



June 21, 2010  
NND-10-0230

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

ATTN: Document Control Desk

Subject: Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3 Combined License Application (COLA) - Docket Numbers 52-027 and 52-028  
Additional Response to NRC Request for Additional Information (RAI) 02.03.01-9

- References:
1. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), NND-09-0060, Voluntary Submittal to Provide Updated Meteorological Information for Final Safety Analysis Report (FSAR) Section 2.3, dated March 26, 2009 (ML090970144).
  2. Letter from Stephen A. Byrne (SCE&G) to Document Control Desk (NRC), NND-09-0170, Response to NRC Request for Additional Information (RAI) Letter No. 048, dated June 24, 2009 (ML091760682).
  3. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), NND-09-0185, Response to NRC Request for Additional Information Letter No. 049, dated July 30, 2009 (ML092180280).

During review of FSAR Subsection 2.3 of the VCSNS Units 2 and 3 COLA, it was noted that some inconsistencies existed between FSAR text and certain tables. These inconsistencies are detailed below and the appropriate updated FSAR pages are included in an attachment to this submittal.

In response to RAI 02.03.01-3 (Reference 2) and as incorporated in Revision 1 to the FSAR, a more detailed discussion of snow loading was provided. At that time the site specific snow loading event was revised from 12.2 lb/ft<sup>2</sup> to 12.4 lb/ft<sup>2</sup> based on the 100 year return period snowfall event. The discussion and values were updated in FSAR Subsection 2.3.1.3.4, however the value was inadvertently not updated in FSAR Table 2.0-201. Therefore, a revised FSAR Table 2.0-201 reflecting the correct 12.4 lb/ft<sup>2</sup> value is hereby provided in the attachment to this submittal.

In Reference letter 3, SCE&G provided a significant update to FSAR Subsection 2.3 to incorporate the 2<sup>nd</sup> year of meteorological data from the meteorological tower that was erected to support VCSNS Units 2 and 3. Within that letter an administrative error was introduced into FSAR Table 2.3-221 that incorrectly reflected two exponent values as "E-04". The correct exponent value in both cases is "E-05". This administrative error was subsequently introduced into Revision 2 of the VCSNS Units 2 and 3 FSAR. A corrected FSAR Table 2.3-221 is provided in the attachment to this submittal.

DOB3  
MRO

Both corrected FSAR tables (Table 2.0-201 and Table 2.3-221) will be included in Revision 3 of the VCSNS Units 2 and 3 COLA.

Should you have any questions, please contact Mr. Al Paglia by telephone at (803) 345-4191, or by email at [apaglia@scana.com](mailto:apaglia@scana.com).

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

Executed on this 21<sup>st</sup> day of June, 2010.

Sincerely,



Ronald B. Clary  
Vice President  
New Nuclear Deployment

AMM/RBC/am

Attachment

c:

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## Attachment 1

(Contains FSAR Tables 2.0-201 and 2.3-221)

**V. C. Summer Nuclear Station, Units 2 and 3  
COL Application  
Part 2, FSAR**

(Sheet 3 of 5)

VCS SUP 2.0-2

**Table 2.0-201  
Comparison of AP1000 DCD Site Parameters and V. C. Summer Nuclear Station, Units 2 and 3**

DCD Value		Plant Specific Value	FSAR Section
<b>Soil (continued)</b>			
Lateral Variability (continued)	Case 1: For a layer with a low strain shear wave velocity greater than or equal to 2500 feet per second, the layer should have approximately uniform thickness, should have a dip not greater than 20 degrees, and should have less than 20 percent variation in the shear wave velocity from the average velocity in any layer.	Units 2 and 3 are founded on hard rock.	
Liquefaction Potential	Negligible	Negligible	2.5.4.8
Minimum Soil Angle of Internal Friction	Greater than or equal to 35 degrees below footprint of nuclear island at its excavation depth	Units 2 and 3 are founded on hard rock.	2.5.4.8
<b>Missiles</b>			
Tornado	4000-lb automobile at 105 mph horizontal, 74 mph vertical 275-lb, 8-in. shell at 105 mph horizontal, 74 mph vertical 1-inch diameter steel ball at 105 mph horizontal and vertical	The Units 2 and 3 design is based on these DCD required limits.	DCD 3.5.4
<b>Flood Level</b>	Less than plant elevation 100'	378.9 ft (NAVD88) (equals DCD elevation 78.9 ft)	2.4.2.2
<b>Groundwater Level</b>	Less than plant elevation 98'	380 ft (NAVD88) (equals DCD elevation 80 ft)	2.4.12.5
<b>Plant Grade Elevation</b>	Less than plant elevation 100' except for portion at a higher elevation adjacent to the annex building	Plant floor elevation is at 400 ft (NAVD88). Plant grade elevation is less than the plant floor elevation. 400 ft (NAVD88) equals DCD elevation 100 ft.	2.4.1.1
<b>Precipitation</b>			
Rain	20.7 in./hr [1-hr 1-mi <sup>2</sup> PMP]	19.0 in./hr (6.2 in./5 min)	2.4.2.3
Snow/Ice	75 pounds per square foot on ground with exposure factor of 1.0 and importance factors of 1.2 (safety) and 1.0 (non-safety)	100-year return period ground-level snowfall of 12.4 snowpack of 12.2 pounds per square foot	2.3.1.3.4

**V. C. Summer Nuclear Station, Units 2 and 3  
COL Application  
Part 2, FSAR**

**Table 2.3-221  
Units 2 & 3 Ground-Level Release PAVAN Output — X/Q Values at the Low Population Zone Boundary**

Low Population Zone Calculations — Building Wake Credit Is Not Included. Relative Concentration (X/Q) Values (Sec/ Cubic Meter) Versus Averaging Time									
Downwind Sector	Distance (Meters)	0–2 Hours	0–8 Hours	8–24 Hours	1–4 Days	4–30 Days	Annual Average	Hrs Per Year Max 0–2 Hr X/Q Exceeded In Sector	
S	3130	4.50E-05	2.26E-05	1.60E-05	7.56E-06	2.58E-06	6.91E-07	15.3	
SSW	3057	2.78 E-05	1.46E-05	1.06E-05	5.31E-06	1.96E-06	5.77E-07	7.5	
SW	3147	3.76 E-05	2.00E-05	1.45E-05	7.32E-06	2.73E-06	8.18E-07	14.1	
WSW	3403	4.09 E-05	2.10E-05	1.51E-05	7.33E-06	2.60E-06	7.33E-07	10.5	
W	3823	4.46 E-05	2.22E-05	1.56E-05	7.31E-06	2.46E-06	6.48E-07	10.9	
WNW	4378	4.27E-05	2.04E-05	1.41E-05	6.32E-06	2.00E-06	4.89E-07	10.0	
NW	5008	4.23E-05	1.99E-05	1.37E-05	6.06E-06	1.88E-06	4.48E-07	8.4	
NNW	5595	3.10E-05	1.47E-05	1.02E-05	4.55E-06	1.43E-06	3.48E-07	6.1	
N	6005	2.90E-05	1.37E-05	9.42E-06	4.18E-06	1.30E-06	3.12E-07	3.5	
NNE	6142	2.92E-05	1.36E-05	9.25E-06	4.03E-06	1.22E-06	2.84E-07	6.2	
NE	5972	2.73E-05	1.29E-05	8.88E-06	3.94E-06	1.23E-06	2.95E-07	7.3	
ENE	5536	3.03E-05	1.45E-05	1.00E-05	4.52E-06	1.43E-06	3.53E-07	10.1	
E	4940	3.23E-05	1.56E-05	1.09E-05	4.94E-06	1.59E-06	3.99E-07	10.0	
ESE	4315	4.82E-05	2.31E-05	1.59E-05	7.17E-06	2.27E-06	5.58E-07	15.0	
SE	3768	8.97E-05	4.46E-05	3.15E-05	1.48E-05	4.97E-06	1.31E-06	43.7	
SSE	3368	7.96E-05	4.01E-05	2.85E-05	1.36E-05	4.67E-06	1.27E-06	32.0	
<b>MAX X/Q</b>		8.97E-05	Total Hours Entire Site Max 0–2 hr X/Q Exceeded						210.4

Site Limit

2.82E-04	1.16E-04	7.45E-05	2.84E-05	7.13E-06	1.31E-06
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