett Square, PA 19348

Dear Mr. Kemper:

The City of Victoria Fire Department affirms its intent to provide fire fighting support, medical, rescue and hazardous materials service to Exelon's Victoria County Station in the event of an emergency or drill / exercise situation. These and other responsibilities of this department are identified in the Emergency Management Plan for Victoria County. Our response is in support of that Plan and the Victoria County Station Emergency Plan.

The services of the City of Victoria Fire Department may be obtained by calling 911. This is a 24-hour emergency number. Our response time to the VCS site is approximately 15 minutes or less. We will also be able to participate in training, drills, and exercises with proper advance notification and on request.

This letter of agreement shall remain in effect unless modified or revoked by the City of Victoria Fire Department or the management of Exelon's Victoria County Station. Modification or revocation requires an advance written thirty (30) day notice.

Sincerely,

Vance L. Riley, MPA, EFO, LP  
Fire Chief

cc: Exelon Generation Company  
Attn: Ken Ainger, Director - New Plant Licensing  
4300 Winfield Road  
Warrenville, IL 60555



C O U N T Y O F V I C T O R I A

**SHERIFF T. MICHAEL O'CONNOR**

101 North Glass Street ☎ Victoria, Texas 77901 ☎ Phone: 361.575.0651 ☎ Fax: 361.574.8019

June 25, 2008

Exelon Generation Company  
Attn: Keith Kemper, Director - Emergency Preparedness  
200 Exelon Way  
Kennett Square, PA 19348

RE: Memorandum of Understanding (MOU) Victoria County Sheriff's Office  
and Emergency Preparedness and Security for Exelon

Dear Mr. Kemper:

Please see the attached Memorandum of Understanding (MOU) between the Victoria County Sheriff's Office and Exelon Generation Company. Please feel free to contact me at 361.574.8002 if you have any questions.

Sincerely,

T. MICHAEL O'CONNOR, SHERIFF  
VICTORIA COUNTY TEXAS

TMO'C/vj

cc: Exelon Generation Company  
Attn: Ken Ainger, Director - New Plant Licensing  
4300 Winfield Road  
Warrenville, IL 60555

**MEMORANDUM OF UNDERSTANDING (MOU)  
VICTORIA COUNTY SHERIFF'S OFFICE AND  
EMERGENCY PREPAREDNESS & SECURITY FOR EXELON**

This Memorandum of Understanding (MOU) reaffirms that the Victoria County Sheriffs Office is prepared to assist Exelon's Victoria County Station in responding to an emergency, or participating in training and drill/exercise.

The Sheriffs Office may be contacted by calling (361) 575-0651 or the communications dispatcher telephone (361) 574-8040 any time, 24-hours a day, 365 days a year. My personnel are available by Sheriffs dispatcher via telephone and radio for dispatching to the VCS or a designated location upon the request.

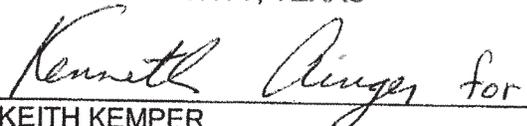
The Sheriffs Office is the primary Law Enforcement Agency in the county. I have access to the Texas Department of Public Safety, the Law Enforcement Officers of Texas Parks and Wildlife Department, and the National Guard, should the situation extend for several days or require several officers. The Emergency Management Plan of Victoria County identifies the responsibilities for the Sheriffs Office. We shall respond as required in the plan and applicable law to emergencies, and participate in training, drills, and exercises.

The Victoria County Sheriff's Office is committed to participating in any further development of the emergency response plans, including any required training and field demonstrations. The Sheriff's office will work with Exelon's Victoria County Station to identify any needed resources to execute our responsibilities for providing law enforcement services necessary for security measures, security contingency events, traffic control and notification and/or movement of people.

This MOU shall remain in effect unless modified or revoked by the Sheriff or the management of Exelon's Victoria County Station. Modification or revocation requires an advance written thirty (30) day notice

  
SHERIFF T. MICHAEL O'CONNOR  
VICTORIA COUNTY, TEXAS

Date: June 25, 2008

  
KEITH KEMPER  
DIRECTOR - EMERGENCY PREPAREDNESS  
EXELON NUCLEAR

Date: August 25, 2008



May 28, 2008

Mr. Keith Kemper  
Director of Emergency Preparedness  
Exelon Generation Company  
200 Exelon Way  
Kennett Square, PA 19348

Dear Mr. Kemper:

Citizens Medical Center and its Medical Staff take pride in being able to provide medical care when needed for both conventional and radiation-induced injuries that occur in emergency or drill/exercise situations. Citizens Medical Center will serve as a response hospital for Exelon's Victoria County Station (VCS).

The Emergency Department at Citizens Medical Center is staffed by highly qualified Physicians twenty-four hours a day and is equipped to handle emergencies arising in Victoria County. In addition, Citizens Air Medical, its Bell 407 and staff of a Pilot, Flight Nurse and Flight Paramedic are available. To support the VCS Emergency Plan, Citizens Medical Center may be contacted by calling the Emergency Department at (361) 572-5124. Citizens Air Medical may be dispatched by calling (877) 435-9744.

It is my understanding that VCS will provide any training needed by the staff of Citizens Medical Center in addition to any special equipment required for the safe provision of contaminated/injured emergency medical service personnel.

This Letter of Agreement (LoA) will remain in effect until cancelled or modified. Any modification or revocation to this LoA will require a thirty (30) day advance notice in writing by either party.

Sincerely,

David P. Brown  
Administrator

DPB/sl

c: Mr. Ken Ainger, Director, New Plant Licensing

# DeTar HEALTHCARE SYSTEM

*DeTar Hospital Navarro • DeTar Hospital North  
A Prominent Past. A Promising Future.*

July 18, 2008

DeTar Healthcare System and the Medical Staff who practice here take great pride in being available to provide care when needed for both conventional and radiological injuries that occur in real emergency or drill/exercise situations. DeTar Navarro is willing to serve as a response hospital for Exelon's Victoria County Station (VCS).

The Emergency Department at this facility has 24/7/365 physician coverage and we handle emergencies in Victoria County as they arise. To support the Victoria County Station Emergency Plan, DeTar Navarro may be contacted by calling the Emergency Department at (361)788-6680.

It is my understanding that VCS will provide any training needed by the staff of DeTar Navarro in addition to any special equipment required for the safe provision of contaminated/injured emergency medical service.

This letter of agreement shall remain in effect until cancelled or modified. Any modification or revocation of the agreement will require (30) day advance notice in writing from either party.

We look forward to working with you here in Victoria.

Sincerely,



Donna M. Oldmixon RN  
Director Emergency and Trauma Services  
Emergency Preparedness  
DeTar Healthcare System  
P.O. Box 2089  
Victoria, Texas 77901  
(361)788-6681 office  
(361)788-6682 fax



# COUNTY OF VICTORIA

**Donald R. Pozzi**  
County Judge

August 1, 2008

**Chris F. Rivera**  
Commissioner, Pct. 1

Exelon Generation Company  
Attn: Keith Kemper, Director - Emergency Preparedness  
200 Exelon Way  
Kennett Square, PA 19348

**Kevin Janak**  
Commissioner, Pct. 2

Dear Mr. Kemper,

**Gary Burns**  
Commissioner, Pct. 3

This Letter of Agreement affirms that Victoria County is providing Exelon Generation Company space in the Victoria County Annex Building for the Victoria County Station (VCS) Emergency Operations Facility (EOF) and Joint Information Center (JIC). The Victoria County Annex Building is located at 205 North Bridge Street in Victoria, Texas. The EOF and the JIC are available, without restriction, to Exelon on a 24 hours/day, 7 days/week, 365 days/year basis. These facilities are available to support a response to an actual emergency, for training purposes and drill/exercise activities.

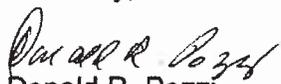
**Wayne D. Dierlam**  
Commissioner, Pct. 4

Approximately 5000 square feet of contiguous space will be dedicated to Exelon's EOF. The EOF will be a shared facility among Exelon, the Emergency Planning Zone Counties, the State of Texas, and responding federal agencies in the event of a declared emergency at VCS. It is understood that Exelon will provide all necessary materials and services to ensure the EOF will adequately function to support the emergency response activities at VCS in accordance with the VCS Emergency Plan.

The JIC will be a shared facility with Victoria County. The JIC will be utilized by Victoria County officials when the Emergency Operations Center is activated or at the discretion of the County's Emergency Management Department. It is understood that the JIC may also be activated in accordance with the VCS Emergency Plan or at Exelon's discretion.

This Letter of Agreement shall remain in effect unless modified or revoked by the County or the management of Exelon's Victoria County Station. Modification or revocation on the Victoria County's behalf requires an advance written notice that will provide Exelon with a sufficient period of time to locate an appropriate facility that has demonstrated its ability to function as an EOF in support of emergency response activities at VCS. Exelon will provide at least 30 days official written notice in the event that it decides to relocate the EOF.

Sincerely,

  
Donald R. Pozzi  
Victoria County Judge

cc: Exelon Generation Company  
Attn: Ken Ainger, Director - New Plant Licensing





**American  
Red Cross  
Crossroads Chapter**

Southwest Service Area

2805 N. Navarro, Suite 500  
Victoria, Texas 77901  
(361) 573-2671  
Fax (361) 573-3307  
www.crossroads-redcross.org

Serving  
Calhoun County  
DeWitt County  
Goliad County  
Jackson County  
Lavaca County  
Victoria County

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Scott Collins  
Vanessa Heinold  
Vance Riley

**Advisory Board**  
Judge Don Pozzi  
Sheriff T. Michael O'Connor  
Jude Ron Leck

**Regional Advisory  
Representative**  
Lisa Breech

Exelon Generation Company  
Attn: Keith Kemper, Director - Emergency Preparedness  
200 Exelon Way  
Kennett Square, PA 19348

Dear Mr. Kemper,

The Crossroads Chapter of the American Red Cross takes pride in being available to provide support to residents and visitors of Victoria, Texas during the aftermath of both natural and man-made disasters.

The Crossroads Chapter of the American Red Cross will be pleased to serve as a provider of shelter and other essential services for individuals affected by an emergency event at Exelon's Victoria County Station (VCS). These services will be offered in conjunction with services provided by the counties of Victoria and Goliad. It is our intention to provide these services to all individuals requesting assistance after registration at the Victoria Reception Center.

It is our understanding that Exelon will provide any specialized training needed by the staff and volunteers of the Crossroads Chapter of the American Red Cross to assist personnel during an event at VCS.

This letter was presented to the Board of Directors at our meeting that was held on Wednesday, June 25, 2008. The Board of Directors voted unanimously to approve this letter to provide to Exelon Generation Company.

This letter of agreement shall remain in effect until cancelled or modified. Any modification or revocation of the agreement will require (30) day advance notice in writing from either party.

Omar Rachid  
Chapter Chair

cc: Exelon Generation Company  
Attn: Ken Ainger, Director - New Plant Licensing  
4300 Winfield Road  
Warrenville, IL 60555

Bcc Steve Hook at:  
865 Trail Ridge Road  
Aiken, SC 29803



**ATTACHMENT 19**

**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3  
Conformance Evaluation**

**(19 pages)**

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

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

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
<p>1. All of the standards of 10 CFR 50.47(b), as supported by the guidance in the corresponding planning standards and evaluation criteria of NUREG 0654/FEMA-REP-1, Rev. 1, (including the March 2002 addenda) must be met before an OL is issued pursuant to 10 CFR 50.57 or a COL is issued pursuant to 10 CFR 52.97.</p> <p>In addition, for the first reactor at a site, Appendix E to 10 CFR Part 50 requires that a full participation exercise be conducted within 2 years before NRC issuance of an operating license for full power (i.e., one authorizing operation above 5 percent of rated power). Because this exercise would be included in the ITAAC required for a COL, its acceptance criteria would have to be satisfied before fuel loading pursuant to a COL (see Table 14.3.10-1).</p>	<p>Standards are addressed with either the Exelon Nuclear Standardized Radiological Emergency Plan, EP-AA-1000, Revision VCS-B, September 2009, the VCS Annex, the emergency plan implementing procedures, or the emergency plan administrative procedures developed to implement and support the Emergency Preparedness Program.</p> <p>Addressed in VCS SSAR ITAAC Table 13.3-1, as revised in Exelon letter NP-11-0011, dated April 12, 2011.</p>
<p>2. The onsite and, except as provided in 10 CFR 50.47(d), offsite emergency response plans for nuclear power reactors must meet the standards established in 10 CFR 50.47(b) and applicable requirements of Appendix E to 10 CFR Part 50. Compliance with these regulations is determined by using the guidance in Regulatory Guide (RG) 1.101, Rev. 2, which endorses NUREG-0654/FEMA-REP-1, Rev. 1, and through it NUREG-0396, and NUREG-0696. NUREG-0654/FEMA-REP-1, Rev. 1, establishes an acceptable basis for NRC licensees and State, tribal and local governments to develop radiological emergency plans and procedures, and improve their overall state of emergency preparedness.</p> <p>NUREG-0696 discusses the facilities and systems to be provided by nuclear power plant licensees to aid the licensee's response to emergency situations.</p> <p>Additional guidance is provided in NUREG-0718, NUREG-0737, Supplement 1 to NUREG-0737, NUREG-0814, and Supplement 3 to NUREG-0654/FEMA-REP-1, Rev. 1.</p>	<p>Exelon Nuclear Standardized Radiological Emergency Plan, EP-AA-1000, Revision VCS-B, September 2009, Part III, Appendix 2 provides procedure cross-reference to NUREG-0654.</p> <p>VCS SSAR ITAAC Table 13.3-1, as revised in Exelon letter NP-11-0011, dated April 12, 2011, addresses applicable NUREG-0696 and NUREG-0737 criteria for facilities and systems..</p>

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
<p>3. 10 CFR 50.47(b)(4) requires a standard emergency classification and action level scheme. Section IV.C, "Activation of Emergency Organization," of Appendix E identifies the four emergency classes. Section IV.B, "Assessment Actions," of Appendix E to 10 CFR Part 50 also requires emergency action levels.</p> <p>The emergency plan should include the emergency classification level scheme described in Appendix 1 and Supplement 3 to NUREG-0654. The staff anticipates that any new application will use an emergency action level scheme similar to that described in Revision 4 of NEI 99-01, "Methodology for Development of Emergency Action Levels," dated January 2003, which was endorsed in Revision 4 Regulatory Guide (RG) 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," dated October 2003. However, Revision 4 of NEI 99-01, "Methodology for Development of Emergency Action Levels," dated January 2003, is not considered to be entirely applicable to advanced light water reactor designs. Even though the majority of Revision 4 of NEI 99-01 may be applicable to any reactor design and should be used, the unique characteristics of the new reactor should be addressed in the development of emergency action levels specific to the new plant and the site. The format of the emergency action level scheme should follow the convention established in Regulatory Information Summary 2003-18, "Use of Nuclear Energy Institute (NEI) 99-01, Methodology for Development of Emergency Action Levels," Revision 4, dated January 2003, and its supplements.</p> <p>Section IV.B, "Assessment Actions," of Appendix E to 10 CFR Part 50 also requires that the initial emergency actions be discussed and agreed on by the State and local governmental authorities. The applicant should provide some form of confirmation of the agreement, such as a letter signed by State and local governmental authorities, in the emergency plan, if the applicant provides emergency action levels different from those for the existing reactor(s) on the site.</p>	<p>VCA Annex, Section 3 ESPA - no specific technology has been selected for the ESPA.</p> <p>Exelon Nuclear Standardized Radiological Emergency Plan (ENSREP), Section D</p> <p>Certifications Letter provided with the ESPA</p>

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
<p>4. Appendix 2, "Meteorological Criteria for Emergency Preparedness at Operating Nuclear Power Plants," to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance related to the planning standards codified in 10 CFR 50.47(b)(8) and (9) and the requirements of Section IV.E.2 of Appendix E to 10 CFR Part 50. Proposed revision 1 to Regulatory Guide 1.23, "Meteorological Programs in Support of Nuclear Power Plants," is referenced in Appendix 2 to NUREG-0654 as a source of acceptance criteria for meteorological measurements. Since Appendix 2 was issued, additional guidance related to meteorological systems has been developed. NUREG-0696, "Functional Criteria for Emergency Response Facilities," refers to the guidance in proposed Revision 1 to Regulatory Guide 1.23, Revision 2 to Regulatory Guide 1.97, and Appendix 2 to NUREG-0654/FEMA-REP-1, Rev. 1. Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," (Generic Letter 82-33) clarifies the guidance in Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-water-cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," and contains guidance related to the need to provide reliable indication of meteorological variables in the control room, Technical Support Center, and Emergency Operations Facility in the vicinity (up to about 10 miles) of the plant site. Revision 3 of Regulatory Guide 1.97 was issued in May 1983 and Revision 4 was issued in June 2006. Revision 1 to Regulatory Guide 1.23 was issued in March 2007.</p>	<p>ENSREP, Section H8 &amp; VCS Annex Section 5.2.1</p>
<p>5. Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," (Generic Letter 82-33) clarifies the guidance in Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-water-cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," and contains guidance related to upgrading emergency response facilities and meeting the requirements of 10 CFR 50.47(b)(6), (8), (9) and Section IV.E of 10 CFR Part 50.</p>	<p>VCS Annex, Section 5.1.2</p>
<p>6. Appendix 3, "Means for Providing Prompt Alerting and Notification of Response Organizations and the Population," to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance related to 10 CFR 50.47(b)(5) and (6).</p>	<p>VCS Annex, Section 4.3</p>
<p>7. Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents," to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance for the development of protective action recommendations for the public for severe reactor accidents. The guidance updates and simplifies the decision-making process for protective actions for severe reactor accidents given in Appendix 1 to NUREG-0654/FEMA-REP-1, Rev. 1.</p>	<p>VCS Annex, Section 4.3 and Figure 4-1</p>

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<p>8. RG 1.101, Rev. 2, states that the criteria and recommendations in NUREG-654/FEMAREP-1, Rev. 1, are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47. Except for cases in which the applicant or licensee proposes acceptable alternative methods for complying with specific portions of the regulations, the methods described in NUREG 0654/FEMA-REP-1, Rev. 1, will be used as a basis for evaluating the adequacy of the emergency plans. If an applicant proposes alternative practice or method for complying with the regulations, the application should provide an appropriate justification.</p>	<p>No alternatives provided</p>
<p>9. In addition to NUREG-0654/FEMA-REP-1, Rev. 1, FEMA will evaluate State, tribal, and local government planning and preparedness on the basis of applicable policies and guidance, including approved alternative approaches and methods. FEMA will base its findings and determinations, relating to the adequacy of offsite radiological emergency planning and preparedness, on these evaluations.</p>	<p>FEMA has reviewed and accepted the county and state plans provided for review in Revision 0 of the ESPA. Calhoun County has determined that they will participate in the planning process at this point. Development of that Plan is ongoing and will be submitted to the NRC for review.</p>
<p>10. 10 CFR 50.33(g), 10 CFR 50.47(c)(2), and Section I of Appendix E to 10 CFR Part 50 require that the size of the EPZ for a nuclear power plant shall be determined in relation to local emergency response needs and capabilities, as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. 10 CFR 52.77 requires that the COL application must contain all of the information required by 10 CFR 50.33. 10 CFR 50.33(g) requires that an applicant for an operating license submit radiological emergency response plans of State and local government entities that are wholly or partially within the 10-mile plume exposure EPZ, as well as the plans of State governments wholly or partially within the 50- mile ingestion pathway EPZ. An applicant should also submit plans for tribal governmental entities affected by the 10-mile EPZ. NUREG-0396 provides additional guidance relating to the definition of the EPZs.</p>	<p>With the exception of Calhoun County as noted above, the Letters of Certification provided by the counties and the state indicate concurrence with the size and parameters of the Plume Exposure Emergency Planning Zone. The state of Texas Letter of Certification provides concurrence with the 50 mile ingestion pathway plume EPZ. There are no Tribal entities in the 10 or 50 mile EPZ for VCS.</p>

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<p>11. Section IV of Appendix E to 10 CFR Part 50, through 10 CFR 52.79(a)(21) and 10 CFR 50.34, requires that an application for an OL or COL provide an analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ; i.e., an ETE. The NRC regulations do not specify a limit for such estimated evacuation times. An ETE can identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. An ETE provides an analysis of the time required to evacuate and for taking other protective actions for various sectors and distances within the plume exposure EPZ. This information can be used by decision makers in responding to an actual emergency to aid in deciding what protective actions to implement. Appendix 4 to NUREG-0654/FEMAREP-1, Rev. 1, and Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provide guidance relating to performing an ETE analysis. NUREG/CR-6863 provides additional information on ETEs.</p>	<p>Evacuation Time Estimate Study has been completed for the three participating counties and submitted for NRC review. The ETE will be revised to include Calhoun County when that portion of the EPZ is finalized.</p>
<p>12. Section VI of Appendix E to 10 CFR Part 50 requires an emergency response data system (ERDS). The ERDS is a direct near real-time electronic data link between a licensee's onsite computer system and the NRC Operations Center, and provides for the automated transmission of a limited data set of selected parameters from a licensee's installed onsite computer system in the event of an emergency. NUREG-1394 provides the minimum standards and acceptable methods that may be used to implement and comply with the ERDS requirements.</p>	<p>ENSREP, Section E.2.b.2</p>
<p>13. Insofar as emergency planning and preparedness requirements are concerned, 10 CFR 50.47(d) provides that a license authorizing fuel loading and/or low-power testing and training (up to 5 percent of the rated power) may be issued after a finding is made by the NRC that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The assessment of the applicant's onsite emergency plan will be based on the pertinent standards in 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50. However, the acceptability of an applicant's emergency plans will be reviewed against the standards with offsite aspects presented in 10 CFR 50.47(d)(1)-(7). 50.47(d)(1) Arrangements for requesting and effectively using offsite assistance on site have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned onsite response have been identified.</p>	<p>Addressed in the VCS SSAR ITAAC Table 13.3-1, as revised in Exelon letter NP-11-0011, dated April 12, 2011.</p> <p>VCS Annex, Appendix 2 lists the LOA for support.</p>

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<p>50.47(d)(2) Procedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.</p> <p>50.47(d)(3) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.</p> <p>50.47(d)(4) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.</p> <p>50.47(d)(5) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use onsite.</p>	<p>ENSERP, Section E.2.b.1</p> <p>ENSERP, Section E.2.b.1</p> <p>ENSERP, Section H</p> <p>ENSERP, Section H.5</p>
<p>50.47(d)(6) Arrangements are made for medical services for contaminated and injured onsite individuals.</p> <p>50.47(d)(7) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency onsite.</p>	<p>Letter of Agreement with two area hospitals- reference VCS Annex, Appendix 2</p> <p>ENSERP, Section o.1</p>
<p>14. Where an applicant for an OL or COL asserts that its inability to demonstrate compliance with the offsite emergency planning requirements of 10 CFR 50.47(b) is wholly or substantially the result of the non-participation of State and/or local governments, an operating license may be issued if the applicant demonstrates to the Commission's satisfaction those elements listed in 10 CFR 50.47(c)(1)(i)-(iii). (See 10 CFR 50.47(c)(1) and 10 CFR 52.79(a)(22)(ii).) Supplement 1 to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance for the development, review, and evaluation of utility offsite radiological emergency response planning and preparedness, for those situations in which State and/or local governments decline to participate in emergency planning.</p>	<p>Not Applicable, offsite local and state officials are participating in the planning process.</p>

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<p>15. The minimum acceptance criteria for all ESP applications, located in 10 CFR 52.17(b)(1), require that ESP applications identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. If such physical characteristics are identified, the applicant must also identify measures that would, when implemented, mitigate or eliminate the significant impediment. Applications providing only the information required by 10 CFR 52.17(b)(1) must also include a description of contacts and arrangements (preferably letters of agreement) made with local, State, and Federal governmental agencies with emergency planning responsibilities, in accordance with 10 CFR 52.17(b)(4). The applicant may choose to submit additional emergency planning information in the ESP application to address the two options in 10 CFR 52.17(b)(2). The two options allow an ESP applicant to propose either major features of the emergency plans, or to provide complete and integrated emergency plans. While neither option is required, each would provide for a more definitive finding concerning emergency plans and preparedness at the ESP stage than would be the case for submittal of only the minimum required information. Complete and integrated emergency plans in an ESP application will be reviewed in accordance with the applicable requirements of 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provides guidance relating to emergency planning information in an ESP application.</p>	<p>Complete and integrated emergency plans have been submitted for review.</p>
<p>16. For an ESP application, a preliminary analysis of evacuation times is one example of how some significant impediments to the development of emergency plans may be identified. Other factors, such as the availability of adequate shelter facilities, in consideration of local building practices and land use (e.g., outdoor recreation facilities, including camps, beaches, hunting or fishing areas), and the presence of large institutional or other special needs populations (e.g., schools, hospitals, nursing homes, prisons) should also be addressed when identifying significant impediments to the development of emergency plans. Any ETE analysis or other identification of physical impediments should include the latest population census numbers and reflect the most recent local conditions. Appendix 4 to NUREG-0654/FEMA-REP-1, Rev. 1, and Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, provide guidance relating to performing an ETE analysis. NUREG/CR-6863 provides additional information on ETEs.</p>	<p>The ETE was conducted in 2008 utilizing population data at that time.</p>

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<p>17. For applications that require site approval for a stationary power reactor subject to 10 CFR Part 50 or 10 CFR Part 52 (e.g., CP, OL, ESP and COL), 10 CFR 100.1 and 10 CFR 100.21(g) require the identification of physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. This siting requirement is similar to that in 10 CFR 52.17(b)(1) for an ESP application, and the means for identifying significant impediments (e.g., an analysis of evacuation times or ETE) could apply to non-ESP applications. Further, if such physical characteristics are identified, the application must also identify measures that would, when implemented, mitigate or eliminate the significant impediment. Where unfavorable physical characteristics of the site exist, the proposed site may nevertheless be found to be acceptable if the design of the facility includes appropriate and adequate compensating engineering safeguards (see 10 CFR 100.10(d), which applies to applications submitted before January 10, 1997).</p> <p>The application should provide a projection of the population within the 10-mile EPZ throughout the requested duration of the application; including a discussion of the sources of information and methodology that supports the population projection.</p> <p>The application should specifically address whether the projected population creates a significant impediment to the development of emergency plans over the requested duration of the ESP or COL application, including how it would affect the ETE. If a significant impediment is created, then the applicant should identify measures that would, when implemented, mitigate or eliminate the significant impediment. Additional site-related guidance is provided in RG 4.7, and in ESP-related guidance documents (e.g., Supplement 2 to NUREG-654/FEMA-REP-1, Rev. 1).</p>	<p>The ETE study did not provide any evidence of any impediments to the VCS site location.</p> <p>VCS Annex, Section 4, Table 4-2 provides population distribution by Subarea.</p> <p>No impediments have been identified as this is a low population area of mostly ranches and oil field activity. Projected populations are described in SSAR Section 13.3 and in the ETE study.</p>

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<p>18. Copies of letters of agreement or other certifications, reflecting contacts and arrangements made with local, State, and Federal agencies with supporting emergency responsibilities, should be included in a CP, OL, ESP or COL application, as required by 10 CFR 52.17(b)(4), 10 CFR 52.79(a)(22), or Section II.B of Appendix E to 10 CFR Part 50.9</p> <p>The agreement information should be up-to-date when the application is submitted, and should reflect use of the proposed site for possible construction of a new reactor (or reactors).</p> <p>In addition, a discussion of the details associated with any ambiguous or incomplete language in the letters of agreement should be provided in the application. For an existing reactor site, the letters of agreement or other certifications should clearly address the presence of an additional reactor (or reactors) at the site, and any impact that would have on governmental agency or private organization emergency planning responsibilities, including acknowledgment by the agencies or organization of the proposed expanded responsibilities.</p> <p>If the applicant is unable to make arrangements with local, tribal, State, and Federal governmental agencies with emergency planning responsibilities, for whatever reason, the applicant should discuss its efforts to make such arrangements and describe any compensatory measures the applicant has taken or plans to take because of the lack of such arrangements. Supplement 1 to NUREG-654/FEMA-REP-1, Rev. 1, provides guidance for the development, review, and evaluation of utility offsite radiological emergency response planning and preparedness (i.e., a utility plan), for those situations in which State and/or local governments decline to participate in emergency planning. (See also 10 CFR 50.47(c)(1).)</p>	<p>Copies of the Letters of Agreement have been acquired and are provided in Attachment 18 of this RAI response submittal (Exelon letter NP-11-0014)</p> <p>Letters are up to date to support the VCS ESPA.</p> <p>N/A</p> <p>N/A No Action</p>

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<p>19. Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, will be used as the primary guidance for the review of emergency preparedness information and plans submitted with an ESP application pursuant to Subpart A of 10 CFR Part 52. For a pre-existing nuclear facility, all major features of the emergency plan (i.e., all 14 planning standards) identified in Supplement 2 to NUREG-0654/FEMA-REP-1, Rev. 1, should be addressed in the ESP application. The detailed, specific evaluation criteria for each of the major features in Supplement 2 should be addressed for both a pre-existing nuclear facility, as well as for applicable major features associated with a site without a pre-existing nuclear facility. If emergency planning information is not provided on all 14 major features (including the detailed, specific evaluation criteria) in Section V of Supplement 2, the ESP application will not be rejected. The review and evaluation will, however, only be based on, and specifically limited to, the submitted information that relates to the guidance in Supplement 2 of NUREG-0654/FEMA-REP-1, Rev. 1.</p>	<p>Complete and integrated emergency plans have been submitted for review.</p>
<p>20. The planning standards and evaluation criteria for preparing and evaluating an ESP application containing complete and integrated emergency plans are provided in NUREG-0654/FEMA-REP-1, Rev. 1. Under this ESP option, the applicant should make a good-faith effort to obtain from the government agencies certifications that (1) the proposed emergency plans are practicable; (2) these agencies are committed to participating in any further development of the plans, including any required field demonstrations; and (3) these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan pursuant to 10 CFR 50.47(c)(1), sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site. The utility-prepared emergency plans and preparedness will be reviewed and evaluated using the guidance in Supplement 1 to NUREG-0654/FEMA-REP-1, Rev. 1.</p>	<p>Letters of Certification were submitted with the ESPA, Part 4, on March 25, 2010..</p>
<p>21. 10 CFR 52.17(b)(3) allows an applicant for an ESP, that proposes major features of the emergency plans or complete and integrated emergency plans, to include proposed ITAAC which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the license, the provisions of the Atomic Energy Act, and the NRC's regulations.</p>	<p>Complete and integrated emergency plans have been submitted for review.</p>

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<p>22. 10 CFR 52.47(b)(1) allows an applicant for a design certification to include proposed ITAAC, including those applicable to emergency planning, which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a plant that incorporates the design certification is built and will operate in accordance with the design certification, the provisions of the Atomic Energy Act, and the NRC's regulations.</p>	<p>Emergency Planning ITAAC included in SSAR 13.3, Table 13.3-1, as updated in Exelon letter NP-11-0011, dated April 12, 2011.</p>
<p>23. 10 CFR 52.80(a) requires that an application for a combined license includes proposed emergency planning ITAAC which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations.</p>	<p>Emergency Planning ITAAC included in SSAR 13.3, Table 13.3-1, as updated in Exelon letter NP-11-0011, dated April 12, 2011.</p>
<p>24. Table 14.3.10-1 [of SECY 05-0197] provides an acceptable set of generic emergency planning ITAAC that an applicant may use to develop application-specific ITAAC, tailored to the specific reactor design and emergency planning program requirements. A smaller set of ITAAC is acceptable if the application contains information that fully addresses emergency preparedness requirements associated with any of the generic ITAAC in Table 14.3.10-1 that are not used. Table 14.3.10-1 is not all-inclusive, or exclusive of other ITAAC an applicant may propose. Additional plant-specific emergency planning ITAAC (i.e., beyond those listed in Table 14.3.10-1) may be proposed, and they will be examined to determine their acceptability on a case-by-case basis. In general, ITAAC are inappropriate for procedure-level details associated with the emergency plans, in that procedure adequacy and implementation can be evaluated under the exercise ITAAC, and should be limited to those aspects of emergency planning and preparedness that can not reasonably be addressed prior to construction of the plant. Each EP-ITAAC must have an objective acceptance criteria stated.</p>	<p>Emergency Planning ITAAC included in SSAR 13.3, Table 13.3-1, as updated in Exelon letter NP-11-0011, dated April 12, 2011.</p>

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<p>25. For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(xxv) requires that an applicant provide a TSC, OSC, and, for a CP application only, a near-site emergency operations facility (EOF) (TMI Item III.A.1.213). NUREG-0696, Appendix B to NUREG-0718, NUREG-0737, and Supplement 1 to NUREG-0737 provide guidance relating to the design and implementation of emergency response facilities (e.g., TSC, OSC, EOF). In addition, 10 CFR 50.47(b)(8) and Subsection IV.E.8 of Appendix E to 10 CFR Part 50 requires that the design should include adequate emergency facilities and equipment to support emergency response. NUREG-0696, NUREG-0737, and Supplement 1 to NUREG-0737 provide guidance relating to occupancy and radiological habitability of vital areas (including the TSC), which aid in the mitigation of or recovery from an accident.</p>	<p>Detailed design of the facilities will be provided once a reactor technology is selected at the COL stage.</p> <p>Facilities will meet the criteria of NUREG-0696 and NUREG-0737. Detailed design will be provided at the COL stage.</p>
<p>26. For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(iv) requires that an applicant seeking an operating license shall provide an SPDS in both the TSC and EOF (TMI Item I.D.2). The SPDS includes the minimum set of plant parameters needed to assess the safety status of the plant in a timely manner, and is capable of indicating when process limits are being approached or exceeded. Supplement 1 to NUREG-0737, NUREG-0696, and NUREG-0814 provide guidance regarding the SPDS. (The SPDS is reviewed under SRP Sections 7.5 and 18.2.)</p>	<p>VCS Annex, Section 5.2.7</p>

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<p>27. For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(viii) requires that an applicant provide a capability to promptly obtain and analyze samples from the reactor coolant system and containment that may contain accident source term radioactive materials, while ensuring that no individual receives radiation exposure in excess of 0.05 Sv (5 rem) to the whole body or 0.5 Sv (50 rem) to the extremities (TMI Item II.B.3).</p> <p>In addition, 10 CFR 50.47(b)(9) requires adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition. To address this regulation, the NRC has concluded that source term information should be obtained and analyzed, to continuously assess and refine dose assessments and confirm or modify initial protective action recommendations.</p> <p>Finally, 10 CFR 50.47(b)(11) requires the establishment of the means for controlling radiological exposure to emergency workers. Post-accident sampling systems are discussed in the October 31, 2000, Model Safety Evaluation, as it relates to the development of contingency plans for sampling and analysis of highly radioactive samples from the reactor coolant system, containment sump, and containment atmosphere.</p>	<p>VCS Annex, Section 5.2.3</p>
<p>28. For those licensees subject to 10 CFR 50.34(f), 10 CFR 50.34(f)(2)(xvii) requires instrumentation to measure, record and readout of various containment parameters, including noble gas effluents at all potential, accident release points. In addition, an applicant must provide for continuous sampling of radioactive iodines and particulates in gaseous effluents from all potential accident release points, and for onsite capability to analyze and measure these samples (TMI Item II.F.1). RG 1.97 provides guidance relating to instrumentation to assess plant and environmental conditions during and following an accident.</p>	<p>The technology for this site has not been established. This information will be provided once a reactor technology is selected at the COL stage.</p>
<p>29. 10 CFR 50.72(a)(3) and (c)(3) require the notification of the NRC Operations Center following the declaration of an emergency in accordance with the licensee's approved emergency plans, and the establishment of an open and continuous communications channel when requested by the NRC.</p> <p>10 CFR 50.72(a)(4) establishes requirements for the activation of the ERDS following the licensee's declaration of an alert, site area emergency, or general emergency. NUREG-1022 provides the minimum standards and acceptance methods that may be used to comply with these NRC reporting requirements.</p>	<p>ENSREP, Section D.1.a and D.1.b and E.2.b.2</p> <p>ENSREP, Section E.2.b.2</p>

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<p>10 CFR 73.71(a) requires the notification of the NRC Operations Center, after the discovery of an imminent or actual safeguards threat against the facility or other safeguards events. Regulatory Guide 5.62 provides the minimum standards and acceptance methods that may be used to comply with these NRC reporting requirements.</p>	<p>ENSREP, Section E.2.b.2</p>
<p>30. The emergency planning and preparedness standards and requirements in 10 CFR Part 50, 10 CFR Part 52, and 10 CFR Part 100 are supplemented by various generic communications and Commission Orders. Those generic communications that relate to emergency planning and are currently in effect are identified in Subsection VI (below). They provide additional guidance and criteria for meeting the relevant emergency planning standards and requirements. Any subsequently issued generic communications or Commission Orders that pertain to emergency planning and preparedness and are relevant to the application should also be addressed by the applicant.</p>	<p>ENSREP, Part III, Appendix 1, addresses generic communications, as applicable.</p>
<p>65. Administrative Letter (AL) 94-04, "Change of the NRC Operations Center Commercial Telephone &amp; Facsimile Numbers," April 11, 1994.</p>	
<p>66. AL 94-07, "Distribution of Site-Specific and State Emergency Planning Information," May 6, 1994.</p>	
<p>67. AL 94-16, "Revision of NRC Core Inspection Program for Annual Emergency Preparedness Exercise," November 30, 1994.</p>	
<p>68. Bulletin (BL) 79-18, "Audibility Problems Encountered on Evacuation of Personnel from High-Noise Areas," August 7, 1979.</p>	
<p>69. BL 80-15, "Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power," June 18, 1980.</p>	
<p>70. BL 05-02, "Emergency Preparedness and Response Actions for Security-Based Events," July 18, 2005 (ADAMS Accession No. ML051740058).</p>	
<p>71. Generic Letter (GL) 82-33, "Supplement 1 to NUREG-0737 – Requirements for Emergency Response Capability (Generic Letter 82-33)," December 17, 1982.</p>	
<p>72. GL 91-14, "Emergency Telecommunications," September 23, 1991 (ADAMS Accession No. ML031140150).</p>	
<p>73. Information Notice (IN) 81-34, "Accidental Actuation of Prompt Public Notification System," November 16, 1981.</p>	

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74. IN 85-41, "Scheduling of Pre-Licensing Emergency Preparedness Exercises," May 25, 1985.	
75. IN 85-44, "Emergency Communication System Monthly Test," May 30, 1985.	
76. IN 85-52, "Errors in Dose Assessment Computer Codes and Reporting Requirements Under 10 CFR Part 21," July 10, 1985.	
77. IN 85-80, "Timely Declaration of an Emergency Class, Implementation of an Emergency Plan, and Emergency Notifications," October 15, 1985.	
78. IN 86-18, "NRC On-Scene Response During a Major Emergency," March 26, 1986.	
79. IN 86-43, "Problems with Silver Zeolite Sampling of Airborne Radioiodine," June 10, 1986.	
80. IN 86-55, "Delayed Access to Safety-Related Areas and Equipment During Plant Emergencies," July 10, 1986.	
81. IN 86-98, "Offsite Medical Services," December 2, 1986.	
82. IN 87-54, "Emergency Response Exercises (Off-Year Exercises)," October 23, 1987.	
83. IN 87-58, "Continuous Communications Following Emergency Notification," November 16, 1987.	
84. IN 88-15, "Availability of U.S. Food and Drug Administration (FDA)-Approved Potassium Iodide for Use in Emergencies Involving Radioactive Iodine," April 18, 1988.	
85. IN 89-72, "Failure of Licensed Senior Operators to Classify Emergency Events Properly," October 24, 1989.	
86. IN 90-74, "Information on Precursors to Severe Accidents," December 4, 1990.	
87. IN 91-64, "Site Area Emergency Resulting from a Loss of Non-Class 1E Uninterruptible Power Supplies," October 9, 1991.	
88. IN 91-64, Supp. 1, "Supplement 1, Site Area Emergency Resulting from a Loss of Non-Class 1E Uninterruptible Power Supplies," October 7, 1992.	
89. IN 91-77, "Shift Staffing at Nuclear Power Plants," November 26, 1991.	

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
90. IN 92-32, "Problems Identified with Emergency Ventilation Systems for Near-Site (Within 10 Miles) Emergency Operations Facilities and Technical Support Centers," April 29, 1992.	
91. IN 92-38, "Implementation Date for the Revision to the EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA-400-R-92-001)," May 12, 1992.	
92. IN 93-53, "Effect of Hurricane Andrew on Turkey Point Nuclear Generating Station and Lessons Learned," July 20, 1993.	
93. IN 93-81, "Implementation of Engineering Expertise on Shift," October 12, 1993.	
94. IN 93-94, "Unauthorized Forced Entry into the Protected Area at Three Mile Island Unit 1 on February 7, 1993," December 9, 1993.	
95. IN 94-27, "Facility Operating Concerns Resulting from Local Area Flooding," March 31, 1994.	
96. IN 95-23, "Control Room Staffing Below Minimum Regulatory Requirements," April 24, 1995.	
97. IN 95-48, "Results of Shift Staffing Study," October 10, 1995.	
98. IN 96-19, "Failure of Tone Alert Radios to Activate When Receiving a Shortened Activation Signal," April 2, 1996.	
99. IN 97-05, "Offsite Notification Capabilities," February 27, 1997.	
100. IN 98-20, "Problems with Emergency Preparedness Respiratory Programs," June 3, 1998.	
101. IN 02-14, "Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner-Controlled Area," April 8, 2002.	
102. IN 02-25, "Challenges to Licensees' Ability to Provide Prompt Public Notification and Information During an Emergency Preparedness Event," August 26, 2002.	
103. IN 04-19, "Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment," November 4, 2004.	

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
104. IN 05-06, "Failure to Maintain Alert and Notification System Tone Alert Radio Capability," March 30, 2005.	
105. IN 05-19, "Effect of Plant Configuration Changes on the Emergency Plan," July 18, 2005.	
106. Regulatory Issue Summary (RIS) 2000-08, "Voluntary Submission of Performance Indicator Date," March 29, 2000 (ADAMS Accession No. ML003685821).	
107. RIS 2000-11, "NRC Emergency Telecommunications System," June 30, 2000 (ADAMS Accession No. ML003727812).	
108. RIS 2000-11, Supp. 1, "NRC Emergency Telecommunications System," March 22, 2001 (ADAMS Accession No. ML010570103).	
109. RIS 2001-16, "Update of Evacuation Time Estimates," August 1, 2001 (ADAMS Accession No. ML012070310).	
110. RIS 2002-01, "Changes to NRC Participation in the International Nuclear Event Scale," January 14, 2002 (ADAMS Accession No. ML013200502).	
111. RIS 2002-16, "Current Incident Response Issues," September 13, 2002 (ADAMS Accession No. ML022560256).	
112. RIS 2002-21, "National Guard and Other Emergency Responders Located in the Licensee's Controlled Area," November 8, 2002 (ADAMS Accession No. ML023160020).	
113. RIS 2003-12, "Clarification of NRC Guidance for Modifying Protective Actions," June 24, 2003 (ADAMS Accession No. ML031680611).	
114. RIS 2003-18, "Use of NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," October 8, 2003 (ADAMS Accession No. ML032580518).	
115. RIS 2003-18, Supp. 1, "Supplement 1, Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," July 13, 2004 (ADAMS Accession No. ML041550395).	

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

Section II. Acceptance Criteria	Section Reference/Comments
116. RIS 2003-18, Supp. 2, "Supplement 2, Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003," December 12, 2005 (ADAMS Accession No. ML051450482).	
117. RIS 2004-07, "Release of Final Review Standard (RS)-002, Processing applications for Early Site Permits," May 19, 2004	
118. RIS 2004-13, "Consideration of Sheltering in Licensee's Range of Protective Action Recommendations," August 2, 2004 (ADAMS Accession No. ML041210046).	
119. RIS 2004-13, Supp. 1, "Consideration of Sheltering in Licensee's Range of Protective Action Recommendations, Dated August 2004," March 10, 2005 (ADAMS Accession No. ML050340531).	
120. RIS 2004-15, "Emergency Preparedness Issues: Post 9/11," (Official Use Only – See RIS 2006-02), October 18, 2004.	
121. RIS 2004-15, Supp. 1, "Emergency Preparedness Issues: Post-9/11," May 25, 2006 (ADAMS Accession No. ML053000046).	
122. RIS 2005-02, "Clarifying the Process for Making Emergency Plan Changes," February 14, 2005 (ADAMS Accession No. ML042580404).	
123. RIS 2005-08, "Endorsement of Nuclear Energy Institute (NEI) Guidance 'Range of Protective Actions for Nuclear Power Plant Incidents," June 6, 2005 (ADAMS Accession No. ML050870432).	
124. RIS 2006-02, "Good Practices for Licensee Performance During the Emergency Preparedness Components of Force-On-Force Exercises," February 23, 2006 (ADAMS Accession No. ML052970294).	
125. RIS 2006-03, "Guidance on Requesting an Exemption from Biennial Emergency Preparedness Exercise Requirements," February 24, 2006 (ADAMS Accession No. ML053390039).	
126. RIS 2006-12, "Endorsement of Nuclear Energy Institute Guidance "Enhancements to Emergency Preparedness Programs for Hostile Action", July 19, 2006 (ADAMS Accession No. ML061530290).	

**ATTACHMENT 19**  
**VCS ESPA NUREG-0800 Standard Review Plan Section 13.3 Conformance Evaluation**

<b>Section II. Acceptance Criteria</b>	<b>Section Reference/Comments</b>
<p>127. Emergency Preparedness Position (EPPOS) No. 1, Rev. 0, "Acceptable Deviations from Appendix 1 of NUREG-0654 Based Upon the Staff's Regulatory Analysis of NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels", June 1, 1995 (ADAMS Accession No. ML022970165).</p>	
<p>128. EPPOS No. 2, "Timeliness of Classification of Emergency Condition," August 1, 1995.</p>	
<p>129. EPPOS No. 3, "Requirement for Onshift Dose Assessment Capability, November 8, 1995.</p>	
<p>130. EPPOS No. 5, "Emergency Planning Information Provided to the Public," December 4, 2002.</p>	
<p>131. Circular (CR) 80-09, "Problems with Plant Internal Communications Systems," April 28, 1980.</p>	
<p>31. For COL reviews, the description of the operational program and proposed implementation milestone(s) for the Emergency Planning program are reviewed in accordance with 10 CFR 50.47, Part 50 Appendix E. The implementation milestones are as follows:                       full participation exercise conducted within 2 years of scheduled date for initial loading of fuel per 10 CFR 50, Appendix E.IV.F.2a(ii); onsite exercise conducted within 1 year before the schedule date for initial loading of fuel per 10 CFR Part 50, Appendix E.IV.F.2a(ii); and applicant's detailed implementing procedures for its emergency plan submitted no less than within 180 days prior to scheduled date for initial loading of fuel per 10 CFR Part 50, Appendix E. V.</p>	<p>Information will be provided at the COL stage.</p> <p>Emergency Planning ITAAC included in SSAR 13.3, Table 13.3-1, as updated in Exelon letter NP-11-0011, dated April 12, 2011.</p> <p>Emergency Planning ITAAC included in SSAR 13.3, Table 13.3-1, as updated in Exelon letter NP-11-0011, dated April 12, 2011.</p>

**ATTACHMENT 20**

**Exelon Nuclear Radiological Emergency Plan Annex**

**For Victoria County Station**

**EP-AA-1011, Revision C**

**May 2011**

## **EXELON NUCLEAR**

# **RADIOLOGICAL EMERGENCY PLAN ANNEX FOR VICTORIA COUNTY STATION**

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**APPENDIXES**

Appendix 1: NUREG-0654 Cross-Reference

Appendix 2: Station Letters of Agreement

Appendix 3: 10 CFR 50 Appendix E Cross-Reference

Appendix 4: Procedure Cross-Reference to NUREG-0654

**REVISION HISTORY**

<u>REVISION</u>	<u>EFFECTIVE DATE</u>	<u>REVISION</u>	<u>EFFECTIVE DATE</u>
A			
B			
C			

## Section 1: Introduction

As required in the conditions set forth by the Nuclear Regulatory Commission (NRC) for the operating licenses for the Exelon Nuclear Stations, the management of Exelon recognizes its responsibility and authority to operate and maintain the nuclear power stations in such a manner as to provide for the safety of the general public.

The Exelon Emergency Preparedness Program consists of the Exelon Nuclear Standardized Emergency Plan (E-Plan), Station Annexes, emergency plan implementing procedures, and associated program administrative documents. The Exelon E-Plan outlines the basis for response actions that would be implemented in an emergency. Planning efforts common to all Exelon Nuclear Stations are encompassed within the E-Plan.

This document serves as the Victoria County Station (VCS) Emergency Plan Annex and contains information and guidance that is unique to the station. This includes Emergency Action Levels (EALs), and facility geographic location for a full understanding and representation of the station's emergency response capabilities. The Station Annex is subject to the same review and audit requirements as the Exelon Nuclear Standardized Emergency Plan. If there is a conflict in information contained in the VCS Emergency plan Annex and the Exelon Nuclear Standardized Plan, the VCS Annex information will apply.

### 1.1 Federal Agencies:

The National Response Framework (NRF), Nuclear/Radiological Incident Annex outlines the statutory and regulatory responsibilities. The primary federal response for supporting an emergency at Exelon's VCS include:

1. Nuclear Regulatory Commission (NRC)
2. Federal emergency management Agency (FEMA)
3. Federal Radiological Preparedness Coordinating Committee (FRPCC)
4. U.S. Department of Energy (DOE)
5. Environment Protection Agency (EPA)
6. U.S. Coast Guard (USCG)
7. U.S. Army Corps of Engineers
8. Federal Bureau of Investigation (FBI)
9. National Weather Service (NWS)

The NRC shall respond to incidents at licensed facilities or vehicular accidents involving licensed materials, including radionuclides, in transit. The NRC shall act as the Federal Coordinating Agency with regard to technical matters during a nuclear incident including radiological assistance. In this role, the NRC:

- Performs an independent assessment of the incident and potential off-site consequences and, as appropriate, provides recommendations concerning any protective measures.
- Performs oversight of the licensee, to include monitoring, evaluation of protective action recommendations, advice, assistance, and, as appropriate, direction.
- Dispatches, if appropriate, an NRC site team of technical experts to the licensee's facility.

The NRC closely coordinates its actions with State and local government officials during an incident by providing advice, guidance, and support as needed. In the event that DHS assumes overall management of the Federal response under HSPD-5 to an accidental or inadvertent incident involving an NRC-regulated facility, the NRC will support DHS under the *NRF* and *NIMS*, including acting as the coordinating agency for this annex.

The NRC shall be prepared through an independent assessment to recommend appropriate protective actions for the public and technical actions to the licensee. For Protective Action Recommendations (PAR), the NRC reviews the licensee's PAR, but only makes a recommendation to State or local officials if requested to do so by these agencies. FEMA shall act as the lead Federal agency for offsite, non-technical concerns.

During an incident, the Chairman of the Commission is the senior NRC authority for all aspects of a response. The Chairman may transfer control of emergency response activities to the Site Team Director when deemed appropriate by the Chairman.

The Department of Homeland Security under Homeland Security Presidential Directive (HSPD) 5 assumes the incident management responsibilities if the event is classified as a General Emergency.

## 1.2 State Agencies

State of Texas: The State of Texas organizations having prime responsibility in matters of radiation hazards are the Department of State Health Services and the Governor's Division of Emergency Management

Department of State Health Services (DSHS) – DSHS has the primary response responsibility as set forth in the State of Texas Emergency Management Plan Annex D, Radiological Emergency Management.

The Governor's Division of Emergency Management (GDEM) – Through the State Operations Center (SOC), GDEM supports DSHS and coordinates local, state, and federal emergency management activities in accordance with the State Emergency Management Plan.

## 1.3 County Government Agencies

Exelon and the surrounding counties of Victoria, Goliad, Calhoun, and Refugio comprise the Plume Exposure Pathway or 10 Mile EPZ and have developed integrated emergency response programs that call upon the resources of their county to respond as needed. The county organizations are responsible for implementing and coordinating the county's response to an emergency.

The planning for, the decision to implement and control those protective actions remains the sole responsibility of the County Judge or County Commissioners;

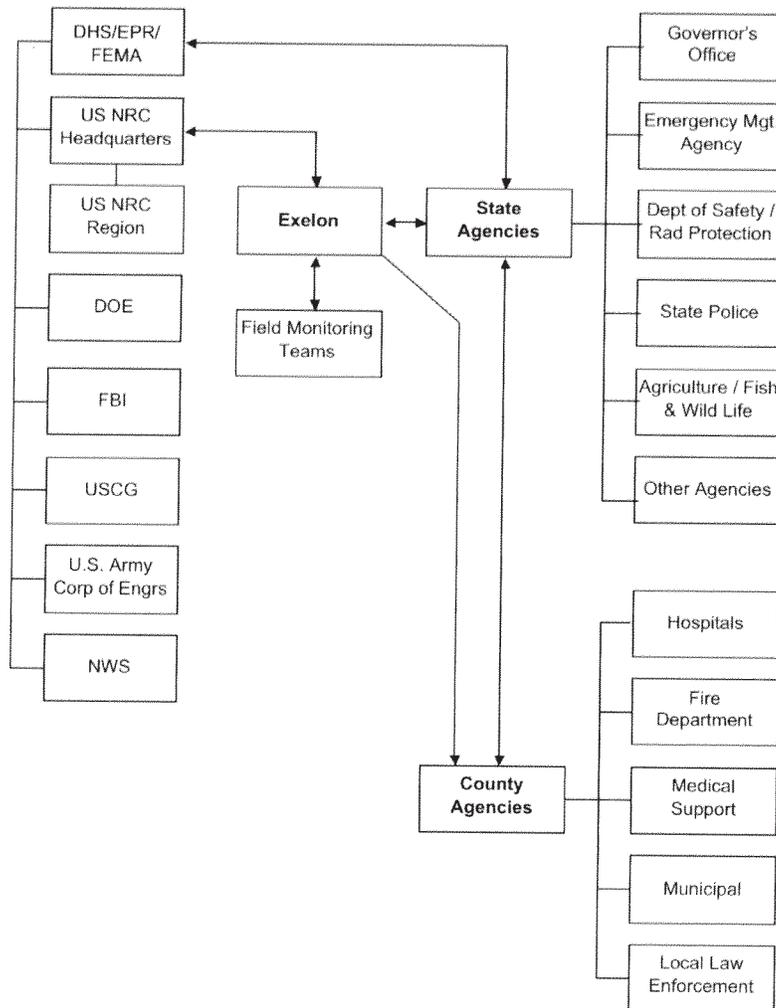
however, the Texas Department of State Health Services (DSHS) will advise the EPZ county officials if and when protective actions are necessary,

The County Emergency Operations Centers (EOCs) serve as the primary coordinating center for local government response within the county's jurisdiction and for coordination between counties and the State of Texas.

Each county agency has a responsibility as outlined in the County Emergency Plan. An example of those responsibilities includes; Command and Control is the responsibility of the County Judge or their designee, communications, warning and notifications are the responsibility of the Sheriff, public health and sanitation is the responsibility of the county health official, and fire protection and rescue is assigned to the fire chief.

Figure A-1 provides an illustration of the interrelationships between the response agencies for the Victoria County Station.

Figure A-1



1.4 Facility Description

Victoria County Station (VCS), Units 1 and 2 is located in Victoria County, Texas. The site is an approximately 11,500 acre undeveloped property located in a rural area, approximately 13.3 miles southwest of the city of Victoria, Texas. The site boundary is the same as the property boundary.

Normal access to the site will be from U.S. Hwy 77. Normal access to the Owner Controlled Area (OCA) is limited to one location. There are other access routes to the site, which are closed to normal site vehicular traffic. Local law enforcement is able to gain access through alternate routes to the site by using a variety of methods.

Units 1 and 2 will be located approximately 3 miles west of Linn Lake and 4.3 miles northwest of the town of McFaddin. The Guadalupe River is approximately 4.1 miles east of the site, and the Victoria Barge Canal, which connects to the Gulf Intracoastal Waterway, is approximately 5.2 miles east of the site. The closest population center to the site with more than 25,000 residents is the city of Victoria.

Figure 1-1 shows the general location of VCS. More specific information on station siting may be found in the Early Site Permit (ESP) Application Site Safety Analysis Report.

VCS will be a multi-unit station whose reactor design will be selected in the future.

#### 1.5 Emergency Planning Zone

The plume exposure Emergency Planning Zone (EPZ) for VCS is an area surrounding the station with a radius of about ten miles. Exact boundaries are determined by the local governments and the State of Texas (refer to Figure 1-2). The counties participating in the EPZ are Victoria, Goliad, Refugio, and Calhoun.

The ingestion pathway EPZ for VCS is an area surrounding the station with a radius of about 50 miles (refer to Figure 1-3). The counties within 50 miles of the station include: Aransas, Bee, Calhoun, De Witt, Goliad, Gonzales, Jackson, Karnes, Lavaca, Matagorda, Refugio, San Patricio, Victoria, and Wharton. All of these counties are in the state of Texas.

Figure 1-1: Victoria County Station Vicinity

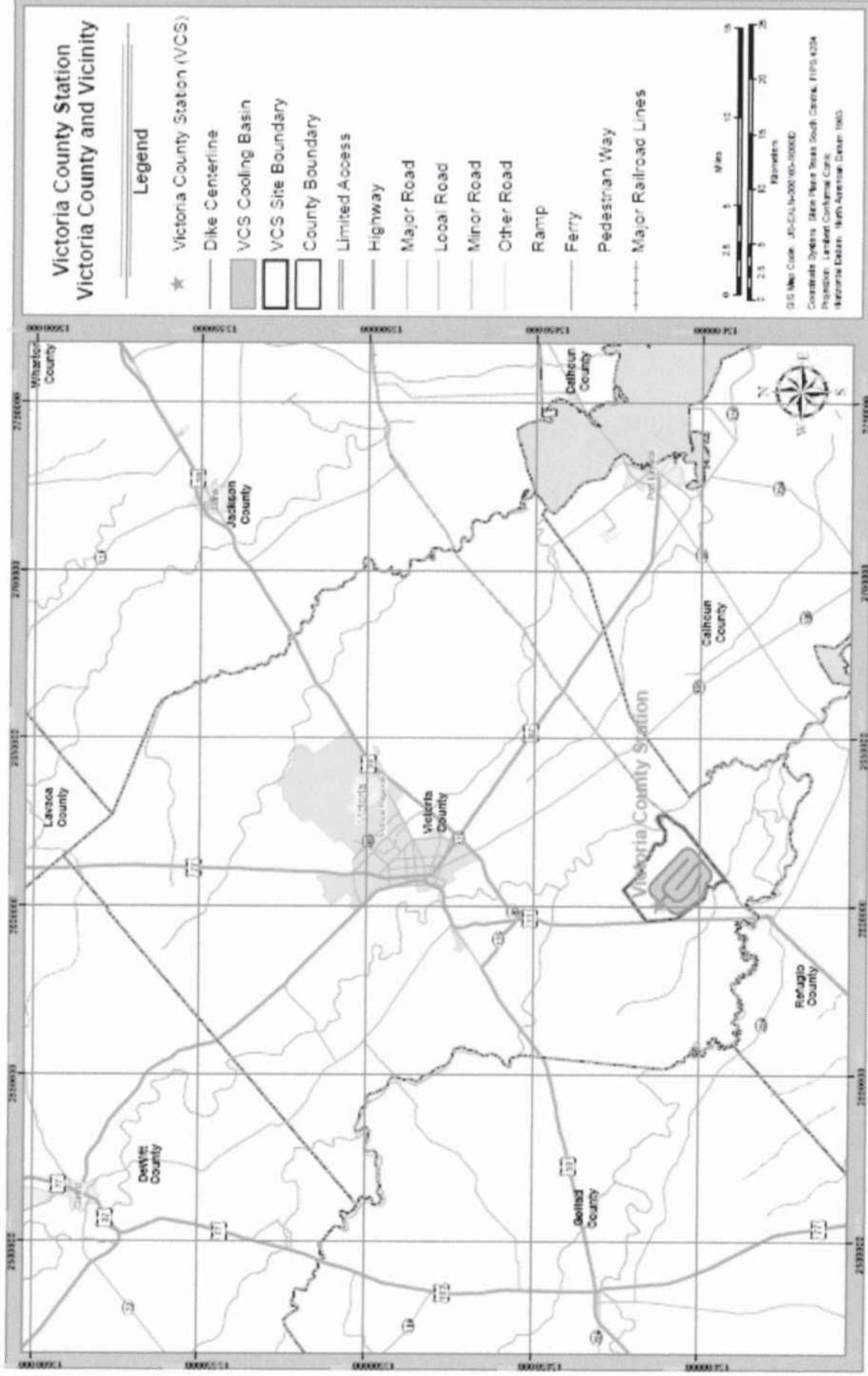


Figure 1-2: Victoria County Station 10 Mile EPZ

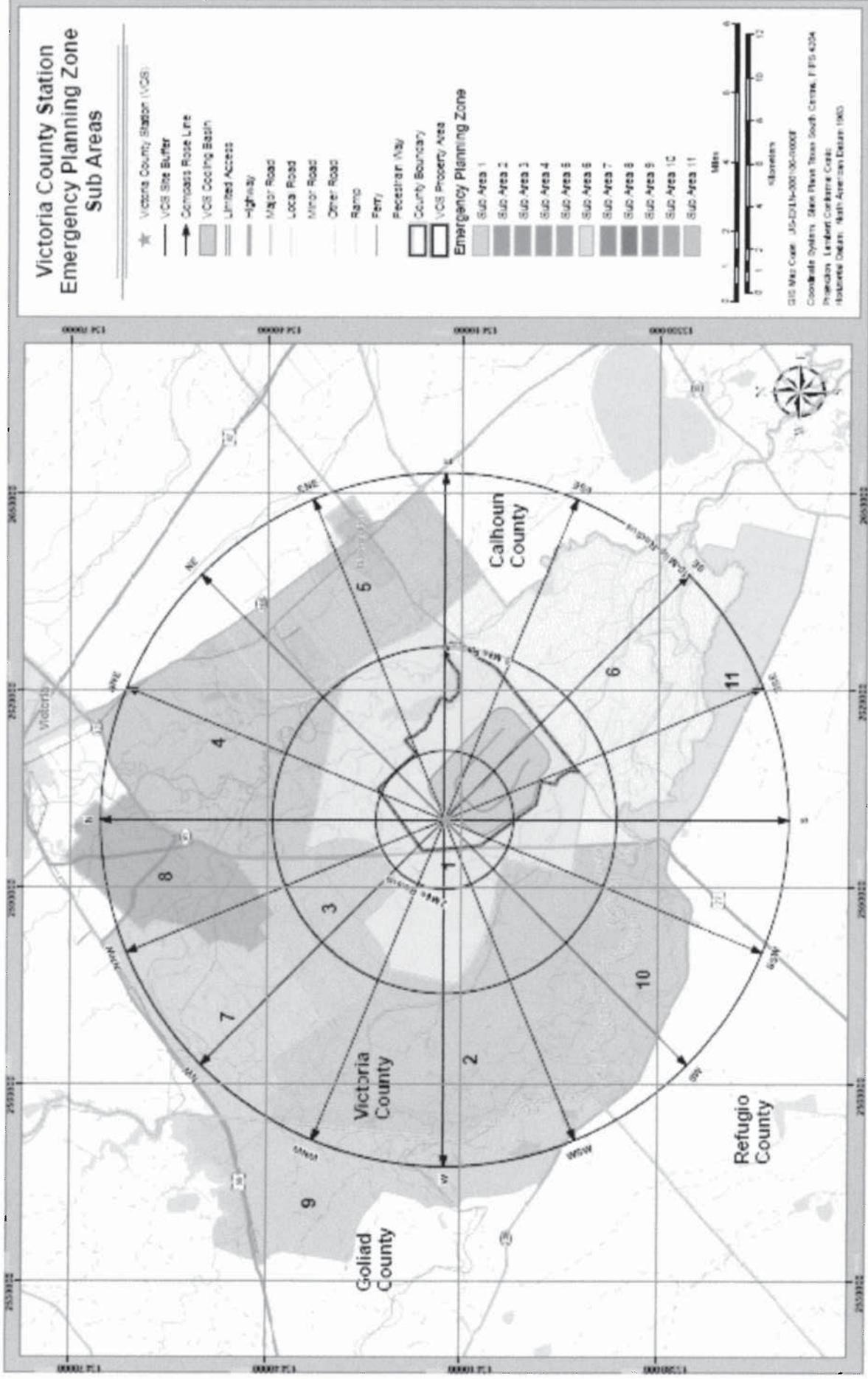
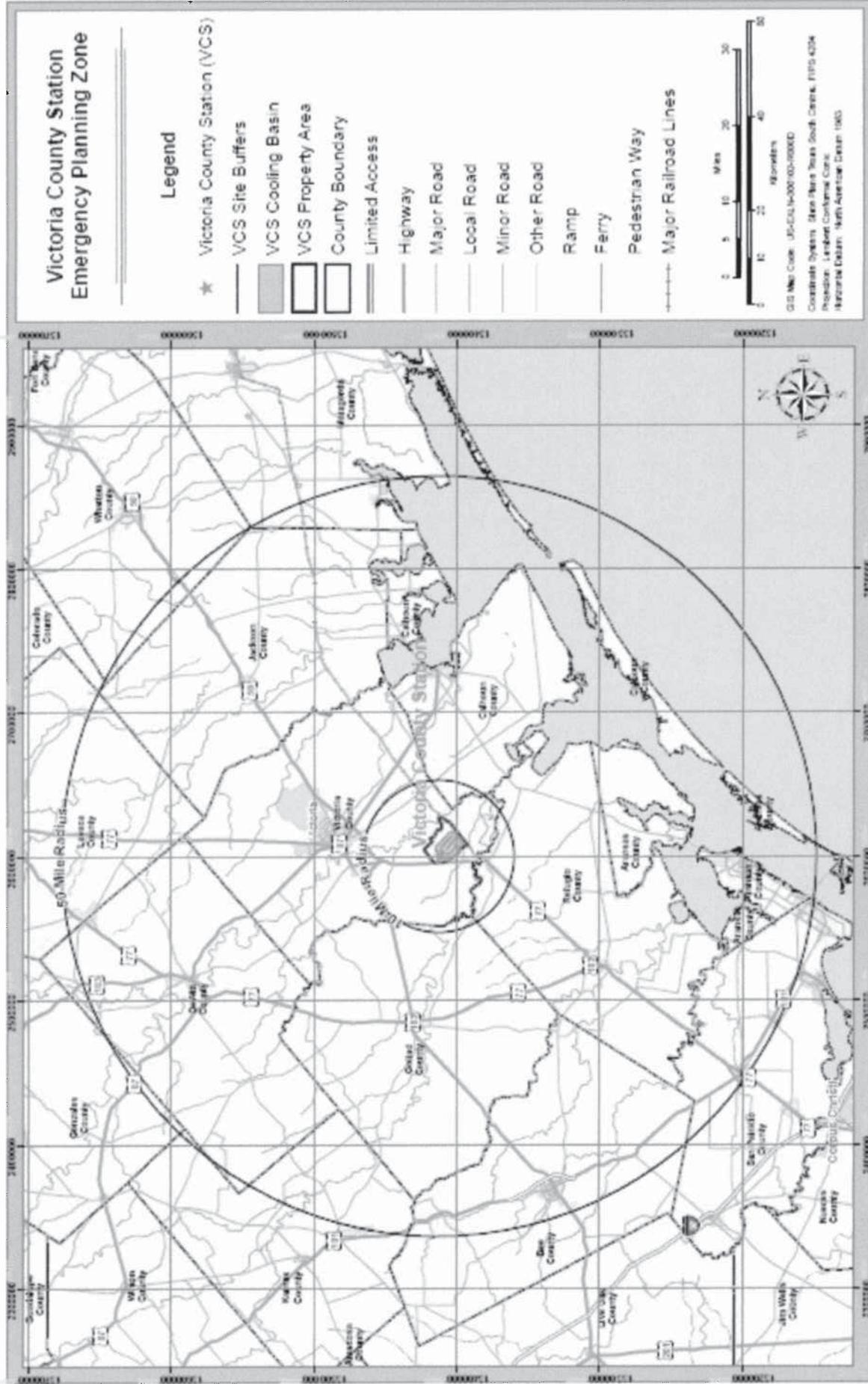


Figure 1-3: Victoria County Station 50 Mile EPZ



## **Section 2: Organizational Control of Emergencies**

Initial response to any emergency is by the normal plant organization present at the site on a 24 hours per day basis. Once an emergency is declared, the Emergency Response Organization (ERO) is activated as described in Section B.4 of the Exelon Nuclear Standardized Radiological Emergency Plan.

At VCS a goal of 30 and 60 minutes for minimum staffing has been established for the ERO personnel responding to the station emergency facilities and the EOF following notification of the declaration of an Alert or higher emergency classification, This is illustrated in Table VCS 2.1.

The overall Emergency Plan staffing by positions and responsibilities is addressed in the Exelon Nuclear Standardized Radiological Emergency Plan. The list below includes position and responsibility differences between VGS and the Standard Plan.

### 2.1 Shift Organization Staffing

Required on-shift staffing in support of emergency response activities is 16 personnel. This on-shift staffing level exceeds the Exelon Nuclear Standardized Radiological Emergency Plan commitment of ten (10) people.

A listing of minimum shift complement is provided in Table VGS 2-1 of the Annex for Victoria County Station. Based on existing on-shift staffing commitments, the "Minimum Shift Size" for the purposes of NUREG-0654, Table B-1 is 16 personnel. In addition, there are eleven (11) 30 minute responders and thirty one (31) 60 minutes responders. This number of personnel provides a response organization that surpasses the minimum staffing level to activate and operate each emergency response facility

#### 2.1.1 Shift Emergency Director

The Shift Manager (SM) assumes the position of Shift Emergency Director upon the declaration of an emergency. The SM retains the duties of the Emergency Director until properly relieved by a qualified Emergency Director in the affected unit Control Room, Emergency Director in an activated TSC, or an Emergency Director in an activated EOF. The Shift Emergency Director maintains the responsibilities of Shift Manager.

The Shift Emergency Director has the authority and responsibility to request Federal assistance during a declared emergency while he/she is in the command and control position. This duty transfers with the command and control of the emergency to either the Station Emergency Director or the Corporate Emergency Director upon formal turnover and assumption of the Emergency Director's duties.

#### 2.1.2 Shift Dose Assessment

The on-shift dose assessment function will be performed by a shift Radiation Protection Technician (RPT) at Victoria County Station. The Shift Dose Assessor is available to assist with radiological survey functions unless dose assessment activities are required

### 2.1.3 Shift Communicator

The Shift Communicator performs notifications to the State and County organizations until relieved by the TSC and assists in the initiation of the ERO Callout System as directed. This position is filled by the shift clerk when that position is staffed. When the shift clerk position is not available, any available on-shift personnel (e.g. equipment operator) may be used to fill this function. The Shift Communicator performs all communication upon approval of the information by the Shift Emergency Director.

Activation of the automated ERO call out system will be performed by the Shift Manager, but may be delegated to a Control Room Emergency Communicator or available on-shift staff.

### 2.1.4 Shift Technical Advisor (STA)

Each on duty shift shall include a Shift Technical Advisor. Any STA qualified individual may perform the position. The Shift Technical Advisor position may be filled by an on-shift Senior Reactor Operator (dual-role SRO/STA) provided the individual meets the requirements of the VCS Technical Specifications when developed for the COLA.

### 2.1.5 Incident Assessor

Victoria County Station has the option of using an Incident Assessor in these cases where others hold STA qualifications such as the Shift Manager. Upon declaration of an emergency, the Incident Assessor fulfills the role of the on-shift technical advisor and reports to the Shift Emergency Director (Shift Manager). The Incident Assessor shall function as an advisor to the Shift Manager on matters of safety and act as an on-shift technical advisor. The Incident Assessor is an ERO position that can be filled by an individual who is qualified as the Shift Technical Advisor or Incident Assessor.

### 2.1.6 Mechanical Maintenance/RadWaste Operator

There is a Mechanical Maintenance trained person on-shift. This is shown in VCS Table 2.1 as one of the two maintenance personnel on-shift.

### 2.1.7 Electrical/I&C Maintenance

There is either an Electrical or an I&C Maintenance person on-shift. This is shown in VCS Table 2.1 as one of the two maintenance personnel on-shift.

### 2.1.8 Radiation Protection Personnel (Protective Actions In-Plant)

On-Shift personnel are trained to utilize radiation detection meters for area surveys and to support day-to-day work activities. On-shift personnel

have also been trained to provide the results of surveys taken to shift management for evaluation and decision making concerning in-plant protective actions for plant personnel and offsite response personnel.

2.1.9 First Aid and Rescue Operations Personnel

On-shift maintenance personnel, chemistry technicians, plant equipment operators, and radiation protection technicians are trained in Red Cross First Aid/CPR/AED or equivalent and are able to support offsite agencies in rescue activities.

2.2 Emergency Response Organization (ERO) Staffing

Refer to Table VCS 2-1 of the VCS Annex, "Minimum Staffing Requirements", for a comparison against the Exelon Nuclear Standardized Radiological Emergency Plan of 60-minute and full augmentation commitments.

2.2.1 Emergency Onsite Organization

**Radiation Controls Coordinator (RCC)** TSC

- Following EOF Protective Measures Group staffing:

Transfer responsibility for dose assessment activities and control of the Field Monitoring Teams to the EOF Dose Assessment Coordinator when appropriate. Standard Plan transfers control of Field Monitoring Teams to the Environmental Coordinator.

**Technical Support Staff** TSC

The Electrical or Mechanical Engineer, as directed by the Technical Manager, will perform the duties of the State / Local Communicator until relieved by the EOF.

**Dose Assessment Coordinator** EOF

The Dose Assessment Coordinator is responsible for the tasks listed in the Standard Plan in addition to the Standard Plan responsibilities for the EOF Environmental Coordinator.

**HPN Communicator** EOF

The HPN Communicator reports to the Dose Assessment Coordinator.

**State Environs Communicator** EOF

The responsibilities of the State Environs Communicator as listed in the Standard Plan are accomplished by the Dose Assessment Coordinator in the VCS Emergency Organization.

**Computer Specialist** TSC

The Computer Specialist reports to the Logistics Coordinator in the TSC.

**Security Coordinator** EOF

The responsibilities of the Security Coordinator as listed in the Standard Plan are accomplished by the Logistics Manager in the VCS Emergency Organization.

**EOC Communicator** EOF

The responsibilities of the EOC Communicator as listed in the Standard Plan are addressed by direct interaction with the State Representatives present in the EOF for the VCS Emergency Organization.

**County Liaisons – dispatched to County EOCs** EOF

County Liaisons as listed in the Standard Plan are not required for support of the VCS Emergency Organization.

**State EOC Liaison – dispatched to State EOC** EOF

State EOC Liaisons as listed in the Standard Plan are not required for support of the VCS Emergency Organization.

**Radiation Protection Spokesperson** JIC

The responsibilities of the Radiation Protection Spokesperson as listed in the Standard Plan are addressed by direct interaction with the State of Texas Representative present in the EOF for the VCS Emergency Organization.

**Public Information Director (PID)**

JIC

The Public Information Director directs the media monitoring staff and other aspects of the JIC operation.

**News Writer**

JIC

In the VCS Emergency Organization, the News Writer obtains assistance from the Radiation Protection Spokesperson as listed in the Standard Plan.

**Media Monitoring Staff**

JIC

The Media Monitoring Staff responsibilities are performed in the VCS JIC under the direction of the PID.

**Rumor Control Staff**

JIC

The Rumor Control Staff responsibilities are performed in the VCS JIC under the direction of the PID.

The Corporate Spokesperson is not a minimum staffing position in the VCS Emergency Plan.

2.3 Emergency Offsite Organization

Based on existing interface and staffing agreements, representatives from the State of Texas will respond to the Emergency Operations Facility (EOF), allowing direct face-to-face communications. As such, the State Environs Communicator position, listed under the Exelon Nuclear Standardized Radiological Emergency Plan, is not staffed at the EOF.

An EOF Access Controller has been added to the Full Augmentation complement to support existing facility access control measures.

Field teams are deployed as needed to conduct environmental monitoring with a goal of 30-60 minutes upon arrival in the EOF.

2.3.1 Emergency Public Information Organization

Based on the co-location of the EOF with the Joint Information Center (JIC) the following Emergency News Center (ENC) functions, the following functions are provided by VCS JIC assigned personnel:

- Media Monitoring and Rumor Control
- Radiation Protection Spokesperson position has been incorporated into the Technical Spokesperson
- Facilities Support Staff
  
- Logistical and administrative configuration of the VCS EOF/JIC provides support to the JIC staff.

## 2.4 Emergency Response Organization (ERO) Training

Training is conducted in accordance with Section O.5 of the Exelon Nuclear Standardized Radiological Emergency Plan per TQ-AA-113, "ERO Training and Qualification." Retraining is performed on an annual basis, which is defined as every 12 months + 3 months (25% grace period).

VCS JIC staff will receive training on a periodic basis on their roles in responding to an emergency at the station per Section II.O.5.

Training in the form classroom sessions/Computer Based Training (CBT) and drills will be provided to the ERO to demonstrate their key skills necessary for mitigating security-based events. Security based event drills will be included in the drill schedule rotation to ensure that their skills and knowledge is maintained accordingly.

Training will also be provided to the ERO that will focus on events external to VCS (transportation, nearby hazardous facilities, dams, and other nearby site that may cause an event to become a classifiable emergency for VCS. The Shift Emergency Director or Station Emergency Director if the TSC has been activated will direct personnel protective actions for the ERO. ERO personnel that are offsite when notified will be directed where to go and to await further instructions prior to attempting to respond to the Station and their assigned emergency response facility. The EOF is the back-up location for personnel to support and stage in the event that the Station is not safe location to respond.

## 2.5 Non-Exelon Nuclear Support Groups

Agreements exist on file with or are verified current annually by the MA Region Corporate Emergency Preparedness Group for the support agencies listed in Appendix 2 of the Exelon Nuclear Radiological Emergency Plan Annex for OCGS.

Additionally, Exelon Nuclear has contractual agreements common within Exelon Nuclear with several companies whose services would be available in the event of a radiological emergency. These agencies are also listed in Appendix 3 of the Exelon Nuclear Standardized Radiological Emergency Plan.

Emergency response coordination with governmental agencies and other support organizations is discussed in Section A of the Exelon Nuclear Standardized Radiological Emergency Plan.

## 2.6 Nuclear Steam Systems Supplier (NSSS)

The chosen vendor maintains an Emergency Response Organization, which can provide technical assistance from their home office or at the site.

## 2.7 Architect/Engineer

The chosen vendor or other contractors may be involved in the technical analysis or construction activities associated with the emergency response or recovery operation. Each such organization will designate a lead representative who will have the same responsibilities, within their scope of work, as described for the NSSS Contractor.

## 2.8 Non-Exelon Nuclear Support Groups

Exelon Nuclear has contractual agreements with several companies whose services would be available in the event of a radiological emergency. These companies and their available services are listed in Appendix 3 of the Exelon Nuclear Standardized Emergency Plan.

Emergency response coordination with governmental agencies and other support organizations is discussed in Section A of the Exelon Nuclear Standardized Emergency Plan and in Section 1 of the Victoria County Station Annex.

Letters of Agreement (LOA) with several support agencies are on file at VCS. These agencies and their support roles are listed in Appendix 2, "Station Letters of Agreement."

## 2.9 Exelon Victoria County Station Annex Organization

This section describes the Victoria County Station Emergency Response Organization (ERO) and its response as it varies from the Exelon Standardized Emergency Response Plan. Other than the response times as listed in Table 2.1. Minimum Staffing levels for the Victoria County Station the ERO is constituted of the same positions and duties as listed in the Exelon Standardize Emergency Response Plan.

## 2.10 ERO Response During Hostile Action

In the event that an emergency is declared based on Hostile Actions during normal working hours, the ERO is expected to take immediate protective actions such as "take cover" as directed by the Shift Emergency Director (ED). If other protective actions of shelter or evacuation have been issued the ERO personnel will respond to their assigned emergency response facility when directed by the Shift ED. During an off-hours response to a hostile action emergency classification, the ERO will be directed to respond to the EOF located in the City of Victoria. This facility is outside of the EPZ and is accessible if the site is in a hostile action event. The ERO will provide support from the EOF as it has the communications links to the Control Room and site security. It also has data links, and other support materials (general drawings and systems information) for the TSC Staff. There are other rooms in the Victoria County Annex Building that would be utilized for staging of OSC personnel until they can safely respond to the site to support and augment the station ERO personnel. When it is determined that it is safe to respond to the Station, selected ERO personnel would be escorted or transported by local law enforcement personnel to ensure

that they are protected during their response to the Station to conduct mitigative actions.

Table VCS 2.1: Minimum Staffing Requirements for the Victoria County Station

Functional Area	Major Tasks	Emergency Positions	On Shift*	(a)30 Minute Responders	(a)60 Minute Responders	Full Augmentation
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	Shift Manager	1			
		Shift Supervisor	1			
		Reactor Operator Equipment Operator	2			
2. Emergency Direction and Control	Command and Control	Shift Emergency Director	2			
	Emergency Operations	Station Emergency Director	1 <sup>(c)</sup>		1	
		Corporate Emergency Director			1	
	Emergency Communications	Shift Communicator <sup>(d)</sup>	1		1	1(TSC) <sup>(p)</sup>
		TSC Director			1	1(EOF)
		EOF Director			1	1(TSC)
3. Notification & Communication		State/Local Communicator <sup>(p)</sup>		1(TSC)		
		ENS Communicator			1(EOF)	
		HPN Communicator			1(TSC)	
		Operations Communicator			1(EOF)	
	Plant Status	Operations Communicator			2	
	In-Plant Team Control	Damage Control Comm.			2	1(TSC)
	Technical Activities	Technical Communicator				1
	Governmental	County EOC Liaison			1	(h)
	Offsite Dose Assessment	Shift Dose Assessor <sup>(e)</sup>		1		(b)
		RP Group Lead				
		(OSC)				
		Dose Assessment Coordinator			1	
		Dose Assessor			1	
4. Radiological Accident Assessment and Support of Operational Accident Assessment		Radiation Controls Coordinator		1		1
		Field Team Communicator				1
	Offsite Surveys	Field Team Communicator				1
		Off-Site Field Team Personnel				
	Onsite Surveys	RP Personnel		2	2	(g)
	In-Plant Surveys	RP Technicians	1	2		(g)
	Chemistry	Chemistry Personnel	1	2		(g)
					1	(g)

RP Supervisor

Radiation Protection Manager (TSC/EOF)

2

Functional Area	Major Tasks	Emergency Positions	On Shift*	30 Minute Responders	60 Minute Responders	Augmentation	
5. Plant Systems Engineering, Repair, and Corrective Actions	Technical Support	STA / Incident Assessor <sup>(n)</sup>	1			Full	
		Technical Manager			1		
		Core/Thermo Hydraulics Engineer		1			
		Mechanical Engineer			1		
		Electrical Engineer			1		
		SAMG Decision maker			1 <sup>(f)</sup>		
		SAMG Evaluator			2 <sup>(f)</sup>		
		Operations Manager			1		
		Radiation Controls Engineer			1		
		Maintenance Personnel			2		(g)
Repair and Corrective Actions	Accident Analysis	Maintenance Manager			1		
		OSC Director	1		1		
		OSC Assistance Director				1	
		Technical Support Manager			1		
6. In-Plant Protective Actions	Radiation Protection	Operations Advisor				1	
		Technical Advisor				1	
7. Fire Fighting	--	RP Personnel	2			(g)	
		Fire Brigade	(i)				
8. First Aid and Rescue Operations	--	Plant Personnel	2 <sup>(f)</sup>				
9. Site Access Control and Personnel Accountability	Security & Accountability	Security Team Personnel	1 <sup>(k)</sup>		(k)		
		Security Coordinator			1		
		EOF Access Controller					
		Access Control				1	
10. Resource Allocation and Administration	JIC Security Logistics / Administration	Logistic Manager			1		
		Logistics Coordinator				1	
		Clerical Staff					1
		Events Recorder					(g)
		Administrative Coordinator					2
	Computer Specialist					1	

Functional Area	Major Tasks	Emergency Positions	On Shift*	(a) 30 Minute Responders	(a) 60 Minute Responders	Full Augmentation	
11.Public Information	Media Interface	Corporate Spokesperson Technical Advisor / Spokesperson (JIC)				1 1	
	Information Development	Public Information Director News Writer (JIC)			1	1	
	Media Monitoring and Rumor Control	Media Monitoring Rumor Control (JIC)				2 2	
	Facility Operation and Control	JIC Director JIC Coordinator Administrative Coordinator Clerical Support (JIC)			1	1 1 (g)	
				Min Shift Size	Total 30 Minute Responders	Total 60 Minute Responders	Total Full Augmentation
				16	11	31	27
				Total	Total	Total	Total

- (a) Response time is based on optimum travel conditions.
- (b) Position assumed by the Shift Dose Assessor when relieved by the Radiological Controls Coordinator.
- (c) Overall direction of station response to be assumed by the Corporate Emergency Director (EOF) when all centers are fully manned. Direction of minute-to-minute facility operations and "non-delegable" responsibilities for event classification and emergency exposure controls remain with the Station Emergency Director (TSC). The Shift Manager, as Shift Emergency Director, shall function as acting Station Emergency Director prior to TSC activation.
- (d) Refer to Section 2.1 for a description of shift communicator staffing.
- (e) Refer to Section 2.1 for description of on-shift dose assessment staffing.
- (f) May be provided by personnel assigned other functions. Personnel can fulfill multiple functions.
- (g) Personnel numbers depend on the type and extent of the emergency.
- (h) Staffing of the County EOC Liaison position is not required based on agreements with offsite agencies; however, every effort will be made to dispatch an Exelon Nuclear representative upon request from County EOC Director.
- (i) Fire Brigade per UFSAR / TRM, as applicable when developed for the COLA.
- (k) Per Security Plan when developed for the COLA.
- (l) Not assigned
- (m) Each Field Survey Team consists of a Lead and Driver.
- (n) Refer to Section 2.1.3. and 2.1.4 for description of on-shift STA and Incident Assessor staffing requirements.
- (p) State / Local communicator function in TSC assigned as collateral duty to either mechanical or electrical engineer (60-minute staff personnel)
- (q) On-shift OSC Director assumes role of OSC Operations Group Lead when relieved by ERO OSC Director

**Section 3: Classification of Emergencies****3.1 Emergency Action Level (EAL) Development Methodology Options**

In a letter from Christopher G. Miller, Deputy Director, Emergency Preparedness (NRC) to Alan Nelson, Director, Emergency Preparedness (Nuclear Energy Institute), dated December 2, 2008, the NRC provided information regarding the NRC's approach for reviewing EALs in new reactor applications. Specifically, the letter addresses how finality will be given regarding an applicant's EAL scheme. The initial EALs, which are required by 10 CFR 50.47(b)(4) and Section IV.B of Appendix E to 10 CFR Part 50, must be approved by the NRC. Current new reactor combined license (COL) applications may not fully address certain aspects of the required EAL scheme. This is because various equipment set points and other information cannot be determined until the as-built information is available. Therefore, the NRC has specified that one of the following two options may be used for developing EALs:

Option 1 – Submit an entire EAL scheme, which contains all site-specific information, including set points. Until this information is finalized, EALs would remain an open item.

Option 2 – Submit emergency plan Section D, "Emergency Classification System," which addresses the four critical elements of an EAL scheme (listed below). The NRC will determine the acceptability of the EAL scheme.

1. Critical Element 1 – Applicant proposes an overview of its emergency action level scheme including defining the four emergency classification levels, (i.e., Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency), as stated in NEI 99-01, Revision 5, with a general list of licensee actions at each emergency classification level.
2. Critical Element 2 – Applicant proposes to develop the remainder of its EAL scheme by using a specified NRC endorsed guidance document. In the development of its EALs, the proposed EALs should be developed with few or no deviations or differences, other than those attributable to the specific reactor design. NEI 07-01, if endorsed, will be applicable to the AP1000 and ESBWR (passive) reactor designs, and NEI 99-01 is applicable to all (non-passive) reactor designs. If applicable, EALs related to digital instrumentation and control must be included. The NRC must find in the Safety Evaluation Report that this approach is acceptable for each site.
3. Critical Element 3 – Applicant proposes a License Condition (LC) that the applicant will create a fully developed set of EALs in accordance with the specified guidance document. These fully developed EALs must be submitted to the NRC for confirmation at least 180 days prior to fuel load.
4. Critical Element 4 – The EALs must be kept in a document controlled by 10 CFR 50.54(q), such as the emergency plan; or a lower tier document, such as the Emergency Plan Implementing Procedures.

### 3.2 Emergency Action Level (EAL) Development

Victoria County Station (VCS) has elected to utilize Option 2 described above for inclusion with the VCS Early Site Permit (ESP) Application. The four associated Critical Elements are addressed below.

Critical Element 1 – The Exelon Nuclear Standardized Radiological Emergency Plan (EP-AA-1000) is included with Part 5, “Emergency Plan,” of the VCS ESP application. Section D, “Emergency Classification System,” of EP-AA-1000 contains an overview of the emergency action level scheme including definition of the four emergency classification levels, (i.e., Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency), as stated in NEI 99-01, Revision 5; and contains a general list of licensee actions at each emergency classification level.

Critical Element 2 – Depending on the reactor design selected, Exelon will develop the remainder of the VCS EAL scheme by utilizing the most current revision of either NEI 99-01, (currently Revision 5), or NEI 07-01, (currently Revision 0) at the time of EAL submittal. The site-specific EALs will be developed with no deviations or differences, other than those attributable to the reactor design selected. References to the appropriate NEI guidance document will be provided in the Exelon Nuclear Standardized Radiological Emergency Plan (EP-AA-1000), Part II, Section D.2, “Emergency Action Level Technical Bases,” and Part III, Appendix 1, “References.”

Critical Element 3 – The following License Condition related to the creation of a fully developed set of site-specific EALs is proposed in accordance with the guidance documents referenced above:

#### PROPOSED LICENSE CONDITION:

*Exelon shall submit a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with [the most recent revision of either NEI 99-01 or NEI 07-01], with no deviations or differences, other than those attributable to the reactor design selected. These fully developed EALs shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.*

This License Condition will be added to the appropriate section of the future VCS COL Application.

Critical Element 4 – The fully developed VCS EAL scheme will be incorporated into a future revision of the Radiological Emergency Plan Annex for Victoria County Station (EP-AA-1011). Accordingly, future changes to the EAL scheme will require an evaluation under 10 CFR 50.54(q) to determine if the change will reduce the effectiveness of the Emergency Plan.

## Section 4: Emergency Measures

Exelon Nuclear emergency response actions are the same for all nuclear stations and are thus covered by Section E of the Exelon Nuclear Standardized Emergency Plan.

### 4.1 Notification of the Emergency Organization

Standard NARS notifications for VCS are made to the counties of Victoria, Goliad, Refugio, and the state of Texas. Calhoun County will also be provided these notifications even though they are not considered in the 10 Mile EPZ.

VCS will notify the Texas Governor's Division of Emergency Management (GDEM) at the State Operations Center (SOC) in Austin of an emergency within the Ingestion Pathway EPZ. The State of Texas has the responsibility for the notifications of counties and other agencies, other than the NRC through the State Warning Point. This process is described in the State of Texas Emergency Management Plan, Annex A, Warning, Section IV.B.1.

### 4.2 Assessment Actions

Throughout each emergency situation, continuing assessment will occur. Assessment actions at VCS may include an evaluation of plant conditions; inplant, onsite, and initial offsite radiological measurements; and initial estimates of offsite doses. Core damage information is used to refine dose assessments and confirm or extend initial protective action recommendations. VCS utilizes implementing procedures as the basis for the methodology for post-accident core damage assessment. This methodology utilizes real-time plant indications in addition to samples of plant fluids and atmospheres. Core damage is qualitatively evaluated per NRC Core Condition Categories (1-10) as shown in the table below.

Degree of Degradation	Minor (<10%)	Intermediate (10% to 50%)	Major (>50)
No Core Damage	1	1	1
Cladding Failure	2	3	4
Fuel Overheat	5	6	7
Fuel Melt	8	9	10

### 4.3 Protective Actions for the Offsite Public

Protective actions concerning the public within the 10 mile EPZ involve prompt notification, evacuation and sheltering. Prompt notification involves the use of the permanently installed outdoor notification sirens located within the EPZ.

To aid Control Room personnel during a rapidly developing emergency situation, Figure 4-1 "Victoria County Station PAR Determination Flowchart" has been developed based on Section J.10.m of the Exelon Nuclear Standardized Emergency Plan.

#### 4.3.1 Alert and Notification System (ANS) Sirens

The ANS consists of a permanently installed outdoor notification system within a ten mile radius around the station and is supplemented with Tone Alert Radios as needed. The ten mile radius around the station is

primarily an agricultural/ranch area with a population density below 2000 persons per square mile. The ANS as installed consists of 68 sirens that will cover this entire area with a minimum sound level of 60 db. Additionally, the ANS will cover the heavily populated areas (i.e., population densities greater than 2000 people per square mile) within the ten-mile radius around the station with a minimum sound level of 70 db to ensure complete coverage; however, at the current time, no areas within the 10-mile EPZ meet this criteria.

Once the public has tuned to designated radio stations in an emergency, detailed instructional messages will be given to the public. State and local procedures provide for these messages.

#### 4.3.2 Evacuation Time Estimates

The evacuation time estimates were developed in accordance with the requirements of NUREG-0654, and to support the State of Texas Emergency Management Plan, Annex D, "Radiological Emergency Management," Tab 1, Fixed Nuclear Facility Accident Response," Chapter 3, "Exelon's Victoria County Station." The purpose of the evacuation time estimates is to assess the postulated evacuation times for the VCS Emergency Planning Zone (EPZ).

The evacuation time estimate data was obtained via a study performed by Innovative Emergency Management, Inc. (IEM) documented in their Final Report, IEM/TEC11-010, dated April 6, 2011 entitled, "Evacuation Time Estimates: Exelon Nuclear Texas Holdings, LLC, Victoria County Station."

Evacuated residents are assumed to relocate to one of two relocation centers. Evacuees north and east of VCS (i.e., Subareas 1, 3, 4, 5, 7, and 8) generally evacuate to the Victoria Community Center located at 2905 E. North Street, Victoria, TX; whereas evacuees south and west of VCS (i.e., Subareas 1, 2, 6, 9, 10 and 11) generally evacuate to the Refugio County Fairgrounds located at Fairgrounds Road, Refugio, TX.

The evacuation times are based on a detailed consideration of the EPZ roadway network and population distribution. The information in Table 4-1 presents representative evacuation times for daytime, nighttime and weekend scenarios, and under normal and adverse weather conditions for the evacuation of various areas around VCS, once a decision has been made to evacuate. The evacuation times noted include notification, mobilization, and travel time. These times are for the general population that includes permanent population and special facilities (schools and recreational areas). Table 4-2 provides information on the scenario population distribution (by Subarea) that was used for this study. Figure 4-3 provides a representation of the subarea locations in relation to the EPZ.

#### 4.4 Protective Actions for Onsite Personnel

VCS has a siren system to warn personnel of emergency conditions. Upon hearing a continuous two minute siren, all personnel not having emergency

assignments have been instructed to assemble in a pre-designated assembly area. Refer to Figure 4-2. Station ERO personnel report to the Technical Support Center (TSC) or Emergency Operations Facility (EOF), and Control Room personnel report to the Main Control Room. Radiation Protection, Chemistry and Operations personnel not assigned to the Main Control Room report to the affected unit Operations Support Center (OSC) along with assigned maintenance personnel.

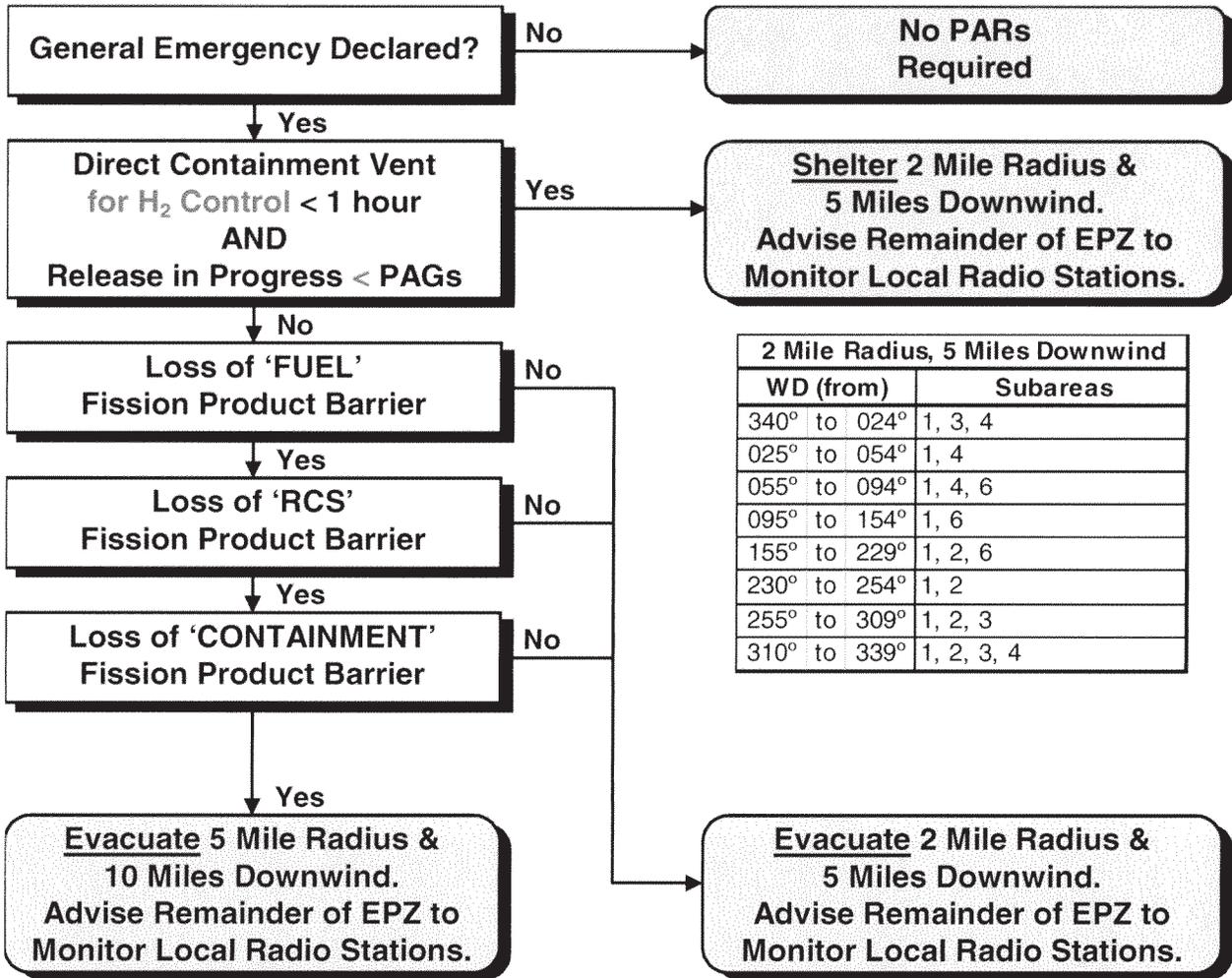
If a site evacuation of non-essential personnel is required by Section J of the Exelon Nuclear Standardized Emergency Plan, personnel will be either relocated and monitored at the relocation centers or sent home if there is no release or radiological/safety concerns. The designated relocation center for VCS is the Victory County Reception Center located at 2905 East North Street, Victoria, Texas.

For evacuation routes, refer to Figure 12, "Evacuation Map and Routes," from the IEM Evacuation Time Estimate study noted in Section 4.3.2 above.

Per NRC Bulletin 2005-02 "Emergency Preparedness and Response Actions for Security-Based Events," VCS has established the implementation of alternate onsite protective actions for security-based events that are more appropriate than the actions for radiological emergencies. These alternate protective actions could include taking immediate cover, immediate protected area evacuation, immediate owner controlled area evacuation, and dispatch of the ERO to their alternate reporting center. In the event that the Security-Based Event occurs prior to a classification and activation of the TSC, the Shift Emergency Director is responsible for determining and issuing protective actions for the Site personnel in response to the hostile activity. If the TSC is activated at the time of the threat or hostile activity, the Station Emergency Director is responsible for determining and issuing protective actions for the Site personnel.

Traffic control for onsite areas will be handled by VCS personnel. If necessary, assistance will be requested from local law enforcement personnel. Equipment and personnel would be available at the relocation center for monitoring, decontamination and bioassay of evacuated personnel.

Figure 4-1: Victoria County Station PAR Determination Flowchart



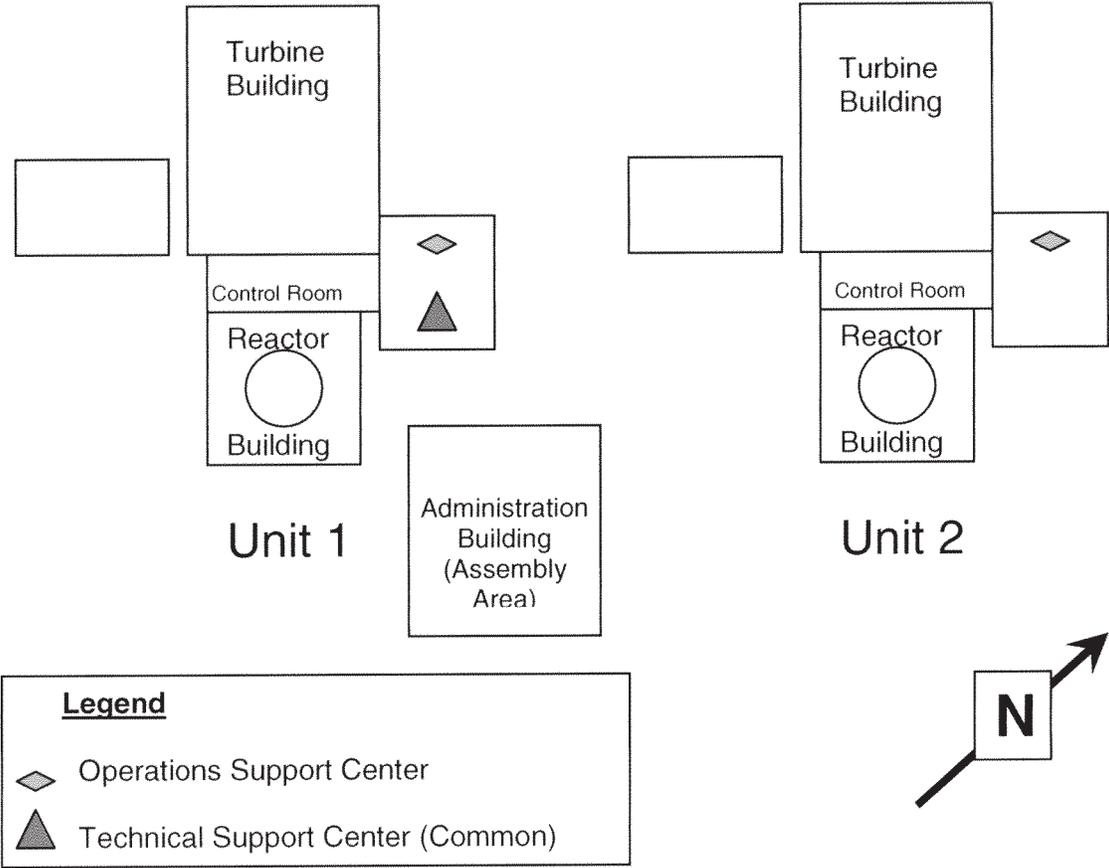
2 Mile Radius, 5 Miles Downwind	
WD (from)	Subareas
340° to 024°	1, 3, 4
025° to 054°	1, 4
055° to 094°	1, 4, 6
095° to 154°	1, 6
155° to 229°	1, 2, 6
230° to 254°	1, 2
255° to 309°	1, 2, 3
310° to 339°	1, 2, 3, 4

5 Mile Radius, 10 Miles Downwind	
WD (from)	Subareas
345° to 004°	1, 2, 3, 4, 6, 7, 8
005° to 014°	1, 2, 3, 4, 5, 6, 7, 8
015° to 044°	1, 2, 3, 4, 5, 6, 8
045° to 094°	1, 2, 3, 4, 5, 6
095° to 134°	1, 2, 3, 4, 5, 6, 11
135° to 154°	1, 2, 3, 4, 6, 11
155° to 209°	1, 2, 3, 4, 6, 10, 11
210° to 224°	1, 2, 3, 4, 6, 9, 10, 11
225° to 264°	1, 2, 3, 4, 6, 9, 10
265° to 279°	1, 2, 3, 4, 6, 7, 9, 10
280° to 289°	1, 2, 3, 4, 6, 7, 9
290° to 344°	1, 2, 3, 4, 6, 7, 8, 9

2 Mile Radius, 5 Miles Downwind	
WD (from)	Subareas
340° to 024°	1, 3, 4
025° to 054°	1, 4
055° to 094°	1, 4, 6
095° to 154°	1, 6
155° to 229°	1, 2, 6
230° to 254°	1, 2
255° to 309°	1, 2, 3
310° to 339°	1, 2, 3, 4

Figure 4-2: Victoria County Station Assembly Areas and Onsite Emergency Response Facilities

(Generic Plant Layout – Not Representative of a Specific Reactor Design)



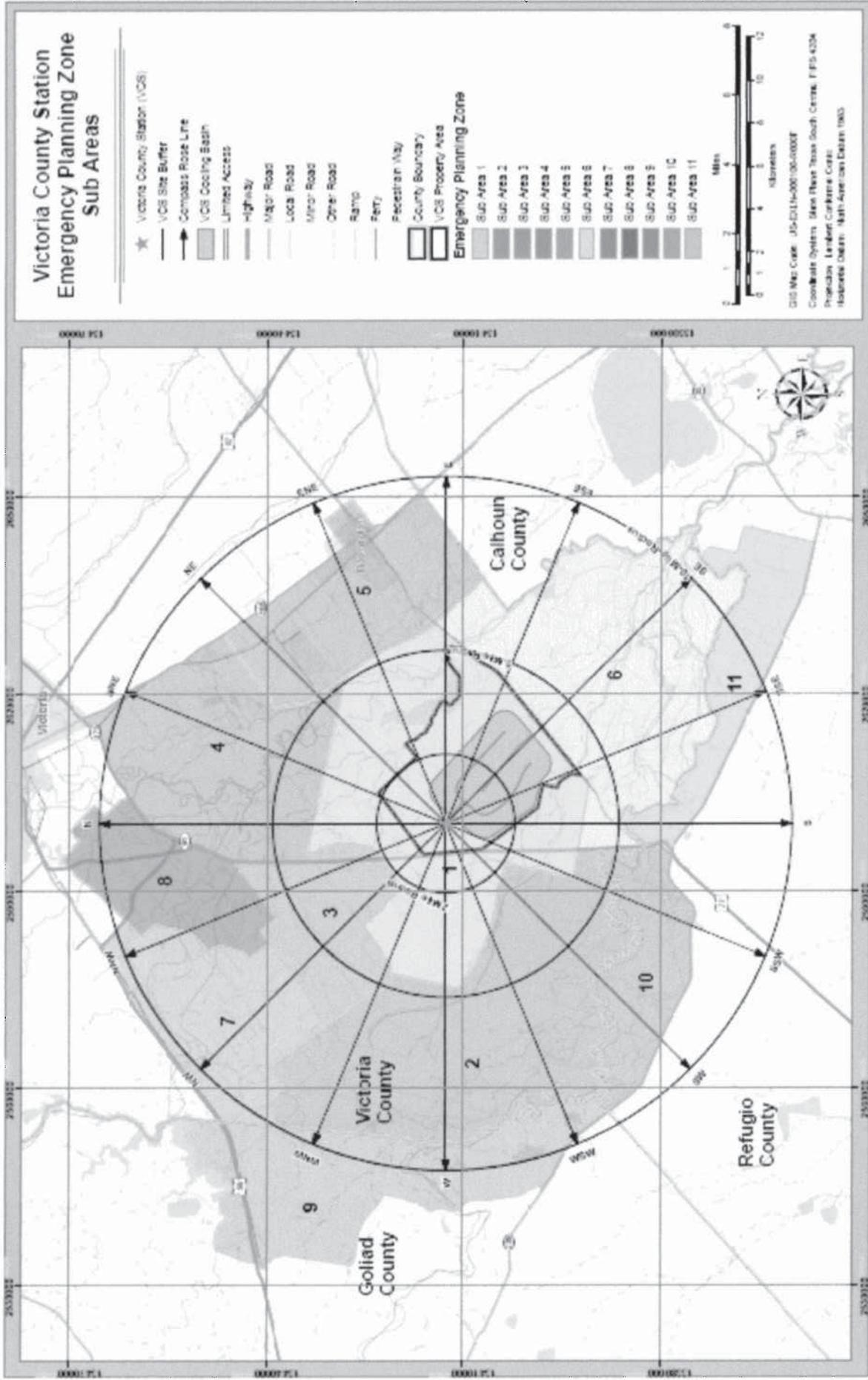
**Table 4-1: Victoria County Station - Summary of General Public Evacuation Time Estimates (minutes)**  
*Need ETE information for Calhoun County.*

	Normal Weather			Adverse Weather		
	Weekday	Weeknight	Weekend	Weekday	Weeknight	Weekend
<b>PAR Evacuation Zone (X, X, X)</b>						
<b>2 Mile Radius and 5 Miles Downwind</b>						
WD 340°- 024° (1, 3, 4)	165	150	230	170	150	230
WD 025°- 054° (1, 4)	160	145	230	160	145	230
WD 055°- 094° (1, 4, 6)	180	145	240	180	145	240
WD 095°- 154° (1, 6)	150	130	225	150	130	225
WD 155°- 229° (1, 2, 6)	175	145	240	180	145	240
WD 230°- 254° (1, 2)	160	140	230	160	145	230
WD 255°- 309° (1, 2, 3)	165	150	230	170	150	235
WD 310°- 339° (1, 2, 3, 4)	190	155	240	195	155	245
<b>5 Mile Radius and 10 Miles Downwind</b>						
WD 345°- 004° (1, 2, 3, 4, 6, 7, 8)	215	160	245	215	165	250
WD 005°- 014° (1, 2, 3, 4, 5, 6, 7, 8)	215	165	245	220	165	250
WD 015°- 044° (1, 2, 3, 4, 5, 6, 8)	215	160	245	215	160	250
WD 045°- 094° (1, 2, 3, 4, 5, 6, 8)	215	160	245	215	160	250
WD 095°- 134° (1, 2, 3, 4, 5, 6, 11)	215	160	245	215	160	250
WD 135°- 154° (1, 2, 3, 4, 6, 11)	210	155	245	215	160	250
WD 155°- 209° (1, 2, 3, 4, 6, 10, 11)	215	155	245	215	160	250
WD 210°- 224° (1, 2, 3, 4, 6, 9, 10, 11)	215	155	245	215	160	250
WD 225°- 264° (1, 2, 3, 4, 6, 9, 10)	215	155	245	215	160	250
WD 265°- 279° (1, 2, 3, 4, 6, 7, 9, 10)	215	160	250	220	165	250
WD 280°- 289° (1, 2, 3, 4, 6, 7, 9)	215	160	245	215	165	250
WD 290°- 344° (1, 2, 3, 4, 6, 7, 8, 9)	215	160	245	215	165	250
<b>Entire 10-mile EPZ</b>	220	165	250	220	165	250

Table 4-2: Victoria County Station Population Distribution by Subarea

Subarea	Population	Vehicles
1	59	31
2	139	74
3	197	105
4	546	292
5	3251	1736
6	53	28
7	1360	726
8	328	175
9	395	211
10	23	12
11	84	45
12	??	??
EPZ Total	6435	3436

Figure 4-3: Victoria County Station EPZ Subarea Locations



## Section 5: Emergency Facilities and Equipment

### 5.1 Emergency Response Facilities

Refer to Figure 4-2 for the location of the Victoria County Station Control Room, Technical Support Center (TSC), and Operations Support Center (OSC) within the Station's Protected Area boundary.

#### 5.1.1 Station Control Room

The VCS Unit 1 and 2 Control Rooms are the initial onsite center of emergency control for each unit and are located in the Control Building.

#### 5.1.2 Technical Support Center

VCS has designated one common TSC to support the response for both units onsite. The TSC is located in the Unit 1 Service Building. The TSC is utilized to support the Control Room for assessment of plant status and potential offsite impact, and for implementation of emergency actions. The TSC has access to a complete set of as-built drawings and other records, including general arrangement diagrams, P&IDs, and electrical schematics. The TSC has the capability to record and display vital plant data, in real time, to be used by knowledgeable personnel responsible for engineering and management support of reactor operations, and for implementation of emergency procedures. The TSC meets all habitability requirements outlined in NUREG-0737, Supplement 1, section 8.2. The TSC fully meets the requirements of Section H.1.b of the Exelon Nuclear Standardized Emergency Plan. In addition, the personnel in the TSC is equipped with area radiation monitors (ARMs) that will be monitored for radiological conditions in the facility. The exposure of the TSC personnel is monitored to ensure that personnel do not exceed 5 rem whole body, or its equivalent to any part of the body, for the accident duration without authorization by the Emergency Director in command and control at the time or the request. In the event that the exposure level is elevated, personnel may be relocated to another facility to support the technical response to the emergency.

The indicators and circuitry that provide the TSC data will be of a reliable design and meet the guidance provided in the appropriate revision of Regulatory Guide 1.97.

The TSC is provided with backup power supply through the use of Uninterruptable Power Source and diesel backup power.

#### 5.1.3 Operations Support Center

VCS has an OSC for each unit located in the lunchroom of the associated unit. The affected unit OSC will be utilized during an emergency. The OSC is provided to support emergency operations consistent with the guidance provided in NUREG-0737, Supplement 1. The OSC conforms to the requirements of Section H.1.c of the Exelon Nuclear Standardized Emergency Plan and is the location to which operations support personnel

will report during an emergency and from which they will be dispatched for assignments in support of emergency operations.

#### 5.1.4 Emergency Operations Facility

The VCS Emergency Operations Facility (EOF) is located at 205 N. Bridge Street, Victoria, Texas in the Victoria County Annex Building outside of the VCS EPZ. The location provides optimum functional and availability characteristics for carrying out overall strategic direction of VCS onsite and support operations, determination of public protective actions to be recommended to offsite officials, and coordination with Federal, state, and county agencies.

It is of sufficient size to accommodate about 50 people including NRC.

It meets the criteria of NUREG-0696, "Functional Criteria for Emergency Response Facilities," regarding location, structure, habitability, size, communications, instrumentation, data system equipment, power supplies, technical data, records availability, and management.

It is equipped with reliable voice communications capabilities to the TSC, the Control Room, NRC, and state and county EOCs. In addition, the EOF has facsimile, computer transmission, and electronic transfer capabilities.

Equipment is provided to gather, store, and display data needed in the EOF to analyze and exchange information on plant conditions with the station. The EOF technical data system receives, stores, processes, and displays information sufficient to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition. The indicators and circuitry that provide the EOF data are of a reliable design and will meet the guidance provided in the appropriate revision of Regulatory Guide 1.97.

The EOF has ready access (either through hard copies or electronic media) to plant records, procedures, and emergency plans needed for effective overall management of VCS emergency response resources.

The EOF is secured while idle with a locking mechanism on each entry and exit point for the facility. While activated, the EOF is provided with security as provided by the Security Coordinator in the EOF.

#### 5.1.5 Joint Information Center

The Joint Information Center (JIC) is the facility in which media personnel gather to receive information related to the emergency event. The JIC is located at 205 N. Bridge Street, Victoria, Texas, in the Victoria County Annex Building.

## 5.2 Assessment Resources

### 5.2.1 Onsite Meteorological Monitoring Instrumentation

A 197-foot meteorological tower has been erected on the site approximately 2700 feet west northwest of the VCS Unit 1 Turbine Building, the major plant structure closest to the tower.

Wind speed, wind direction and temperature are measured at 33 feet and 197 feet above grade level. Temperature difference is determined between the 33-foot and 197-foot levels. A precipitation gauge is utilized to measure rain and snowfall at ground level near the base of the tower.

The onsite meteorological monitoring program is covered in the contract specification and vendor procedures of the meteorological monitoring contractor. These data are used to generate wind roses and to provide estimates of airborne concentrations of gaseous effluents.

#### 5.2.1.1 Instrumentation

The meteorological tower is instrumented with equipment that conforms to the recommendations of Regulatory Guide 1.23 and ANSI/ANS 2.5 (1984). The equipment is placed on booms oriented into the generally prevailing wind at the site. Equipment signals are brought to an instrument shack with controlled environmental conditions. The shack at the base of the tower houses the recording equipment, signal conditioners, etc., used to process and re-transmit the data to the end point users.

#### 5.2.1.2 Meteorological Measurement Program During High Winds

Cooperation between the corporate office and the meteorological contract assures that a timely restoration of any outage can be made. Emergency field visits to the site are made as quickly as possible after detection of a failure.

Should winds of sufficient magnitude occur to destroy the tower structure, a contract is maintained to have a temporary tower erected within 72 hours, weather conditions permitting. Further, the meteorological contractor maintains two levels of sensors (wind speed, wind direction and temperature) in a state of readiness for use on the temporary tower.

Meteorological data are available to the station Control Room, TSC, and EOF for use in the Dose Projection Computer Model for estimating the environmental impact of unplanned releases of radioactivity from the station.

### 5.2.2 Onsite Radiation Monitoring and Process Monitor Equipment

Information regarding Onsite radiation monitoring and process monitor equipment will be provided at the COL stage.

### 5.2.3 Onsite Laboratory

The onsite laboratory sampling system is designed to provide gas and liquid samples of the containment atmosphere following an accident.

Chemistry personnel supporting the ERO will conduct analysis on these samples and provide the results to the TSC staff for evaluation. Additional detail will be provided at the COL stage.

#### 5.2.4 Onsite Fire Detection Instrumentation

The fire detection system is designed in accordance with applicable National Fire Protection Association Standards. The system is equipped with electrically supervised ionization smoke and heat detectors to quickly detect any fires and the instrumentation to provide local indication and Control Room annunciation. In addition to the smoke and heat detection systems, each fire protection carbon dioxide, halon, or water system is instrumented to inform the Control Room of its actuation or of system trouble. In the event that a portion of the fire detection instrumentation is inoperable, fire watches in affected areas may be required.

#### 5.2.5 Facilities and Equipment for Offsite Monitoring

Consult Chapter 11 of the station specific Offsite Dose Calculation Manual (ODCM) for the most current location for fixed continuous air samplers and TLD locations. VCS maintains a supply of emergency equipment and supplies for offsite monitoring and sampling by environmental field teams.

#### 5.2.6 Site Hydrological Characteristics

The hydrological characteristics of the VCS vicinity are described in the VCS SSAR.

#### 5.2.7 Safety Parameter Display System (SPDS) and Plant Parameter Display (PPDS) – In accordance with the Exelon Standardized Radiological Emergency Plan, SPDS and PPDS will be displayed in the Control Room, TSC and EOF. The plant parameter variables will include, at a minimum, the requirements of NUREG 0737 Supplement 1, section 4.1.f. These systems will meet the guidance in Regulatory Guide 1.97. The indicators and the circuitry for these systems will be of reliable design to provide data to the TSC and EOF.

### 5.3 Protective Facilities and Equipment

The principal onsite assembly areas for VCS are the Administrative Building and the Training Building. These areas are suitable because:

1. They are large open areas suitable for assembling a large number of people in a short time;
2. They can be easily exited if a site evacuation is deemed necessary following an assembly; and
3. They have a low probability of being affected by a serious accident involving the reactor and its primary systems.

The offsite relocation centers for VCS are discussed in Section 4 of this annex. The center locations are suitable because they are outside the VCS plume exposure pathway (i.e., the 10-mile emergency planning zone). Supplies and communications are maintained readily available.

#### 5.4 First Aid and Medical Facilities

VCS has an in-plant first aid/decontamination room. This room is provided with a sink, a shower, and a supply cabinet. First aid kits, stretchers, sinks, eyewashes, and emergency showers have been placed in strategic locations throughout the station.

Medical treatment given to injured persons at the station is of a "first aid" nature. When more professional care is needed, injured persons are transported to a local hospital. Citizens Medical Center in Victoria, Texas is the designated primary support hospital for evaluation and treatment of persons suffering from traumatic injury, medical illness, radiation exposure, radiological uptake, and handling contaminated injured persons. DeTar Hospital Navarro in Victoria, Texas is the backup medical facility for evaluation and treatment of persons suffering from traumatic injury, medical illness, radiation exposure, uptake, and contaminated injured persons.

#### 5.5 Communications

Refer to Section F.1 of the Exelon Nuclear Standardized Radiological Emergency Plan for a description of dedicated communications lines to support both offsite and inter-facility communications.

- 1) Telephone Systems: The VCS site is served by the Private Phone System (PBX) and direct commercial lines. These systems are expected to function during emergencies as they do during normal plant operations. Site telephone communications to other Exelon sites are provided via dedicated T-1 lines provided by commercial carrier. Access to this system is through the plant telephone system that bypasses potentially congested public-use circuits. Backup to these routes are commercial business lines.

Automatic dialing equipment also provides automatic dialing of pre-selected telephone numbers, reducing callout/notification time and dialing errors.

VCS has direct offsite Commercial Phone system lines in each ERF and are supplied by phone company backup power. PBX power supplies support in-plant lines in each onsite ERF as follows: reliable offsite power, onsite backup power (e.g. diesel generators) and backup battery power for 8 hours. In-plant emergency circuits are also on the PBX and have an additional 8 hour battery backup. Offsite emergency circuits are carried by both dedicated T-1 lines and commercial business phone systems. The EOF and JIC are provided communications back-up power through an onsite diesel generator. The Commercial Phone system circuits have the same backup power as other such circuits.

Company tie lines are utilized to route NRC communications (e.g., ENS, HPN and counterpart circuits) from between Exelon Nuclear emergency response facilities for Victoria County Station.

- 2) Radio Communications: Radio communication equipment used during normal plant operations will be used in an emergency to communicate with mobile units and to provide backup to the telephone system.

VCS, base stations are located in the Control Room and the Emergency Operations Facility. The EOF has the capability of transmitting and receiving on the Texas Law Enforcement Telecommunications System (TLETS) provides a communication path with the State of Texas and the County Emergency Operations Centers

### 3) Station Warning System

In addition, station communication links exist to ensure appropriate information transfer capabilities during an emergency. The station may also utilize its Station Warning System, station radios and pagers to augment its emergency communications. The Station Warning System consists of the following:

a) Alarms: Audible alarms are a quick and effective means of communicating emergency warnings on the site. Alarms currently installed at Victoria County include:

- Station Emergency Alarm
- Fire Alarm
- Reactor Building Evacuation Alarm

Each alarm provides a distinctive sound that all site personnel and contractors are trained to recognize and respond to. The Station Emergency Alarm will be followed by an announcement that provides emergency information such as class of emergency declared, accountability directions, radiological precautions, etc. The Reactor Building evacuation alarm is supplemented with flashing lights at specific locations in the Reactor Building to provide both audible and visual warnings.

The Control Room alarm systems consist of overhead annunciators, panel annunciators and computer alarms. The overhead and panel annunciators consist of flashing translucent tiles and audible indicators (i.e., buzzer or horn). The computer alarms use annunciators and also provide specific data using the alarm printer.

b) Plant Paging System: The Plant Paging System provides plant-wide paging from the Control Room and all remote stations plus private communications during normal operating conditions.

The plant paging system provides immediate warning and instructions to onsite personnel in the event of an emergency. Phone stations and speakers of this subsystem are located in vital plant areas.

## Section 6 Victoria County Station Specific Information

### 6.1 Notifications

Initial notifications are carried out in accordance with the Exelon Nuclear Standardized Radiological Emergency Plan.

Follow-up notifications are issued on a periodic basis as agreed upon by the state and counties officials. These periodic follow-up notifications address the following:

- Location, date, and time of incident;
- Class of emergency;
- Type of actual or projected release;
- Estimate of quantity of radioactive material release or being released and chemical / physical form of released material;
- Meteorological conditions,
- Actual or projected dose rates,
- Projected dose rate and integrated dose rate at the projected peak and at 2, 5, and 10 miles;
- Estimate of any surface radioactive contamination in-plant, onsite or offsite;
- Licensee emergency response actions underway;
- Recommended emergency actions, including protective measures;
- Request for any needed onsite support by offsite organizations; and
- Prognosis for worsening or termination of event.

During a security event the NRC will be notified within approximately 15 minutes of the identification of the event.

### 6.2 Drills and Exercises

Drills and exercises are conducted in accordance with the Exelon Nuclear Standardized Radiological Emergency Plan. Drills and exercises for security related events are included in the six-year plan for demonstration of major objectives.

In the event that there is a need to perform a remedial demonstration due to a determination that there was an unsatisfactory biennial exercise (such that the NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency) remedial drills will be conducted to demonstrate these emergency response capabilities. If this demonstration involves the state or local participation negotiations will be conducted to provide an opportunity to demonstrate their capability to respond to an event or to interface with the Victoria County Station ERO. Any remedial demonstration, drill, or exercise scenario will be provided to the NRC and FEMA, if necessary, for approval prior to conducting the remedial activity.

6.3 Supporting Emergency Plans for Victoria County Station

Other plans that support this E-Plan are:

- State of Texas Emergency Management Plan – Annex D: Radiological Emergency Management.
- Victoria County, Texas Emergency Plan
- Refugio County, Texas Emergency Plan
- Goliad County, Texas Emergency Plan
- Calhoun County, Texas Emergency Plan

## Appendix 1: NUREG-0654 Cross-Reference

<u>Annex Section</u>	<u>NUREG-0654</u>
1.0	Part I, Section A
1.1	Part I, Section C
1.2	Part I, Section D
Figure 1-1	Part I, Section D
2.0	Part II, Section A.4
2.1	Part II, Section A.3
3.0	Part II, Section D
4.1	Part II, Section E.1 & J.7
4.2	Part II, Section I.2 & 3
4.3	Part II, Section J.10.m
4.3.1	Part II, Section E.6
4.3.2	Part II, Section J.8
4.4	Part II, Section J.1-5
Figure 4-1	Part II, Section J.10.m
Table 4-2	Part II, Section J.8 & 10.b
Figure 4-2	Part II, Section J.5
Figure 4-3	Part II, Section J.2 & 3
5.1	Part II, Section H.1 & G.3
5.2.1	Part II, Section H.5.a & 8
5.2.2	Part II, Section H.5.b & I.2
5.2.3	Part II, Section H.5.c
5.2.4	Part II, Section H.5.d
5.2.5	Part II, Section H.6.b & 7
5.2.6	Part II, Section H.5.a & 6.a
5.3	Part II, Section J.1-5
5.4	Part II, Section L.1 & 2

**Appendix 2: Station Letters of Agreement**

- Victoria Fire and Rescue – fire protection and ambulance response.
- The Victoria County Sheriff's Office – law enforcement.
- Citizens Medical Center – medical services.
- DeTar Hospital Navarro – back-up medical services
- Victoria County – EOF and JIC location
- Crossroads Chapter Red Cross – congregate care facilities.

**Appendix 3: 10 CFR 50 Appendix E Cross-Reference**

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV A.	The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization	B.1, B.5	
IV A.	and the means for notification of such individuals in the event of an emergency.	E.2	
IV A.1	A description of the normal plant operating organization.	B.1	2.1
IV A.2.a	A description of the onsite emergency response organization with a detailed discussion of:  Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;	B.2, B.3, B.5	2.1, 2.2, 2.3
IV A2.b	Plant staff emergency assignments;	B.5	2
IV A2.c	Authorities, responsibilities, and duties on an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.	B.2, B.4	2.1, 2.2
IV A.3	A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.	B.5.c, B.7	
IV A.4	Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.	B5.b.2, 3, 4 5, 6, 7, & 11	2.1.1, 2.1.2, 2.1.3, 2.2.1,

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV A.5	Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.	A.3	
IV A.6	A description of the local offsite services to be provided in support of the licensee's emergency organization.	L.1, 2, 3, 4	
IV A.7	Identification of, and assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies.	C.1, 2, 3, 4	
IV A.8	Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.	J.9	
IV B	The means to be used for determining the magnitude of and for continually assessing the impact of the release of radioactive materials shall be described,	I.2, I.3, I.4, I.5, I.6, I.7, I.8, I.9, I.10	
IV B (continued)	including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies,	E.2, E.3,	N/A ESPA
IV B (continued)	and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety.	J.7, J.9, J.10	N/A ESPA
IV B (continued)	The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring.		N/A ESPA
IV B (continued)	These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by NRC.	D.2	At the COL stage

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV B (continued)	They shall also be reviewed with the State and local governmental authorities on an annual basis.	D.3	
IV C	The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described.	D.1	
IV C (continued)	The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described.	E.2	
IV C (continued)	Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described.		N/A ESPA
IV C (continued)	The existence, but not the details, of a message authentication scheme shall be noted for such agencies.	E.1	
IV C (continued)	The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG - 0654; FEMA - REP - 1.	D.1	
IV D.1	Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.	E.3,	
IV D.2	Provisions shall be described for yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification and the protective actions planned if an accident occurs, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of	G.1, G.2	

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
	information during an emergency. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.		
IV D.3	A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency.	E.2.b.1	
IV D.3 (continued)	The design objective of the prompt public notification system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system. Where there is a decision to activate the notification system, the State and local officials will determine whether to activate the entire notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public notification system shall remain with the appropriate governmental authorities.	E.6	
IV 4.E.1	Adequate provisions shall be made and described for emergency facilities and equipment, including: Equipment at the site for personnel monitoring;	H.1, H.2, H.5, K.3	
IV 4.E.2	Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;	H.5.b, H.5.d	
IV 4.E.3	Facilities and supplies at the site for decontamination of onsite individuals;	H.5.b, H.5.c	
IV 4.E.4	Facilities and medical supplies at the site for appropriate emergency first aid treatment;	L.2	

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV 4.E.5	Arrangements for the services of physicians and other medical personnel qualified to handle radiation emergencies on-site;	L.3	
IV 4.E.6	Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;	L.4	
IV 4.E.7	Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;	L.1	
IV 4.E.8	A licensee onsite technical support center and a licensee near-site emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency;	H.1, H.2	
IV 4.E.9	At least one onsite and one offsite communications system; each system shall have a backup power source. All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication.	F.1	
IV 4.E.9.a	Where consistent with the function of the governmental agency, these arrangements will include: Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communications shall be tested monthly.	N.2	
IV 4.E.9.b	Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.	N.2	
IV 4.E.9.c	Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.	N.2	

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV 4.E.9.d	Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility. Such communications shall be tested monthly.	N.2	
IV F.1.i	The program to provide for: (a) The training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:	O.2	
IV F.1.ii	Directors and/or coordinators of the plant emergency organization;	O.4.a	
IV F.1.iii	Personnel responsible for accident assessment, including control room shift personnel;	O.4.b	
IV F.1.iv	Radiological monitoring teams;	O.4.c	
IV F.1.v	Fire control teams (fire brigades);	O.4.d	
IV F.1.vi	Repair and damage control teams;	O.4.e	
IV F.1.vii	First aid and rescue teams;	O.4.f	
IV F.1.viii	Medical support personnel;	O.4.h	
IV F.1.ix	Licensee's headquarters support personnel;	O.4.i	
IV F.1	Security personnel.	O.4.d.2	
	In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/Civil Defense, local law enforcement personnel, local news media persons.	O.1.a G.5, P.3	

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV F.2	<p>The plan shall describe provisions for the conduct of emergency preparedness exercises as follows:  Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communications networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties.</p>	N.1	
IV F.2.a	<p>A full participation exercise which tests as much of the licensee, State and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted for each site at which a power reactor is located.</p>	N.1	
IV F.2.b	<p>Each licensee at each site shall conduct an exercise of its onsite emergency plan every 2 years. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section. In addition, the licensee shall take actions necessary to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities.</p>	N.1	
IV F.2.c	<p>Offsite plans for each site shall be exercised biennially with full participation by each offsite authority having a role under the plan. Where the offsite authority has a role under a radiological response plan for more than one site, it shall fully participate in one exercise every two years and shall, at least, partially participate in other offsite plan exercises in this period.</p>	N.1	
IV F.2.d	<p>A State should fully participate in the ingestion pathway portion of exercises at least once every six years. In States with more than one site, the State should rotate this participation from site to site.</p>	N.1	

REGULATION	STATEMENT	Exelon Nuclear Standardized Radiological Emergency Plan	VCS Annex
IV F.2.e	Licensees shall enable any State or local Government located within the plume exposure pathway EPZ to participate in the licensee's drills when requested by such State or local Government.	N.1.b	
IV F.2.f	Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency. The extent of State and local participation in remedial exercises must be sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercises.	N.1	
IV F.2.g	All training, including exercises, shall provide for formal critiques in order to identify weak or deficient areas that need correction. Any weaknesses or deficiencies that are identified shall be corrected.	N.4, N.5	
IV F.2.h	The participation of State and local governments in an emergency exercise is not required to the extent that the applicant has identified those governments as refusing to participate further in emergency planning activities, pursuant to 10 CFR 50.47(c)(l). In such cases, an exercise shall be held with the applicant or licensee and such governmental entities as elect to participate in the emergency planning process.	N/A	
IV G	Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.	P.3	
IV H	Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.	M.1.a	

#### Appendix 4: Procedure Cross-Reference to NUREG-0654

Criteria	Planning Standard	Procedure/Document
NUREG-0654.II.A	Assignment of Responsibility (Organization Control)	EP-AA-120, Emergency Plan Administration Letters of Agreement
NUREG-0654.II.B	Onsite Emergency Organization	EP-AA-112, Emergency Response Organization (ERO) / Emergency Response Facility (ERF) Activation and Operation EP-AA-112-100, Control Room Operations EP-AA-112-200, TSC Activation and Operation EP-AA-112-300, Operations Support Center Activation and Operation EP-AA-112-400, Emergency Operations Facility Activation and Operation EP-AA-112-500, Emergency Environmental Monitoring EP-AA-112-600, Public Information Organization Activation and Operations
NUREG-0654.II.C	Emergency Response Support and Resources	EP-AA-112-400, Emergency Operations Facility Activation and Operations
NUREG-0654.II.D	Emergency Classification System	EP-AA-111, Emergency Classification and Protective Action Recommendations
NUREG-0654.II.E	Notification Methods and Procedures	EP-AA-114, Notifications EP-MA-114-100, Mid-Atlantic State/Local Notifications EP-MW-114-100, Midwest Region Offsite Notifications
NUREG-0654.II.F	Emergency Communications	EP-AA-114, Notifications EP-MA-114-100, Mid-Atlantic State/Local Notifications EP-MW-114-100, Midwest Region Offsite Notifications EP-AA-124, Inventories and Surveillances EP-MA-124-1001, Facility Inventories and Equipment Tests EP-MW-124-1001, Facilities Inventories and Equipment Tests
NUREG-0654.II.G	Public Education and Information	EP-AA-120, Emergency Plan Administration
NUREG-0654.II.H	Emergency Facilities and Equipment	EP-AA-112, Emergency Response Organization (ERO) / Emergency Response Facility (ERF) Activation and Operation EP-AA-121, Emergency Response Facilities and Equipment Readiness EP-AA-121-1001, Automated Call-Out System Maintenance EP-MA-121-1002, Exelon East Alert Notification System (ANS) Program EP-MW-121-1002, Siren Unscheduled Activation Response EP-MW-121-1003, JIC Fire Alarm System Notification EP-MA-121-1004, Exelon East ANS Corrective Maintenance

Criteria	Planning Standard	Procedure/Document
		EP-MW-121-1004, Siren Change Documentation
		EP-MW-121-1005, Siren Outage Reporting and Monitoring
		EP-MW-121-1006, Contracted Siren Maintenance Oversight
		EP-AA-123, Computer Programs
		EP-AA-124, Inventories and Surveillances
		EP-MA-124-1001, Facility Inventories and Equipment Tests
		EP-MW-124-1001, Facilities Inventories and Equipment Tests
		EP-AA-125-1004, Emergency Response Facilities & Equipment Performance Indicators Guidance
NUREG-0654.II.I	Accident Assessment	EP-AA-110, Assessment of Emergencies
		EP-MA-110-100, ERO Computer Applications
		EP-MW-110-100, ERO Computer Applications
		EP-MA-110-200, Dose Assessment
		EP-MW-110-200, Dose Assessment
		EP-AA-110-301, Core Damage Assessment (BWR)
		EP-AA-110-302, Core Damage Assessment (PWR)
		EP-MW-110-1001, Data Point Tables
		EP-AA-123, Computer Programs
		EP-MA-123-1002, Dose Assessment And Protective Action Recommendation (DAPAR) Program Technical Basis For Three Mile Island Generating Station
		EP-MA-123-1004, Dose Assessment And Protective Action Recommendation (DAPAR) Program Technical Basis For Limerick Generating Station
		EP-MA-123-1005, Dose Assessment And Protective Action Recommendation (DAPAR) Program Technical Basis For Peach Bottom Atomic Power Station
		EP-MA-123-1007, Dose Assessment And Protective Action Recommendation (DAPAR) Program Technical Basis For Victoria County Station
		EP-MW-123-1002, Dose Assessment And Protective Action Recommendation (DAPAR) Program Technical Basis
EP-AA-123-1003, Core Damage Assessment Methodology (CDAM) Program Technical Basis		
NUREG-0654.II.J	Protective Response	EP-AA-113, Personnel Protective Actions
		EP-AA-113-F-04, MA Emergency Director - Site Assembly, Accountability And Evacuation
		EP-AA-113-F-07, MW Emergency Director - Site Assembly, Accountability And Evacuation
		EP-AA-123, Computer Programs
		EP-AA-113-F-03, Thyroid Blocking Agent Authorization.
NUREG-0654.II.K	Radiological Exposure Control	EP-AA-110, Assessment of Emergencies

Criteria	Planning Standard	Procedure/Document
NUREG-0654.II.L	Medical and Public Health Support	EP-AA-113, Personnel Protective Actions EP-AA-120, Emergency Plan Administration
NUREG-0654.II.M	Recovery and Reentry Planning and Post-Accident Operations	EP-AA-115, Termination and Recovery EP-AA-120-1002, Storm/Event Restoration
NUREG-0654.II.N	Exercises and Drills	EP-AA-122, Drills & Exercises EP-AA-122-1001, Drill & Exercise Scheduling, Development And Conduct EP-AA-122-1002, Drill & Exercise Evaluation EP-AA-122-1002-F-01 [through F-13], Drill & Exercise Demonstration Criteria Section A [through Section M] EP-AA-125-1001, EP Performance Indicator Guidance EP-AA-125-1002, ERO Performance – Performance Indicators Guidance EP-AA-125-1003, ERO Readiness - Performance Indicators Guidance
NUREG-0654.II.O	Radiological Emergency Response Training	TQ-AA-113, ERO Training And Qualification
NUREG-0654.II.P	Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans	EP-AA-1, Emergency Preparedness EP-AA-10, Emergency Preparedness Program Description EP-AA-11, Operating Stations Emergency Preparedness Process Description EP-AA-1101, EP Fundamentals EP-AA-1102, ERO Fundamentals EP-AA-120, Emergency Plan Administration EP-AA-120-1001, 10CFR50.54(q) Change Evaluation. EP-AA-125, Emergency Preparedness Self Evaluation Process EP-AA-125-1001, EP Performance Indicator Guidance EP-AA-125-1005, Problem Identification & Resolution Performance Indicator Guidance Emergency Response Facilities Telephone Directory

**ATTACHMENT 21**

**SUMMARY OF REGULATORY COMMITMENTS**

**(Exelon Letter to USNRC, NP-11-0014, dated May 13, 2011)**

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	Programmatic (Yes/No)
Exelon will revise the VCS ESPA SSAR Section 2.4.4 to incorporate the changes shown in the enclosed response to the following NRC RAI:  02.04.04-2 (Attachment 1)	Revision 1 of the ESPA SSAR and ER planned for no later than March 31, 2012	Yes	No
Exelon will revise the VCS ESPA to incorporate the VCS Annex, EP-AA-1011, Revision C, May 2011 (Attachment 20), revised to incorporate the changes shown to the following NRC RAIs:  13.03-20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, and 33	Revision 1 of the ESPA SSAR planned for no later than March 31, 2012	Yes	No
SSAR ITAAC Table 13.3-1 will be revised to list NARS as the dedicated offsite notification system.  RAI 13.03-24, F-1	Revision 1 of the ESPA SSAR planned for no later than March 31, 2012	Yes	No
The Emergency Plan documentation reflecting the inclusion of Calhoun County in the plume exposure pathway EPZ will be submitted to the NRC.  RAI 13.03-34, S-1	August 15, 2011	Yes	No