PMSTPCOL NPEmails

From: Tekia Govan
Sent: Thursday, November 13, 2008 3:59 PM
To: 'Bense, Richard'
Cc: STPCOL
Subject: Draft RAIs for review
Attachments: RAI 1557.doc; RAI 1556.doc; RAI 1553.doc; RAI 1547.doc; RAI 1548.doc

Dick,

Please review the attached RAIs. If you feel we need a conference call to clarify the requested information, please contact me. If a conference call is not needed I will continue the formal process of issuing the RAIs to STPNOC.

All of these RAIs are from section 2.3. These are the items that were discussed during the site audit earlier this year.

Thanks

Tekia V. Govan, Project Manager
U.S. Nuclear Regulatory Commission
Office of New Reactors
MS T-7-F29
Washington DC 20555-0001
301-415-6197
Tekia.Govan@nrc.gov

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"STPCOL" <STP.COL@nrc.gov>
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"'Bense, Richard'" <rhbense@STPEGS.COM>
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MESSAGE	624	11/13/2008 3:58:54 PM
RAI 1557.doc	30202	
RAI 1556.doc	32250	
RAI 1553.doc	30714	
RAI 1547.doc	37370	
RAI 1548.doc	31226	

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Request for Additional Information No. 1557 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 12.02 - Radiation Sources
Application Section: FSAR Section 12.2

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

12.02-***

Clarify a reference to a FSAR Table 2.3S.5-2 and revise the FSAR as necessary.

FSAR Section 12.2.2 presents parameters required to evaluate airborne concentrations and doses due to routine radiological releases during normal plant operation. FSAR Section 12.2.2.1 states site specific χ/Q values from FSAR Table 2.3S.5-2 were used to re-perform the gaseous release dose analysis. There is no FSAR Table 2.3S.5-2. Should FSAR Table 2.3S-27 be referenced instead?

Request for Additional Information No. 1556 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 02.03.05 - Long-Term Atmospheric Dispersion Estimates for Routine Releases
Application Section: FSAR Section 2.3S.5

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.05-***

Review an apparent discrepancy between the receptor distances listed in FSAR Table 2.3S-26 and the Land Use Census reported in the STP 2006 Annual Environmental Operating Report and revise the FSAR as necessary.

FSAR Section 22.3S.5 describes the long-term atmospheric dispersion analyses for routine releases and FSAR Table 2.3S-26 lists the distances from the release point to sensitive receptors of interest (e.g., vegetable garden, meat animal, resident). In comparing the assumed distances from the STP 1 & 2 reactors to the receptors of interest presented in FSAR Table 2.3S-26 with the Land Use Census results presented in the STP 1 & 2 2006 Radiological Environmental Operating Report, the staff notes the following discrepancies:

(a) FSAR Table 2.3S-26 states that the distance to the receptors of interest in the ENE sector is 8000 meters whereas the 2006 Land Use Census states that the distance to this receptor is approximately 4.5 miles (7242 meters).

(b) FSAR Table 2.3S-26 states that the distance to the receptors of interest in the WNW sector is 6400 meters whereas the 2006 Land Use Census states that the distance to this receptor is approximately 4.5 miles (7242 meters).

02.03.05-***

Clarify some of the maximum annual average atmospheric dispersion factors (χ/Q values) presented in FSAR Section 2.3S.5.2 for several sensitive receptor types and revise the FSAR as necessary.

FSAR Section 2.3S.5.2 summarizes the maximum χ/Q values predicted for sensitive receptors of interest in the STP site area due to routine releases of gaseous effluents. The numbers at the beginning of the three bullets in this section need to be clarified:

(a) Should "6.2 10^{-7}" read "6.2E-07"?

(b) Should "1.3 10^{-5}" read "1.3E-05"?

02.03.05-***

Clarify some of the entries in FSAR Table 2.3S-29 and revise the FSAR as necessary.

FSAR Table 2.3S-29 presents predicted annual average deposition factors (D/Q values) at standard radial distances and distance-segment boundaries for the STP site. The first row in each of the three pages of FSAR Table 2.3S-29 reads either “deltaQ at Various Distances” or “deltaQ at Various Segments.” Should these read “D/Q at Various Distances” and “D/Q at Various Segments”?

Request for Additional Information No. 1553 Revision 2

South Texas Project Units 3 and 4
Southern Nuclear Operating Co.
Docket No. 52-012 and 52-013
SRP Section: 02.03.03 - Onsite Meteorological Measurements Programs
Application Section: FSAR 2.3S.3

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.03-***

FSAR Sections 2.3S3.2 and 2.3S3.3 describe the preoperational and operational onsite meteorological monitoring programs, respectively. RG 1.206 Section C.I.2.3.3 states the applicant should describe both the preoperational and operational monitoring programs, including calibration and maintenance procedures, data output and recording systems, and data processing, archiving, and analysis procedures.

Either revise FSAR Section 2.3S3.3 to clarify whether the calibration and maintenance procedures described in FSAR Section 2.3S.3.2.3 and the data display, processing, archiving, and analysis described in FSAR Section 2.3S.3.2.5 for the preoperational meteorological monitoring program will continue for the operational meteorological monitoring program, or justify an alternative response.

Request for Additional Information No. 1547 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 02.03.01 - Regional Climatology
Application Section: 2.3S.1

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.01-***

Explain the meteorological phenomena associated with the STP site cyclical precipitation pattern and revise FSAR Section 2.3S.1.2 as necessary.

FSAR Section 2.3S.1.2 describes a cyclical precipitation pattern with a predominant maximum occurring from late spring into early summer and a secondary maximum period from early to mid-autumn. This FSAR section further states that the late spring/early summer predominant precipitation maximum is associated with both tropical cyclones and thunderstorm activity whereas the early to mid autumn secondary precipitation maximum is primarily due to thunderstorms. Don't tropical cyclones occur more frequently in early to mid autumn as compared to late spring/early summer? FSAR Section 2.3S.1.3.3 states the highest monthly frequency of tropical cyclones is recorded in September.

02.03.01-***

Confirm the number of tropical cyclone storm tracks that have passed near the STP site and revise FSAR Section 2.3S.1.3.3 as necessary.

FSAR Section 2.3S.1.3.3 discusses the frequency of tropical cyclone storm tracks that have been recorded in the vicinity of the STP site. This FSAR section states that NOAA's Coastal Service Center (CSC) historical hurricane track database indicates that a total of 142 tropical cyclone storm tracks have passed within a 100-nautical mile (nm) radius of the STP site from 1851 through 2006. In reviewing the same database, the staff found that 75 (instead of 142) storm tracks passed within a 100-nm radius. The staff believes that a number of these storm tracks are assigned a multiple number of storm intensities as the storms moved through the STP site region which were misclassified as separate storm tracks by the applicant.

02.03.01-***

Confirm some of the data statistics presented in FSAR Table 2.3S-3 and revise as necessary.

FSAR Table 2.3S-3 presents climatological extremes at selected National Weather Service and cooperative observing stations in the STP site area. The staff reviewed the maximum and minimum temperature statistics provided in FSAR Table 2.3S-3 against

the NCDC's Climate Data Online (CDO) Surface Data, Monthly (SDM) and found the following discrepancies:

(a) For Edna Hwy 59 Bridge maximum temperature, FSAR Table 2.3S-3 reports that measurements were not made whereas the NCDC SDM reports a value of 105 °F for 08/12/1969.

(b) For Edna Hwy 59 Bridge minimum temperature, FSAR Table 2.3S-3 reports that measurements were not made whereas the NCDC SDM reports a value of 17 °F for 01/12/1973.

02.03.01-***

Confirm some of the data statistics presented in FSAR Table 2.3S-3 and revise as necessary.

FSAR Table 2.3S-3 presents climatological extremes at selected National Weather Service and cooperative observing stations in the STP site area. The staff reviewed the maximum 24-hour and maximum monthly rainfall statistics provided in FSAR Table 2.3S-3 against the NCDC's Climate Data Online (CDO) Surface Data, Monthly (SDM) and found the following discrepancies:

(a) For the Palacios Muni Airport maximum monthly rainfall, FSAR Table 2.3S-3 reports a value of 24.30 inches for 10/1949 whereas the NDCD SDM reports a value of 24.28 inches for 10/1949.

(b) For the Bay City Waterworks maximum 24-hour rainfall, FSAR Table 2.3S-3 reports a value of 8.95 inches on 09/12/1961 whereas the NCDC SDM reports a value of 20.85 inches on 10/19/1983.

(c) For the Bay City Waterworks maximum monthly rainfall, FSAR Table 2.3S-3 reports a value of 23.73 for 10/1984 whereas the NCDC SDM reports a value of 24.02 for 10/1983.

(d) For the Pierce 1E maximum monthly rainfall, FSAR Table 2.3S-3 reports a value of 17.22 inches for 10/1949 whereas the NCDC SDM reports a value of 23.37 inches for 11/2004.

(e) For the Port O'Connor maximum monthly rainfall, FSAR Table 2.3S-3 reports a value of 34.44 inches for 07/2006 whereas the NCDC SDM reports a value of 24.51 inches for 10/1984.

(f) For Wharton maximum 24-hour rainfall, FSAR Table 2.3S-3 reports that measurements were not made whereas the NCDC SDM reports a value of 11.58 inches for 10/18/1994.

(g) For Wharton maximum monthly rainfall, FSAR Table 2.3S-3 reports that measurements were not made whereas the NCDC SDM reports a value of 20.06 inches for 11/2004.

02.03.01-***

Confirm some of the data statistics presented in FSAR Table 2.3S-3 and revise as necessary.

FSAR Table 2.3S-3 presents climatological extremes at selected National Weather Service and cooperative observing stations in the STP site area. The staff reviewed the maximum 24-hour and maximum monthly snowfall statistics provided in FSAR Table 2.3S-3 against the NCDC's Climate Data Online (CDO) Surface Data, Daily (SDD) and found the following discrepancies:

(a) For the Danevang 1W maximum 24-hour snowfall, FSAR Table 2.3S-3 reports a value of 10.5 inches for 12/23/2004 whereas the NCDC SDD reports a value of 10.5 inches for 12/25/2004.

(b) For the Victoria Regional Airport maximum 24-hour snowfall, FSAR Table 2.3S-3 reports a value of 2.1 inches for 01/12/1985 whereas the NCDC SDD reports a value of 3.3 inches for 02/12/1958.

(c) For the Victoria Regional Airport maximum monthly snowfall, FSAR Table 2.3S-3 reports a value of 2.1 inches for 01/1985 whereas the NDCD SSD reports a value of 3.3 inches for 02/1985.

02.03.01-***

Confirm some of the data statistics presented in FSAR Table 2.3S-5 and revise as necessary.

FSAR Table 2.3S-5 presents climatological normals at selected National Weather Service and cooperative observing stations in the STP site area. The staff reviewed the climatological normals provided in FSAR Table 2.3S-5 and found the following discrepancies:

(a) For Victoria Regional Airport normal annual snowfall, FSAR Table 2.3S-5 reports a value of 0.1 inches whereas the Climatography of the United States, No. 20 reports a value of 0.3 inches.

(b) For Palacios Muni Airport, daily maximum and daily minimum temperatures of 77.2 °F and 61.1 °F imply a daily range of 16.1 °F whereas FSAR Table 2.3S-5 reports a daily range value of 19.4 °F.

(c) For Bay City Waterworks, daily maximum and daily minimum temperatures of 80.6 °F and 61.2 °F imply a daily range of 19.4 °F whereas FSAR Table 2.3S-5 reports a daily range value of 16.1 °F.

Request for Additional Information No. 1548 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 02.03.02 - Local Meteorology
Application Section: FSAR 2.3S2

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.02-***

Confirm the length of the longest wind direction period for the 60-meter level and revise FSAR Section 2.3S.2.2.2 as necessary.

FSAR Section 2.3S.2.2.2 provides information regarding wind direction persistence. This section states the longest wind direction persistence period at the 60-m level is 30 hours. However, the staff found two longer persistence periods: a 33-hour period ending at hour 16 on day 55 of 1997 and a 32-hour period ending at hour 0 on day 338 of 2000.

02.03.02-***

Confirm the STP site's air quality attainment status designations and revise FSAR Section 2.3S.2.5.1 as necessary.

FSAR Section 2.3S.2.5.1 provides information regarding STP site's air quality attainment status designations.

(a) FSAR Section 2.3S.2.5.1 states that the Metropolitan Houston-Galveston Intrastate Air Quality Control Region (AQCR 216) is in attainment for all criteria pollutions (except for the 8-hour ozone standard in certain counties) where attainment areas are areas where the ambient levels of criteria air pollutants are designated as being "better than," "unclassifiable/attainment," or "cannot be classified or better than," EPA-promulgated National Ambient Air Quality Standards. Note that AQCR 216 attainment status has not been designated for lead (40CFR81.38).

(b) FSAR Section 2.3S.2.5.1 states that certain counties within AQCR 216 (exclusive of Matagorda County) have been classified as moderate nonattainment for the 8-hour ozone standard. Note that the EPA has proposed to grant a request by the Governor of the State of Texas to voluntarily reclassify the AQCR 216 ozone nonattainment area from a moderate 8-hour ozone nonattainment area to a severe 8-hour ozone nonattainment area (72FR74252, December 31, 2007).