

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

changes. In addition to drift emissions, there is another potential impact of the cooling towers to the environment: the warm saturated air leaving the towers is cooled by the ambient air such that the water vapor condenses into a visible plume that may persist for some distance downwind depending on meteorological conditions (e.g., wind speed, relative humidity). These visible plume occurrences may pose some aesthetic and ground shadowing impacts. Under relatively high wind speeds and humid conditions, the aerodynamic wake turbulence may result in the visible plume touching down causing ground level fogging and, under freezing conditions, icing.

The meteorological data used in the plume analysis is a hybrid of various data sources, but the impact of merging these sources is assumed to be insignificant compared to the inherent uncertainties of predicting future meteorological conditions. The wind speeds and direction are taken from the site meteorology tower for the years 2001-2006: the temperature, humidity, and cloud cover data are from the national weather station at Mineral Wells located 37 mi to the northwest, and the mixing height data is from the airport at Stephenville, 20 mi to the southwest. The topography within 37 mi indicates no major terrain changes that would cause any of these locations to have a different microclimate from the other two. The general site is approximately 822 ft elevation, while Mineral Wells is at 930 ft and Stephenville is 1321 ft with no intervening hills or valleys.

An analysis of the potential environmental impacts caused by the operation of LMDCTs was conducted using the Electric Power Research Institute (EPRI) sponsored Seasonal/Annual Cooling Tower Impact (SACTI) Program. This model is considered a state-of-the-art cooling tower impact model by EPRI and the nuclear industry. It was developed by Argonne National Laboratory (ANL) using the knowledge obtained from extensive research conducted on cooling tower environmental effects. The SACTI model provides salt drift deposition pattern (i.e., kg/km<sup>2</sup>/month) as a function of distance and direction from the cooling towers as well as the frequency of occurrence of visible plumes, hours of plume shadowing, and ground level fogging and icing occurrences by season resulting from the operation of the cooling towers. The circulating water total dissolved solids of 40008402 mg/l (based on an average input TDS of 16803525 mg/l and cooling tower operation at 2.4 cycles of concentration) is the expected long term average condition for Lake Granbury.

| RCOL2\_02.0  
3.02-4 S01

| RCOL2\_02.0  
3.02-4

The SACTI results, as presented in Table 2.3-319, indicate that the longest and largest visible plumes occur in the winter, with smaller plumes occurring in the spring and fall seasons, due to the cold air in winter causing condensation of the moist plumes more readily than in the warmer seasons (i.e., cold air has a much smaller capacity of holding water vapor). The summer visible plumes are noticeably smaller because warmer ambient air results in less condensation of the moist plumes due to its ability to accommodate higher water vapor concentrations.

The largest visible plumes shown in Table 2.3-319 reach a distance of 67106210 meters (4.173.86 mi) downwind of the towers. The frequency of seasonal plume length by compass direction are given in Tables 2.3-320 through 2.3-323. It should

| RCOL2\_02.0  
3.02-4  
RCOL2\_02.0  
3.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

be noted that the longest plumes occur during conditions of high ambient relative humidity that are conducive to natural fog formation and poor visibility. Under these conditions, the atmosphere is already at, or close to, saturation. Therefore, the largest plumes may not be discernible from the ambient fogging conditions. **Figure 2.3-372** provides the seasonal variation of plume length as a function of compass direction.

**Table 2.3-324** provides the hours of plume shadowing by downwind distances and direction. Consistent with the visible plume frequency results, most shadowing occurs in the winter season with lesser amounts in the spring and fall and the least amounts in the summer. The annual hours of plume shadowing are given in **Figure 2.3-379**. The SACTI output also shows that ground level fogging occurs mainly to the north and south directions (**Table 2.3-325**). **Figure 2.3-377** provides the hours of fogging as a function of distance and direction. The pattern of ground level icing is similar to the pattern of fogging, as shown in **Table 2.3-326** and **Figure 2.3-378**. Most ground icing occurs within a half mi of the site except in the south and north directions.

The salt deposition pattern shown in **Table 2.3-327** indicates that there is negligible salt deposition at a distance of ~~one-quarter of a mi~~1.5 miles from the site with the highest amount being ~~approximately 1.83~~2.91 kg/km<sup>2</sup>/month. The salt deposition rate is shown in **Figure 2.3-373**. ~~The salt deposition amounts are below 1 kg/km<sup>2</sup>/month in all directions at 1000 meters from the site.~~ The maximum salt deposition amount of ~~55.8~~137.3 kg/km<sup>2</sup>/month at 100 meters from the site can be compared with a value of 400 kg/km<sup>2</sup>/month below which damage to vegetation is not expected to occur according to a study of the environmental effects of cooling towers. Salt deposition as a function of distance and direction is shown on **Figure 2.3-373**. SCR is adjacent to the cooling towers and is likely to receive cooling tower drift that would add to TDS of the reservoir. However, TDS measured in SCR in 2007 exceeded 2600 mg/L at all sampling locations across all seasons, which is likely due to the reservoir acting as the UHS for two once through units. Increases in SCR TDS measurements due to cooling tower drift are anticipated to be negligible. In addition, according to NUREG-1555, general guidelines for predicting effects of drift deposition on plants suggest that many species have thresholds for visible leaf damage in the range of 10 to 20 kg/ha/mo of NaCl deposited on leaves during the growing season. This range of deposition corresponds to 1000 to 2000 kg/km<sup>2</sup>/month. Therefore, no impacts on vegetation outside the site boundary are expected.

RCOL2\_02.0  
3.02-4  
RCOL2\_02.0  
3.02-4 S01

RCOL2\_02.0  
3.02-4

The deposition patterns for chlorides and total dissolved solids are shown in **Table 2.3-328** and **Table 2.3-329**. These results are illustrated in **Figures 2.3-374** and **2.3-375**, which show that the deposition is minimal at the site boundary.

The maximum predicted water deposition rate is ~~7.84.9~~7.84.9  $\times 10^4$  kg/km<sup>2</sup>/month at a downwind distance of 100 meters from the cooling towers (**Table 2.3-330**). The water deposition rate is shown in **Figure 2.3-376**. This deposition rate is the rainfall equivalent of ~~0.003~~0.002 ~~inches~~inches per month based on the density of water

RCOL2\_02.0  
3.02-4 S01  
RCOL2\_02.0  
3.02-4  
RCOL2\_02.0  
3.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-319**  
**Cooling Tower Visible Plume Length by Season**

CP COL 2.3(1)

	(Length in meters)					
	Winter	Spring	Summer	Fall	Annual	
Plume from LMDCT moving in the indicated direction						
S	63806060	40803660	26302210	39303540	47404360	RCOL2_02.0 3.02-4
SSW	60905590	34702950	49601670	30202730	36203210	RCOL2_02.0 3.02-4 S01
SW	50606210	20503000	9501400	19802500	22402990	
WSW	49805830	26703590	8801160	23602770	23702930	
W	66806140	39003430	14401170	40203730	37403360	
WNW	67106140	34203100	16601460	30002630	34003050	
NW	65906120	34803130	49101720	31202840	34403130	
NNW	54204970	26202360	12501060	26902390	26902410	
N	45804140	23902090	1100930	26402260	25002190	
NNE	41403700	26902300	14001040	33002690	28802420	
NE	29204070	24303140	9601490	32104210	23903260	
ENE	40604960	30503880	14002040	40804960	33904220	
E	53404900	33403000	25502060	46403970	42503770	
ESE	58905440	42403820	34302910	52504630	51104600	
SE	50104620	38103400	26102260	43903940	44304020	
SSE	51804910	34503190	21501860	39203690	42103960	
All	52905050	29802780	14701330	32803050	32503050	
Average Plume Lengths in Mi						
	Winter	Spring	Summer	Fall	Annual	
Plume from LMDCT moving in the indicated direction						
S	3.963.77	2.542.27	4.631.37	2.442.2	2.952.71	RCOL2_02.0 3.02-4
SSW	3.783.47	2.161.83	1.221.04	1.881.7	2.251.99	RCOL2_02.0 3.02-4 S01
SW	3.143.86	1.271.86	0.590.87	1.231.55	1.391.86	
WSW	3.093.62	1.662.23	0.550.72	1.471.72	1.471.82	
W	4.153.82	2.422.13	0.890.73	2.523.2	2.322.09	
WNW	4.173.82	2.131.93	1.030.91	1.861.63	2.141.9	
NW	4.093.8	2.161.94	1.191.07	1.941.76	2.141.94	
NNW	3.373.09	1.631.47	0.780.66	1.671.49	1.671.5	
N	2.852.57	1.491.3	0.680.58	1.641.4	1.551.36	
NNE	2.572.3	1.671.43	0.870.65	2.051.67	1.791.5	
NE	1.812.53	1.511.95	0.600.93	1.992.62	1.492.03	
ENE	2.523.08	1.92.41	0.871.27	2.543.08	2.112.62	
E	3.323.04	2.081.86	1.581.28	2.882.47	2.642.34	
ESE	3.663.38	2.632.37	2.131.81	3.262.88	3.182.86	
SE	3.112.87	2.372.11	1.621.4	2.732.45	2.752.5	
SSE	3.223.05	2.141.98	1.341.16	2.442.29	2.622.46	
All	3.293.14	1.851.73	0.940.83	2.041.9	2.021.9	

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-320**  
**Winter Plume Percent Frequency by Length and Direction**

CP COL 2.3(1)	(0 - <500 m (0 to 1/3 mi)	500 - <1000 m (1/3 - 2/3 mi)	1000 - <8000 m (2/3 - 5 mi)	8000 m and longer <th data-kind="parent" data-rs="2">Total Freq</th>	Total Freq
Plume from LMDCT moving in the indicated direction					
S	2.46	<u>0.4</u>	<u>2.13</u> <u>1.73</u>	4.6	9.19
SSW	0.97	<u>0.21</u>	<u>1.04</u> <u>0.8</u>	1.5	3.48
SW	<u>0.49</u> <u>0.32</u>	<u>0.41</u> <u>0.17</u>	<u>0.22</u> <u>0.59</u>	<u>0.8</u> <u>0.84</u>	1.92
WSW	<u>0.45</u> <u>0.27</u>	<u>0.24</u> <u>0.18</u>	<u>0.14</u> <u>0.34</u>	<u>0.61</u> <u>0.65</u>	1.44
W	0.7	<u>0.19</u>	<u>0.95</u> <u>0.76</u>	1.59	3.24
WNW	0.83	<u>0.27</u>	<u>1.3</u> <u>1.03</u>	1.98	4.11
NW	1.3	<u>0.29</u> <u>1.47</u>	<u>2.34</u> <u>1.53</u>	<u>4.36</u> <u>3.99</u>	8.29
NNW	3.41	<u>0.35</u> <u>1.71</u>	<u>2.68</u> <u>1.88</u>	<u>4.7</u> <u>4.14</u>	11.14
N	7.47	<u>0.94</u>	<u>3.82</u> <u>2.88</u>	5.12	16.41
NNE	2.73	<u>0.45</u>	<u>1.64</u> <u>1.19</u>	1.42	5.79
NE	<u>1.98</u> <u>1.73</u>	<u>0.89</u> <u>0.25</u>	<u>0.74</u> <u>1.43</u>	<u>0.67</u> <u>0.87</u>	4.28
ENE	<u>1.79</u> <u>1.45</u>	<u>0.72</u> <u>0.34</u>	<u>0.79</u> <u>1.31</u>	<u>1.26</u> <u>1.46</u>	4.56
E	1.09	<u>0.29</u>	<u>1.07</u> <u>0.78</u>	1.14	3.3
ESE	1.42	<u>0.28</u>	<u>1.38</u> <u>1.1</u>	1.95	4.75
SE	2.64	<u>0.35</u> <u>1.24</u>	<u>1.92</u> <u>1.34</u>	<u>2.92</u> <u>2.61</u>	7.83
SSE	3.62	<u>0.23</u> <u>0.97</u>	<u>1.59</u> <u>1.14</u>	<u>4.17</u> <u>3.88</u>	9.61
All	<u>33.4</u> <u>32.4</u>	<u>3.5</u> <u>9.4</u>	<u>23.7</u> <u>19.8</u>	<u>38.8</u> <u>37.7</u>	99.35

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-321**  
**Spring Plume Percent Frequency by Length and Direction**

CP COL 2.3(1)	(0 - <500 m (0 to 1/3 mi)	500 - <1000 m (1/3 - 2/3 mi)	1000 - <8000 m (2/3 - 5 mi)	8000 m and longer <th data-kind="parent" data-rs="2">Total Freq</th> <th data-kind="parent" data-rs="2">RCOL2_02.0 3.-2-4 RCOL2_02.0 3.02-4 S01</th>	Total Freq	RCOL2_02.0 3.-2-4 RCOL2_02.0 3.02-4 S01
	Plume from LMDCT moving in the indicated direction					
S	2.93	<u>0.31</u>	<u>1.44</u> <u>1.13</u>	1.47	5.84	
SSW	2.53	<u>0.32</u>	<u>1.10</u> <u>0.78</u>	0.87	4.5	
SW	<u>21.8</u>	<u>0.65</u> <u>0.2</u>	<u>0.34</u> <u>0.94</u>	<u>0.4</u> <u>0.45</u>	3.39	
WSW	<u>4.3</u> <u>1.13</u>	<u>0.54</u> <u>0.17</u>	<u>0.25</u> <u>0.72</u>	<u>0.46</u> <u>0.5</u>	2.52	
W	2.15	<u>0.28</u>	<u>40.72</u>	1	4.15	
WNW	2.69	<u>0.23</u>	<u>0.93</u> <u>0.7</u>	1.01	4.63	
NW	4.69	<u>0.37</u> <u>1.42</u>	<u>2.13</u> <u>1.49</u>	<u>2.16</u> <u>1.75</u>	9.35	
NNW	11.64	<u>0.39</u> <u>1.91</u>	<u>2.85</u> <u>1.88</u>	<u>3.23</u> <u>2.68</u>	18.11	
N	17.52	<u>0.97</u>	<u>3.76</u> <u>2.79</u>	3.37	24.65	
NNE	2.61	<u>0.21</u>	<u>0.84</u> <u>0.6</u>	0.53	3.95	
NE	<u>1.85</u> <u>1.66</u>	<u>0.35</u> <u>0.19</u>	<u>0.43</u> <u>0.66</u>	<u>0.4</u> <u>0.52</u>	3.03	
ENE	<u>1.22</u> <u>1.12</u>	<u>0.37</u> <u>0.1</u>	<u>0.35</u> <u>0.65</u>	<u>0.46</u> <u>0.53</u>	2.4	
E	1.22	<u>0.12</u>	<u>0.50</u> <u>0.38</u>	0.38	2.1	
ESE	1.03	<u>0.14</u>	<u>0.55</u> <u>0.41</u>	0.58	2.16	
SE	1.65	<u>0.11</u> <u>0.59</u>	<u>0.84</u> <u>0.45</u>	<u>0.96</u> <u>0.84</u>	3.53	
SSE	2.92	<u>0.09</u> <u>0.54</u>	<u>40.68</u>	<u>1.28</u> <u>1.15</u>	5.29	
All	<u>60.0</u> <u>59.3</u>	<u>2.8</u> <u>7.7</u>	<u>18.3</u> <u>15.0</u>	<u>18.6</u> <u>17.7</u>	99.62	

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-322**  
**Summer Plume Percent Frequency by Length and Direction**

CP COL 2.3(1)	(0 - <500 m (0 to 1/3 mi)	500 - <1000 m (1/3 - 2/3 mi)	1000 - <8000 m (2/3 - 5 mi)	8000 m and longer <th data-kind="parent" data-rs="2">Total Freq</th>	Total Freq
Plume from LMDCT moving in the indicated direction					
S	1.82	<u>0.12</u>	<u>0.51</u> <u>0.39</u>	0.37	2.7
SSW	2.41	<u>0.18</u>	<u>0.46</u> <u>0.28</u>	0.33	3.2
SW	<u>2.5</u> <u>2.32</u>	<u>0.25</u> <u>0.18</u>	<u>0.08</u> <u>0.3</u>	<u>0.19</u> <u>0.22</u>	3.02
WSW	<u>2.52</u> <u>2.43</u>	<u>0.18</u> <u>0.09</u>	<u>0.08</u> <u>0.25</u>	<u>0.17</u> <u>0.18</u>	2.95
W	4.15	<u>0.26</u>	<u>0.62</u> <u>0.36</u>	0.32	5.09
WNW	5.3	<u>0.24</u>	<u>0.83</u> <u>0.59</u>	0.56	6.69
NW	10.59	<u>0.33</u> <u>1.42</u>	<u>2.17</u> <u>1.38</u>	<u>1.61</u> <u>1.31</u>	14.7
NNW	15.96	<u>0.45</u> <u>1.72</u>	<u>2.13</u> <u>1.07</u>	<u>1.18</u> <u>0.97</u>	19.72
N	20.73	<u>0.73</u>	<u>1.98</u> <u>1.25</u>	1.17	23.88
NNE	4.84	<u>0.33</u>	<u>0.83</u> <u>0.5</u>	0.28	5.95
NE	<u>2.84</u> <u>2.55</u>	<u>0.47</u> <u>0.29</u>	<u>0.23</u> <u>0.67</u>	<u>0.13</u> <u>0.16</u>	3.67
ENE	<u>1.57</u> <u>1.38</u>	<u>0.29</u> <u>0.19</u>	<u>0.19</u> <u>0.44</u>	<u>0.14</u> <u>0.18</u>	2.19
E	1.04	<u>0.11</u>	<u>0.40</u> <u>0.29</u>	0.15	1.59
ESE	0.75	<u>0.1</u>	<u>0.38</u> <u>0.28</u>	0.24	1.37
SE	0.75	<u>0.04</u> <u>0.19</u>	<u>0.29</u> <u>0.17</u>	<u>0.18</u> <u>0.15</u>	1.26
SSE	1.21	<u>0.04</u> <u>0.16</u>	<u>0.24</u> <u>0.2</u>	<u>0.24</u> <u>0.16</u>	1.73
All	<u>79.0</u> <u>78.2</u>	<u>2.06</u> <u>3</u>	<u>11.4</u> <u>8.4</u>	<u>7.2</u> <u>6.7</u>	99.71

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-323**  
**Fall Plume Percent Frequency by Length and Direction**

CP COL 2.3(1)	(0 - <500 m (0 to 1/3 mi)	500 - <1000 m (1/3 - 2/3 mi)	1000 - <8000 m (2/3 - 5 mi)	8000 m and longer <th data-kind="parent" data-rs="2">Total Freq</th>	Total Freq
Plume from LMDCT moving in the indicated direction					
S	3.73	<u>0.41</u>	<u>1.54</u> <u>1.1</u>	1.83	7.07
SSW	2.82	<u>0.2</u>	<u>0.64</u> <u>0.44</u>	0.91	4.37
SW	<u>2.14</u> <u>1.91</u>	<u>0.34</u> <u>0.23</u>	<u>0.19</u> <u>0.47</u>	<u>0.44</u> <u>0.47</u>	3.08
WSW	<u>1.95</u> <u>1.84</u>	<u>0.18</u> <u>0.11</u>	<u>0.18</u> <u>0.33</u>	<u>0.52</u> <u>0.55</u>	2.83
W	<u>2.91</u> <u>2.91</u>	<u>0.31</u>	<u>0.97</u> <u>0.66</u>	1.65	5.53
WNW	3.38	<u>0.3</u>	<u>0.89</u> <u>0.59</u>	1.06	5.33
NW	6.83	<u>0.35</u> <u>1.5</u>	<u>2.26</u> <u>1.35</u>	<u>2.54</u> <u>2.3</u>	11.98
NNW	8.37	<u>0.49</u> <u>1.83</u>	<u>2.64</u> <u>1.59</u>	<u>2.26</u> <u>1.97</u>	13.76
N	11.03	<u>0.87</u>	<u>3.11</u> <u>2.24</u>	2.31	16.45
NNE	2.87	<u>0.48</u>	<u>1.46</u> <u>0.98</u>	0.8	5.13
NE	<u>1.72</u> <u>1.53</u>	<u>0.63</u> <u>0.19</u>	<u>0.52</u> <u>1.02</u>	<u>0.76</u> <u>0.89</u>	3.63
ENE	<u>1.2</u> <u>1.01</u>	<u>0.47</u> <u>0.19</u>	<u>0.37</u> <u>0.74</u>	<u>0.93</u> <u>1.03</u>	2.97
E	0.99	<u>0.26</u>	<u>0.85</u> <u>0.59</u>	0.66	2.5
ESE	1.15	<u>0.27</u>	<u>0.95</u> <u>0.68</u>	1.16	3.26
SE	1.99	<u>0.19</u> <u>0.68</u>	<u>1.17</u> <u>0.88</u>	<u>1.42</u> <u>1.22</u>	4.77
SSE	3.3	<u>0.15</u> <u>0.58</u>	<u>0.85</u> <u>0.69</u>	<u>2.08</u> <u>1.81</u>	6.38
All	<u>56.4</u> <u>55.7</u>	<u>2.8</u> <u>8.4</u>	<u>18.6</u> <u>14.4</u>	<u>21.3</u> <u>20.6</u>	99.03

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-324 (Sheet 1 of 4)**  
**Annual Hours/Yr of Plume Shadow**

CP COL 2.3(1)

Directions are directions from the tower.

		(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
		0.25	400	2037.8 <u>2028</u>	2271.1 <u>2437</u>	2897.1 <u>3125</u>	3825.1 <u>4075</u>	4616.9 <u>5017</u>	4171.6 <u>4273</u>	3598.3 <u>3678</u>	3186.5 <u>3262</u>	3036.8 <u>3107</u>	3109.5 <u>3166</u>	3782.3 <u>889</u>	4279.2 <u>4534</u>	3424.3 <u>3584</u>	2424.5 <u>2464</u>	1952.8 <u>1964</u>	1915.9 <u>1895</u>
		0.37	600	1501.2 <u>1392</u>	1511.8 <u>1436</u>	1612.4 <u>1723</u>	2233.5 <u>2385</u>	2864.5 <u>2986</u>	27902 <u>827</u>	2733.7 <u>2592</u>	2534.9 <u>2329</u>	2208.9 <u>2037</u>	1968.6 <u>1840</u>	2026.1 <u>1938</u>	2180.6 <u>2329</u>	1979.3 <u>1981</u>	1652.6 <u>1600</u>	1500.5 <u>1400</u>	1539.3 <u>1422</u>
		0.5	800	1221 <u>1096</u>	1122.5 <u>994</u>	1107.3 <u>1137</u>	1611.9 <u>1681</u>	1977.3 <u>2096</u>	2306.2 <u>2184</u>	2260.2 <u>2100</u>	2041.8 <u>1861</u>	1686 <u>1495</u>	1424.9 <u>1289</u>	1284.1 <u>1277</u>	1523.8 <u>1541</u>	1312.1 <u>1311</u>	1243.7 <u>1185</u>	1222.4 <u>1131</u>	1231.2 <u>1128</u>
		0.62	1000	1077.4 <u>950</u>	952 <u>832</u>	871.5 <u>848</u>	1267 <u>1340</u>	1593.5 <u>1601</u>	1968.6 <u>1810</u>	1967.9 <u>1783</u>	1725.4 <u>1537</u>	1421.6 <u>1240</u>	1112.5 <u>1013</u>	971.2 <u>945</u>	1149.1 <u>1167</u>	995.4 <u>972</u>	976.9 <u>945</u>	1002.2 <u>918</u>	1085.5 <u>994</u>
		0.75	1200	924.7 <u>822</u>	831.4 <u>744</u>	736.5 <u>706</u>	1047.7 <u>1110</u>	1328 <u>1286</u>	1687.6 <u>1562</u>	1755.7 <u>1573</u>	1486 <u>1337</u>	1247.3 <u>1085</u>	910.8 <u>838</u>	717.1 <u>724</u>	845 <u>898</u>	766.7 <u>754</u>	835.9 <u>819</u>	854.2 <u>768</u>	962.4 <u>881</u>
		0.87	1400	777.9 <u>703</u>	679.2 <u>604</u>	637.3 <u>590</u>	889.1 <u>939</u>	1139.7 <u>1087</u>	1469.6 <u>1323</u>	1581.9 <u>1377</u>	1307.5 <u>1139</u>	1080.7 <u>956</u>	745 <u>685</u>	568.5 <u>557</u>	654.8 <u>668</u>	620.3 <u>608</u>	721.1 <u>690</u>	713.8 <u>651</u>	834.4 <u>758</u>
		0.99	1600	616.8 <u>546</u>	585.9 <u>527</u>	580.6 <u>533</u>	793.4 <u>834</u>	969.9 <u>894</u>	1280.1 <u>1129</u>	1446.4 <u>1253</u>	1179.1 <u>1016</u>	908.9 <u>815</u>	604.2 <u>568</u>	483.6 <u>470</u>	546.2 <u>570</u>	488.7 <u>473</u>	619.3 <u>605</u>	624 <u>561</u>	748.4 <u>669</u>
		1.12	1800	495.9 <u>454</u>	515.3 <u>464</u>	535.3 <u>490</u>	728 <u>757</u>	861.7 <u>776</u>	1133 <u>1013</u>	1338.5 <u>1165</u>	1054.8 <u>892</u>	782.6 <u>716</u>	485.6 <u>461</u>	429.7 <u>409</u>	474 <u>497</u>	410.5 <u>382</u>	550.7 <u>521</u>	560.3 <u>514</u>	688.4 <u>606</u>
		1.24	2000	437.3 <u>394</u>	456.3 <u>404</u>	497 <u>457</u>	657.2 <u>696</u>	740.8 <u>674</u>	997.2 <u>896</u>	1222.3 <u>1083</u>	949.3 <u>809</u>	690.9 <u>632</u>	404 <u>383</u>	376.5 <u>357</u>	416.6 <u>436</u>	355 <u>342</u>	487.7 <u>463</u>	500.4 <u>452</u>	612.9 <u>534</u>
		1.37	2200	382.3 <u>341</u>	408.1 <u>359</u>	464.3 <u>430</u>	607.8 <u>624</u>	659.6 <u>606</u>	906 <u>798</u>	1130 <u>1008</u>	827.5 <u>733</u>	613 <u>561</u>	351.3 <u>337</u>	320.1 <u>307</u>	373 <u>375</u>	310.1 <u>298</u>	447.4 <u>415</u>	458.4 <u>409</u>	529.6 <u>469</u>
		1.49	2400	336.7 <u>304</u>	378.3 <u>331</u>	436.9 <u>397</u>	578 <u>586</u>	607.2 <u>555</u>	842.5 <u>744</u>	1017.6 <u>921</u>	749.4 <u>649</u>	559.2 <u>504</u>	317.2 <u>303</u>	275.7 <u>259</u>	335 <u>336</u>	274.5 <u>257</u>	403.2 <u>372</u>	388.7 <u>353</u>	480 <u>419</u>
		1.62	2600	307.1 <u>279</u>	340.2 <u>304</u>	416.5 <u>376</u>	538.2 <u>557</u>	549.6 <u>512</u>	792.2 <u>694</u>	947.9 <u>840</u>	670.3 <u>580</u>	518.6 <u>470</u>	294.1 <u>274</u>	236.7 <u>224</u>	307 <u>304</u>	244.2 <u>233</u>	363.9 <u>343</u>	362.5 <u>320</u>	432.4 <u>379</u>

RCOL2\_02.  
03.02-4

RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-324 (Sheet 2 of 4)**  
**Annual Hours/Yr of Plume Shadow**

CP COL 2.3(1)

Directions are directions from the tower.

		(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
		1.74	2800	276.9 246	320.5 286	387.3 349	505.7 523	518 473	735.6 644	886.8 775	616.1 528	486.7 447	279.8 260	216.6 199	274 268	227.1 209	329 309	346.4 306	394.2 337
		1.86	3000	257.5 229	298 270	362.5 328	474.4 487	489 439	685.6 604	818.6 730	575.2 500	452.8 417	268.8 250	191.6 174	247.5 243	209.5 194	312.2 289	330.6 292	355.5 305
		1.99	3200	246.9 214	284.7 253	342.4 312	452.7 453	449.3 411	654.6 567	778.8 680	531.9 470	432 386	252.6 239	175.4 163	219.6 222	196.4 183	285 266	313.5 272	331.3 285
		2.11	3400	229.1 204	267.6 239	327.9 297	414.6 411	428.5 385	617.1 539	738.4 643	504.9 437	411.5 363	244.4 232	163.3 157	199.2 198	182.7 170	274.8 244	294.1 260	306.6 269
		2.24	3600	219.3 192	252.8 226	318.4 287	375.7 375	411.1 366	573.5 516	695.8 606	486.7 417	388.7 344	235.7 225	154.6 149	183.1 174	171.3 161	260.5 234	279.9 244	285.6 254
		2.36	3800	210.1 186	243 214	308.6 275	339.1 354	392.8 354	556.7 496	653.3 578	466.8 404	367.8 333	227.8 221	142.1 139	171.5 161	159.7 148	245 229	270.2 234	266.7 241
		2.49	4000	201.2 174	228 206	301.6 265	314.5 329	383.4 340	542.6 468	631.1 544	444.7 389	347.5 318	213.4 214	137.6 133	157 144	152.4 140	231.9 221	258.5 224	257.4 230
		2.61	4200	191.1 163	214.6 193	293.6 254	298 309	377.1 332	520.1 450	609.7 515	416.8 374	333.4 304	206.9 203	132.4 126	142.7 131	145.4 131	222 209	246.2 212	251.1 219
		2.73	4400	178.4 153	204.2 179	283.1 243	280.3 289	371.3 325	495.4 429	579.5 498	404.4 354	323.6 293	201.2 196	126.5 122	128.2 122	140.7 128	214.6 196	238 206	242.7 209
		2.86	4600	166.1 143	195.4 170	269 237	264.6 279	361.6 317	470.8 412	560.8 484	389 336	317.6 283	196 190	120.6 118	124.2 118	139.4 125	206.6 190	227.8 195	236.7 201
		2.98	4800	152.1 134	181.1 155	259.6 230	257.7 272	354.2 310	457 394	550.2 465	374.4 324	298 272	191.3 186	116.1 108	114.3 108	130 123	196.3 181	218.9 187	220.7 190
		3.11	5000	144.7 127	167.8 148	248.3 217	251.6 261	345.1 304	445.4 382	533.8 457	362.2 313	289 266	186.5 179	110.8 103	110.8 100	125.4 118	188.8 170	209.9 176	204.4 178

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-324 (Sheet 3 of 4)**  
**Annual Hours/Yr of Plume Shadow**

CP COL 2.3(1)

Directions are directions from the tower.

		(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
				134.5	158.8	236.5	239	338.2	427.9	517.8	350.5	280.5	182.3	106.2	102.3	122.4	181.9	196.3	187.9
3.23	5200			116	141	209	247	297	373	445	304	260	177	99	89	113	163	170	170
				120	149.5	219.6	227.6	332.3	409.8	500.1	341.5	268.3	174.6	101.3	93.3	118.9	176.7	183.8	176.7
3.36	5400			110	133	195	237	294	360	433	296	253	175	97	87	110	156	159	160
				114	141.5	211.9	223.8	324.1	400.5	487.3	328.2	254.5	171.6	100.3	88.4	117.8	172	179.7	167.7
3.48	5600			108	121	189	228	286	347	417	290	243	164	94	83	105	146	152	152
				104.3	128.7	198.4	213.8	317.5	375.5	476.5	319.2	249.3	167.3	95.7	86	116.4	163.8	163.7	155.7
3.6	5800			95	117	177	222	278	335	412	276	233	158	91	79	102	141	141	145
				98.3	125.8	189.9	206.6	311.6	362.2	460.5	309.8	243	156.6	92.4	82.8	111.9	158.3	160.6	145.7
3.73	6000			90	113	170	214	273	317	399	270	221	152	88	75	99	137	133	140
				95.3	115.3	181.2	198.4	309.5	352.2	449.7	300.6	234.9	152.1	90.5	78.9	105.2	155.1	152.9	137.9
3.85	6200			84	108	156	207	269	311	392	259	210	147	86	71	95	134	131	131
				89.3	111.3	174.7	189.3	307.3	344.2	432.5	295.7	227.4	144.5	86.4	73.1	101.5	150.4	141.9	134.9
3.98	6400			76	104	148	195	266	296	376	256	197	144	83	68	94	129	126	127
				82.3	101.1	165.7	178.2	302.4	322.6	420.9	286.3	217.4	138.7	83.1	68.9	100.5	145.5	133.7	128.9
4.1	6600			69	97	145	182	261	283	362	249	192	138	81	65	93	124	117	118
				76	97.9	162.3	169.5	294.9	315.1	402.5	280.3	211	135.2	82.1	66.5	99.5	139.1	131.7	121.9
4.23	6800			62	90	142	175	255	275	352	239	181	133	77	60	91	121	112	113
				67	92.9	156.4	161.8	289	309.8	395.6	275.2	201.9	127.2	79	63	97.9	134.4	128.4	116.9
4.35	7000			57	82	135	161	252	265	343	230	171	127	74	55	89	114	108	107
				58.9	90.9	147.6	157.4	287	301.8	385.4	262	188.4	121.3	74.8	59.9	93.6	127.4	124.4	114.9
4.47	7200			55	81	133	157	245	255	330	219	158	124	72	52	81	108	101	105
				53.4	86.6	141.2	150.2	282.2	294.5	368.2	254.9	176.1	115.3	71.8	54.9	92.6	120.1	119.8	105.5
4.6	7400			48	79	129	152	241	246	319	216	149	117	66	52	77	102	98	97

RCOL2\_02.  
03.02-4

RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-324 (Sheet 4 of 4)**  
**Annual Hours/Yr of Plume Shadow**

CP COL 2.3(1)

Directions are directions from the tower.

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
4.72	7600	44.4 40	83.9 71	135.1 124	146.1 148	277.2 239	287.3 243	360 301	246 208	168.7 142	110.3 108	68.7 65	52.5 50	87.7 76	113.7 99	109.6 90	97.2 89
4.85	7800	39.4 33	70.8 60	128.9 118	138.9 141	275.2 237	275.7 234	343 291	236.6 203	158.6 133	106.3 99	65.1 62	49.7 45	85.8 76	111.9 98	106.7 87	91.2 85
4.97	8000	35.4 31	60 50	118.4 110	134 138	270.6 234	266.5 229	333.1 275	225.4 188	151.4 121	101.8 93	62.8 59	48.6 43	79.9 70	110.9 95	99.8 82	81.2 76

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-325 (Sheet 1 of 2)**  
**Annual Hours/Yr of Fogging**

CP COL 2.3(1)

Directions are directions from the tower.

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.06	100	98.22	57.2	14.8	41.1	4.90.4	62.8	1124.3	47.8	89.5	60.3	19.6	5.12.8	2.60.0	5.48.8	7.1	45.2
		92.7	73.9	21.6					68.2	96.9	77.9	27.5				22.9	106.3
0.12	200	90.8	31.4	7.4	5.32.2	5.72.0	6.85.9	1531	94.5	76.7	30.6	10.2	7.34.4	3.81.4	511.2	137.5	290.1
		86.3	35.4	13.6					1.5	24.4	90.3	35.1				10.3	56.1
0.19	300	61.2	11.0	5.9	0.52.1	2.51.0	6.33.1	24.1	77.4	53.0	11.4	198.9	4.24.3	1.50.5	53.5	129.4	350.3
		128.5	44.1				12.4		157.4							12.3	60.4
0.25	400	45.1	5.2	7.34.4	0.41.0	2.41.0	0.7	12.4	1950.9	26.6	425.7	9.76.3	3.62.5	40.4	82.3	100.6	313.4
		103.7	28						7.4	119.4	22.5						53.6
0.31	500	90.0	9.4	0.44.1	0.31.0	41.9	9.12.3	00.0	15.4	60.9	8.2	0.36.3	2.42.5	0.50.4	6.44.8	1137.4	157.9
		83.3	22.6						11.8	87.3						16.9	63.9
0.37	600	60.8	4.1	0.34.1	0.30.5	41.7	6.30.7	1.80.0	7.6	27.3	463.3	0.36.3	1.61.7	0.50.3	52.5	13.8	63.5
		77.3	18.4						76.4	13.8						4.1	23.3
0.43	700	50.5	2.0	0.34.0	0.20.0	41.5	5.40.0	00.0	44.1	19.0	1.0	0.26.3	1.51.0	0.40.3	4.62.0	2.0	17.4
		61.4							49.5								
0.5	800	42.3	7.22.0	0.14.0	00.0	41.1	30.0	00.0	4.31.0	19.0	7.21.0	06.3	0.91.0	0.10.3	3.52.0	1.20.2	6.32.8
		60.6							49.5								
0.56	900	33.7	7.21.6	0.14.0	00.0	40.7	30.0	00.0	1.20.0	16.3	7.21.0	06.0	0.51.0	0.10.0	3.52.0	0.10.0	1.20.0
		48.8							29.4								
0.62	1000	28.5	3.81.5	02.0	00.0	40.5	4.50.0	00.0	0.70.0	15.5	3.91.0	03.0	0.51.0	00.0	2.72.0	00.0	0.70.0
		38.27.9	41.1	02.0	00.0	40.5	00.0	00.0	00.0	4212.8	41.0	03.0	0.51.0	00.0	22.0	00.0	00.0
0.68	1100	3820.5	41.0	02.0	00.0	40.5	00.0	00.0	00.0	427.5	40.5	03.0	0.51.0	00.0	21.5	00.0	00.0
		3820.5	41.0	00.0	00.0	40.5	00.0	00.0	00.0	427.5	40.5	00.0	0.51.0	00.0	21.5	00.0	00.0
0.75	1200																
0.81	1300																

RCOL2\_02.  
03.02-4

RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-325 (Sheet 2 of 2)**  
**Annual Hours/Yr of Fogging**

CP COL 2.3(1)

Directions are directions from the tower.

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.87	1400	<u>37.6</u> <u>20.5</u>	<u>41.0</u>	<u>0.0</u>	<u>0.0</u>	<u>40.5</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>427.5</u>	<u>40.5</u>	<u>0.0</u>	<u>0.51.0</u>	<u>0.0</u>	<u>21.5</u>	<u>0.0</u>	<u>00.0</u>
0.93	1500	<u>29.9</u> <u>19.4</u>	<u>40.6</u>	<u>0.0</u>	<u>0.0</u>	<u>0.60.5</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>426.4</u>	<u>40.5</u>	<u>0.0</u>	<u>0.51.0</u>	<u>0.0</u>	<u>21.1</u>	<u>0.0</u>	<u>00.0</u>
0.99	1600	<u>22.8</u> <u>19</u>	<u>0.90.5</u>	<u>0.0</u>	<u>0.0</u>	<u>040.5</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>40.5</u> <u>6.0</u>	<u>0.90.5</u>	<u>0.0</u>	<u>0.50.6</u>	<u>0.0</u>	<u>4.71.0</u>	<u>0.0</u>	<u>00.0</u>

RCOL2\_02  
03.02-4

RCOL2\_02  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-326 (Sheet 1 of 2)**  
**Annual Hours/Yr of RIME Icing**

CP COL 2.3(1)

Directions are directions from the tower.

		(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE	
		0.06	100	64.3 9	41.9 1.1	44.2 6.5	3.41.1 3.60	3.60 5.42.8	4124.2 45.2	45.3 6.4	80.6 1.6	57.7 9.8	49.6 5.12.8	2.30 47.5	6.8 57.2	3277.2 40	49.8 80.4	RCOL2_02. 03.02-4 RCOL2_02. 03.02-4 S01		
		0.12	200	66.5 52.7	54.4 21.6	19.77 4.61.9	4.71.2 65.6	65.6 30.6	84.5 66.9	86.8 28.5	73.4 10.2	27.5 7.34.4	3.31.2 45.2	45.2 80.4	133.2 1.5	19 67.2	125 36.4	84.8 27.4		
		0.19	300	60.8 36	25.7 7.5	13.1 5.7	0.22 1.50	1.50 63	24.1 63.4	80.343 32.610	32.610 198.9	4.24.3 4.25	1.30.4 42.5	1.30.4 67.2	1.5 67.2	19 125	1.5 36.4	84.8 27.4		
		0.25	400	103 19.7	33.5 2.2	6.84 6.84	01 01	4.40 4.40	42.07 12.4	4.4 38.2	147.4 16.6	39.5 3.8	9.76.3 109.4	3.62.5 20.9	0.80.3 0.36.3	71.3 2.42.5	0.9 0.36.3	13 5.42.9	0.9 2.4	13 11.1
		0.31	500	78.3 42.9	19.9 5.2	04 04	01 01	0 0	8.82.3 8.82.3	0 7.1	42.1 7.1	7.9 7.9	0.36.3 0.36.3	3.62.5 2.42.5	0.80.3 0.30.3	71.3 5.42.9	0.8 2.4	11.1 27.4	0.8 27.4	
		0.37	600	58 20.5	14.8 1.8	04 04	00.5 00.5	0 0	60.7 60.7	4.80 8.32.6	77.3 16.9	15.3 3.1	0.36.3 0.36.3	4.61.7 4.61.7	0.3 0.36.3	41.3 4.61.7	5.80.9 0.3	17.210 0.3	0.2 3.2	
		0.43	700	52.3 15.5	12.20 12.20	04 04	0 0	0 0	5.20 5.20	0 4.71.5	68.2 9	43 43	0.26.3 7.1	1.51 0.63	0.20.3 0.91	3.61 0.91	0.20.5 0.251	0.20.5 0	5.5 0.4	
		0.5	800	36.5 15	5.50 5.50	04 04	0 0	0 0	30 30	0 0	43 9	43 7.1	0.91 0.63	0.51 0.6	0.251 0.51	0.251 0	0.2 0	0.2 0		
		0.56	900	36.5 14.5	5.50 5.50	04 04	0 0	0 0	30 30	0 0	43 9	43 7.1	0.91 0.63	0.51 0.6	0.251 0.51	0.251 0	0.2 0	0.2 0		
		0.62	1000	25.5 14.5	2.70 2.70	02 02	0 0	0 0	1.50 1.50	0 0	25.69 25.69	3.91 03	0.51 0.51	0 0	4.71 4.71	0 0	0 0	0 0		
		0.68	1100	4514.5 0	02 02	0 0	0 0	0 0	0 0	0 0	99 94.5	1 40.5	03 03	0.51 0.51	0 0	1 40.5	0 0	0 0		
		0.75	1200	457.5 0	02 02	0 0	0 0	0 0	0 0	0 0	94.5 94.5	40.5 40.5	03 0	0.51 0.51	0 0	40.5 40.5	0 0	0 0		
		0.81	1300	457.5 0	02 02	0 0	0 0	0 0	0 0	0 0	94.5 94.5	40.5 40.5	03 0	0.51 0.51	0 0	40.5 40.5	0 0	0 0		

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-326 (Sheet 2 of 2)**  
**Annual Hours/Yr of RIME Icing**

CP COL 2.3(1)

Directions are directions from the tower.

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.87	1400	<u>14.6</u> <u>7.5</u>	0	0	0	0	0	0	0	<u>94.5</u>	<u>40.5</u>	0	<u>0.51</u>	0	<u>40.5</u>	0	0
0.93	1500	<u>14.5</u> <u>7.5</u>	0	0	0	0	0	0	0	<u>94.5</u>	<u>40.5</u>	0	<u>0.51</u>	0	<u>40.5</u>	0	0
0.99	1600	<u>12.7</u> <u>7.5</u>	0	0	0	0	0	0	0	<u>7.84.5</u>	<u>0.90.5</u>	0	<u>0.50.6</u>	0	<u>0.90.5</u>	0	0

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-327 (Sheet 1 of 3)**  
**Cooling Tower Salt Deposition Rate**

RCOL2\_02  
 .03.02-2  
 RCOL2\_02.  
 03.02-4 S01

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.06	100	24.41	23.80	49.39	41.11	26.96	30.99	66.47	86.01	137.3	30.79	64.35	42.38	10.97	10.24	19.96	31.85
0.12	200	20.60	18.04	28.58	24.38	17.19	20.56	42.02	61.28	127.2	25.41	34.31	23.97	7.70	8.26	14.18	19.06
0.19	300	7.20	5.41	16.70	12.60	3.65	4.94	33.28	52.17	49.19	8.60	22.56	15.76	2.07	2.54	11.45	15.01
0.25	400	6.25	4.69	7.09	5.42	3.26	4.43	25.57	40.43	42.50	7.51	9.34	6.36	1.84	2.21	9.02	11.50
0.31	500	6.28	4.69	0.23	0.17	3.46	4.74	10.67	13.03	42.80	7.61	0.44	0.37	1.79	2.22	4.05	4.65
0.37	600	6.17	4.59	0.15	0.13	3.35	4.57	8.79	10.91	42.08	7.42	0.26	0.22	1.67	2.18	3.19	3.90
0.43	700	5.55	4.12	0.10	0.10	2.97	3.85	5.98	8.05	37.63	6.42	0.17	0.15	1.41	1.98	2.04	2.80
0.5	800	3.77	2.78	0.08	0.07	1.84	2.33	4.55	6.52	24.97	4.25	0.14	0.13	0.97	1.36	1.42	2.02
0.56	900	0.33	0.19	0.07	0.06	0.25	0.28	4.54	6.51	0.76	0.27	0.14	0.13	0.14	0.17	1.42	2.02
0.62	1000	0.31	0.18	0.07	0.06	0.24	0.27	4.58	6.57	0.74	0.26	0.14	0.13	0.14	0.17	1.43	2.03
0.68	1100	0.31	0.18	0.07	0.06	0.24	0.27	5.33	7.62	0.73	0.26	0.14	0.13	0.14	0.17	1.66	2.25
0.75	1200	0.31	0.18	0.07	0.06	0.24	0.27	5.85	8.44	0.73	0.26	0.14	0.13	0.14	0.17	1.87	2.48
0.81	1300	0.31	0.18	0.07	0.06	0.24	0.27	6.04	8.65	0.73	0.26	0.14	0.13	0.14	0.17	1.92	2.53
0.87	1400	0.31	0.18	0.07	0.06	0.24	0.27	6.04	8.65	0.73	0.26	0.14	0.13	0.14	0.17	1.92	2.53
0.93	1500	0.31	0.18	0.07	0.06	0.24	0.27	5.94	8.58	0.73	0.26	0.14	0.13	0.14	0.17	1.90	2.45
0.99	1600	0.31	0.18	0.07	0.06	0.24	0.27	5.75	8.43	0.73	0.26	0.14	0.13	0.14	0.17	1.86	2.27
1.06	1700	0.31	0.18	0.06	0.05	0.24	0.27	5.75	8.43	0.73	0.26	0.12	0.12	0.14	0.17	1.86	2.27
1.12	1800	0.31	0.18	0.05	0.05	0.24	0.27	5.75	8.43	0.73	0.26	0.10	0.10	0.14	0.17	1.86	2.27

RCOL2\_02  
 .03.02-3  
 RCOL2\_02.  
 03.02-4 S01

RCOL2\_02.  
 03.02-4  
 RCOL2\_02.  
 03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-327 (Sheet 2 of 3)**  
**Cooling Tower Salt Deposition Rate**

RCOL2\_02  
 .03.02-2  
 RCOL2\_02.  
 03.02-4 S01

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
1.18	1900	0.31	0.18	0.05	0.04	0.24	0.27	5.75	8.43	0.73	0.26	0.09	0.09	0.14	0.17	1.86	2.27
1.24	2000	0.31	0.18	0.05	0.04	0.24	0.27	5.56	8.18	0.73	0.26	0.09	0.09	0.14	0.17	1.78	2.21
1.3	2100	0.30	0.17	0.04	0.04	0.23	0.25	5.28	7.83	0.71	0.25	0.08	0.08	0.14	0.16	1.68	2.13
1.37	2200	0.27	0.15	0.04	0.03	0.20	0.22	5.10	7.58	0.64	0.23	0.06	0.07	0.13	0.15	1.59	2.05
1.43	2300	0.19	0.10	0.03	0.02	0.12	0.13	4.49	6.62	0.41	0.14	0.05	0.05	0.09	0.11	1.35	1.79
1.49	2400	0.12	0.05	0.02	0.02	0.07	0.07	2.29	2.91	0.22	0.08	0.04	0.04	0.05	0.07	0.93	0.78
1.55	2500	0.10	0.05	0.02	0.02	0.05	0.06	2.28	2.89	0.18	0.06	0.03	0.03	0.04	0.06	0.93	0.78
1.62	2600	0.08	0.04	0.02	0.02	0.05	0.05	2.28	2.89	0.15	0.05	0.03	0.03	0.03	0.04	0.93	0.78
1.68	2700	0.08	0.04	0.02	0.02	0.05	0.05	2.28	2.89	0.15	0.05	0.03	0.03	0.03	0.04	0.93	0.78
1.74	2800	0.06	0.03	0.02	0.02	0.04	0.04	2.28	2.89	0.11	0.04	0.03	0.03	0.02	0.03	0.93	0.78
1.8	2900	0.05	0.02	0.02	0.02	0.03	0.03	2.28	2.89	0.09	0.03	0.03	0.03	0.02	0.03	0.93	0.78
1.86	3000	0.05	0.02	0.02	0.02	0.03	0.03	2.13	2.71	0.09	0.03	0.03	0.03	0.02	0.03	0.87	0.73
1.93	3100	0.05	0.02	0.02	0.01	0.03	0.03	1.80	2.28	0.09	0.03	0.03	0.03	0.02	0.03	0.75	0.63
1.99	3200	0.05	0.02	0.01	0.01	0.03	0.03	1.88	2.31	0.09	0.03	0.03	0.02	0.02	0.03	0.77	0.66
2.05	3300	0.04	0.02	0.01	0.01	0.03	0.03	1.93	2.34	0.08	0.03	0.03	0.02	0.02	0.02	0.79	0.67
2.11	3400	0.04	0.02	0.01	0.01	0.02	0.03	1.93	2.34	0.07	0.02	0.03	0.02	0.01	0.02	0.79	0.67
2.17	3500	0.04	0.02	0.01	0.01	0.02	0.03	1.93	2.34	0.07	0.02	0.03	0.02	0.01	0.02	0.79	0.67
2.24	3600	0.04	0.02	0.01	0.01	0.02	0.03	1.54	1.76	0.07	0.02	0.03	0.02	0.01	0.02	0.58	0.51

RCOL2\_02  
 .03.02-3

RCOL2\_02.  
 03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-327 (Sheet 3 of 3)**  
**Cooling Tower Salt Deposition Rate**

RCOL2\_02  
 .03.02-2  
 RCOL2\_02.  
 03.02-4 S01

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
2.3	3700	0.04	0.02	0.01	0.01	0.02	0.03	1.27	1.38	0.07	0.02	0.03	0.02	0.01	0.02	0.45	0.41
2.36	3800	0.04	0.02	0.01	0.01	0.02	0.03	1.20	1.30	0.07	0.02	0.03	0.02	0.01	0.02	0.43	0.39
2.42	3900	0.04	0.02	0.01	0.01	0.02	0.03	1.06	1.24	0.07	0.02	0.03	0.02	0.01	0.02	0.38	0.34
2.49	4000	0.04	0.02	0.01	0.01	0.02	0.03	0.97	1.20	0.07	0.02	0.03	0.02	0.01	0.02	0.35	0.31
2.55	4100	0.04	0.02	0.01	0.01	0.02	0.03	0.97	1.20	0.07	0.02	0.03	0.02	0.01	0.02	0.35	0.31
2.61	4200	0.04	0.02	0.01	0.01	0.02	0.03	0.97	1.20	0.07	0.02	0.03	0.02	0.01	0.02	0.35	0.31

RCOL2\_02  
 .03.02-3

RCOL2\_02.  
 03.02-4 S01

RCOL2\_02.  
 03.02-4  
 RCOL2\_02.  
 03.02-4 S01

RCOL2\_02.  
 03.02-4  
 RCOL2\_02.  
 03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-328 (Sheet 1 of 3)**  
**Chlorides Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.06	100	37.6	36.6	75.8	63.1	41.4	47.6	102.1	132.1	211.9	47.4	98.7	65.0	16.9	15.8	30.7	48.9
0.12	200	31.8	27.8	43.9	37.4	26.4	31.6	64.6	94.2	196.3	39.2	52.8	36.9	11.8	12.7	21.8	29.3
0.19	300	10.90	8.18	25.75	19.44	5.54	7.50	51.15	80.13	74.44	13.03	34.76	24.27	3.14	3.85	17.61	23.06
0.25	400	9.56	7.17	10.62	8.11	4.99	6.80	39.20	61.93	65.02	11.50	14.00	9.53	2.82	3.39	13.85	17.62
0.31	500	9.60	7.17	0.36	0.27	5.30	7.26	16.17	19.74	65.46	11.65	0.69	0.58	2.74	3.40	6.12	7.06
0.37	600	9.43	7.01	0.23	0.21	5.13	6.98	13.45	16.70	64.27	11.34	0.41	0.35	2.55	3.34	4.88	5.96
0.43	700	8.49	6.29	0.15	0.15	4.55	5.90	9.15	12.30	57.52	9.82	0.26	0.24	2.16	3.03	3.12	4.28
0.5	800	5.77	4.26	0.13	0.12	2.80	3.55	6.98	10.01	38.16	6.50	0.23	0.21	1.49	2.08	2.18	3.11
0.56	900	0.50	0.29	0.11	0.10	0.39	0.43	6.96	9.99	1.17	0.42	0.23	0.21	0.22	0.26	2.18	3.10
0.62	1000	0.48	0.28	0.11	0.10	0.38	0.42	7.04	10.09	1.14	0.41	0.23	0.21	0.22	0.26	2.21	3.12
0.68	1100	0.48	0.27	0.11	0.10	0.38	0.41	8.17	11.68	1.14	0.41	0.23	0.21	0.22	0.26	2.54	3.45
0.75	1200	0.48	0.27	0.11	0.10	0.38	0.41	8.97	12.94	1.14	0.41	0.23	0.21	0.22	0.26	2.86	3.80
0.81	1300	0.48	0.27	0.11	0.10	0.38	0.41	9.26	13.26	1.14	0.41	0.23	0.21	0.22	0.26	2.95	3.89
0.87	1400	0.48	0.27	0.11	0.10	0.38	0.41	9.26	13.26	1.14	0.41	0.23	0.21	0.22	0.26	2.95	3.89
0.93	1500	0.48	0.27	0.11	0.10	0.38	0.41	9.07	13.11	1.14	0.41	0.23	0.21	0.22	0.26	2.90	3.72
0.99	1600	0.48	0.27	0.11	0.10	0.38	0.41	8.81	12.91	1.14	0.41	0.23	0.21	0.22	0.26	2.85	3.48
1.06	1700	0.48	0.27	0.10	0.09	0.38	0.41	8.81	12.91	1.14	0.41	0.20	0.19	0.22	0.26	2.85	3.48
1.12	1800	0.48	0.27	0.09	0.08	0.38	0.41	8.81	12.91	1.14	0.41	0.17	0.16	0.22	0.26	2.85	3.48

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-328 (Sheet 2 of 3)**  
**Chlorides Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
1.18	1900	0.48	0.27	0.08	0.07	0.38	0.41	8.81	12.91	1.14	0.41	0.15	0.14	0.22	0.26	2.85	3.48
1.24	2000	0.48	0.27	0.08	0.07	0.38	0.41	8.52	12.54	1.14	0.41	0.15	0.14	0.22	0.26	2.74	3.39
1.3	2100	0.45	0.26	0.07	0.06	0.34	0.38	8.09	11.99	1.08	0.38	0.13	0.12	0.21	0.25	2.58	3.26
1.37	2200	0.42	0.24	0.06	0.05	0.31	0.34	7.83	11.62	0.99	0.35	0.11	0.11	0.20	0.24	2.44	3.15
1.43	2300	0.29	0.15	0.05	0.04	0.18	0.20	6.90	10.16	0.62	0.22	0.08	0.09	0.13	0.17	2.07	2.75
1.49	2400	0.19	0.09	0.04	0.04	0.11	0.12	3.53	4.48	0.36	0.12	0.08	0.07	0.09	0.11	1.44	1.20
1.55	2500	0.16	0.07	0.04	0.03	0.09	0.10	3.51	4.46	0.29	0.10	0.06	0.06	0.07	0.09	1.43	1.20
1.62	2600	0.13	0.06	0.03	0.03	0.08	0.08	3.51	4.46	0.25	0.08	0.06	0.06	0.05	0.07	1.43	1.20
1.68	2700	0.13	0.06	0.03	0.03	0.08	0.08	3.51	4.46	0.25	0.08	0.06	0.06	0.05	0.07	1.43	1.20
1.74	2800	0.09	0.04	0.03	0.03	0.06	0.07	3.51	4.46	0.17	0.06	0.06	0.06	0.04	0.05	1.43	1.20
1.8	2900	0.08	0.04	0.03	0.03	0.05	0.06	3.51	4.46	0.15	0.05	0.06	0.06	0.03	0.05	1.43	1.20
1.86	3000	0.08	0.04	0.03	0.03	0.05	0.06	3.29	4.18	0.15	0.05	0.06	0.06	0.03	0.05	1.35	1.13
1.93	3100	0.08	0.04	0.03	0.03	0.05	0.06	2.78	3.53	0.15	0.05	0.06	0.05	0.03	0.05	1.16	0.98
1.99	3200	0.08	0.04	0.03	0.03	0.05	0.06	2.90	3.58	0.15	0.05	0.06	0.05	0.03	0.05	1.20	1.01
2.05	3300	0.07	0.03	0.03	0.03	0.05	0.05	2.98	3.61	0.13	0.05	0.06	0.05	0.03	0.04	1.22	1.04
2.11	3400	0.06	0.03	0.03	0.03	0.04	0.05	2.97	3.61	0.12	0.04	0.06	0.05	0.03	0.04	1.22	1.04
2.17	3500	0.06	0.03	0.03	0.03	0.04	0.05	2.97	3.61	0.12	0.04	0.06	0.05	0.03	0.03	1.22	1.04
2.24	3600	0.06	0.03	0.03	0.03	0.04	0.05	2.28	2.60	0.11	0.04	0.06	0.05	0.02	0.03	0.85	0.76

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-328 (Sheet 3 of 3)**  
**Chlorides Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
2.3	3700	0.06	0.03	0.03	0.03	0.04	0.05	1.98	2.16	0.11	0.04	0.06	0.05	0.02	0.03	0.70	0.63
2.36	3800	0.06	0.03	0.03	0.03	0.04	0.05	1.87	2.04	0.11	0.04	0.06	0.05	0.02	0.03	0.67	0.60
2.42	3900	0.06	0.03	0.03	0.03	0.04	0.05	1.65	1.95	0.11	0.04	0.06	0.05	0.02	0.03	0.60	0.53
2.49	4000	0.06	0.03	0.03	0.03	0.04	0.05	1.51	1.88	0.11	0.04	0.06	0.05	0.02	0.03	0.55	0.49
2.55	4100	0.06	0.03	0.03	0.03	0.04	0.05	1.51	1.88	0.11	0.04	0.06	0.05	0.02	0.03	0.55	0.49
2.61	4200	0.06	0.03	0.03	0.03	0.04	0.05	1.98	2.16	0.11	0.04	0.06	0.05	0.02	0.03	0.70	0.63

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-329 (Sheet 1 of 3)**  
**Total Dissolved Solids Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.06	100	73.7	71.8	150.0	125.0	81.0	93.3	203.4	264.2	415.5	93.1	195.1	128.5	33.1	31.0	61.1	97.3
0.12	200	62.2	54.3	85.6	72.9	51.5	61.6	130.2	190.3	384.9	76.6	103.1	72.1	23.1	24.9	43.8	59.1
0.19	300	21.0	15.8	50.8	38.4	10.8	14.6	101.2	158.8	143.4	25.2	68.5	47.8	6.1	7.4	34.7	45.7
0.25	400	18.7	14.0	19.7	15.0	9.8	13.4	75.2	118.1	126.8	22.5	26.0	17.7	5.5	6.6	26.9	33.8
0.31	500	18.7	14.0	0.7	0.6	10.3	14.2	31.4	38.3	127.6	22.7	1.4	1.2	5.4	6.7	11.9	13.7
0.37	600	18.4	13.7	0.5	0.4	10.0	13.6	25.9	32.1	125.1	22.1	0.9	0.7	5.0	6.5	9.4	11.5
0.43	700	16.6	12.3	0.3	0.3	8.9	11.5	17.3	23.3	112.1	19.2	0.6	0.5	4.2	5.9	5.8	8.0
0.5	800	11.1	8.2	0.3	0.3	5.4	6.8	13.6	19.4	73.3	12.5	0.5	0.5	2.9	4.0	4.3	6.0
0.56	900	1.0	0.6	0.3	0.2	0.8	0.9	13.6	19.4	2.4	0.9	0.5	0.5	0.5	0.5	4.3	6.0
0.62	1000	1.0	0.5	0.3	0.2	0.8	0.9	13.7	19.6	2.3	0.8	0.5	0.5	0.5	0.5	4.3	6.1
0.68	1100	1.0	0.5	0.3	0.2	0.8	0.9	16.0	22.9	2.3	0.8	0.5	0.5	0.5	0.5	5.0	6.8
0.75	1200	1.0	0.5	0.3	0.2	0.8	0.9	17.8	25.6	2.3	0.8	0.5	0.5	0.5	0.5	5.7	7.5
0.81	1300	1.0	0.5	0.3	0.2	0.8	0.9	18.3	26.2	2.3	0.8	0.5	0.5	0.5	0.5	5.8	7.7
0.87	1400	1.0	0.5	0.3	0.2	0.8	0.9	18.3	26.2	2.3	0.8	0.5	0.5	0.5	0.5	5.8	7.7
0.93	1500	1.0	0.5	0.3	0.2	0.8	0.9	17.9	25.9	2.3	0.8	0.5	0.5	0.5	0.5	5.7	7.3
0.99	1600	1.0	0.5	0.3	0.2	0.8	0.9	17.4	25.5	2.3	0.8	0.5	0.5	0.5	0.5	5.6	6.9
1.06	1700	1.0	0.5	0.2	0.2	0.8	0.9	17.4	25.5	2.3	0.8	0.4	0.4	0.5	0.5	5.6	6.9
1.12	1800	1.0	0.5	0.2	0.2	0.8	0.9	17.4	25.5	2.3	0.8	0.4	0.4	0.5	0.5	5.6	6.9

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4

RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-329 (Sheet 2 of 3)**  
**Total Dissolved Solids Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
1.18	1900	1.0	0.5	0.2	0.2	0.8	0.9	17.4	25.5	2.3	0.8	0.4	0.3	0.5	0.5	5.6	6.9
1.24	2000	1.0	0.5	0.2	0.2	0.8	0.9	16.8	24.8	2.3	0.8	0.4	0.3	0.5	0.5	5.4	6.7
1.3	2100	0.9	0.5	0.2	0.1	0.7	0.8	16.0	23.7	2.2	0.8	0.3	0.3	0.4	0.5	5.1	6.4
1.37	2200	0.8	0.5	0.1	0.1	0.6	0.7	15.3	22.8	2.0	0.7	0.3	0.3	0.4	0.5	4.7	6.2
1.43	2300	0.5	0.3	0.1	0.1	0.4	0.4	12.2	17.7	1.2	0.4	0.2	0.2	0.3	0.3	3.8	4.8
1.49	2400	0.4	0.2	0.1	0.1	0.2	0.3	6.9	8.8	0.8	0.3	0.2	0.2	0.2	0.2	2.8	2.4
1.55	2500	0.3	0.2	0.1	0.1	0.2	0.2	6.9	8.8	0.6	0.2	0.2	0.2	0.1	0.2	2.8	2.4
1.62	2600	0.3	0.1	0.1	0.1	0.2	0.2	6.9	8.8	0.6	0.2	0.2	0.2	0.1	0.2	2.8	2.4
1.68	2700	0.3	0.1	0.1	0.1	0.2	0.2	6.9	8.8	0.6	0.2	0.2	0.2	0.1	0.2	2.8	2.4
1.74	2800	0.2	0.1	0.1	0.1	0.1	0.2	6.9	8.8	0.4	0.1	0.2	0.2	0.1	0.1	2.8	2.4
1.8	2900	0.2	0.1	0.1	0.1	0.1	0.2	6.9	8.8	0.4	0.1	0.2	0.1	0.1	0.1	2.8	2.4
1.86	3000	0.2	0.1	0.1	0.1	0.1	0.2	6.5	8.2	0.4	0.1	0.2	0.1	0.1	0.1	2.6	2.2
1.93	3100	0.2	0.1	0.1	0.1	0.1	0.2	5.5	7.0	0.4	0.1	0.2	0.1	0.1	0.1	2.3	1.9
1.99	3200	0.2	0.1	0.1	0.1	0.1	0.2	5.7	7.1	0.4	0.1	0.2	0.1	0.1	0.1	2.4	2.0
2.05	3300	0.2	0.1	0.1	0.1	0.1	0.1	5.9	7.2	0.3	0.1	0.1	0.1	0.1	0.1	2.4	2.1
2.11	3400	0.1	0.1	0.1	0.1	0.1	0.1	5.9	7.2	0.3	0.1	0.1	0.1	0.1	0.1	2.4	2.1
2.17	3500	0.1	0.1	0.1	0.1	0.1	0.1	5.9	7.2	0.3	0.1	0.1	0.1	0.1	0.1	2.4	2.1
2.24	3600	0.1	0.1	0.1	0.1	0.1	0.1	4.4	5.0	0.3	0.1	0.1	0.1	0.1	0.1	1.6	1.4

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-329 (Sheet 3 of 3)**  
**Total Dissolved Solids Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
2.3	3700	0.1	0.1	0.1	0.1	0.1	0.1	4.0	4.4	0.3	0.1	0.1	0.1	0.1	0.1	1.4	1.3
2.36	3800	0.1	0.1	0.1	0.1	0.1	0.1	3.8	4.2	0.3	0.1	0.1	0.1	0.1	0.1	1.4	1.2
2.42	3900	0.1	0.1	0.1	0.1	0.1	0.1	3.4	4.0	0.3	0.1	0.1	0.1	0.1	0.1	1.2	1.1
2.49	4000	0.1	0.1	0.1	0.1	0.1	0.1	3.1	3.9	0.3	0.1	0.1	0.1	0.1	0.1	1.1	1.0
2.55	4100	0.1	0.1	0.1	0.1	0.1	0.1	3.1	3.9	0.3	0.1	0.1	0.1	0.1	0.1	1.1	1.0
2.61	4200	0.1	0.1	0.1	0.1	0.1	0.1	3.1	3.9	0.3	0.1	0.1	0.1	0.1	0.1	1.1	1.0

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-330 (Sheet 1 of 3)**  
**Water Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
0.06	100	8500	8200	18000	15000	9000	10000	23000	30000	49000	11000	23000	15000	3700	3500	6800	11000
0.12	200	7200	6300	10000	8600	5800	7000	15000	21000	45000	8800	12000	8500	2600	2800	4900	6600
0.19	300	2500	1900	6000	4500	1200	1700	11000	18000	17000	3000	8000	5600	690	870	3900	5100
0.25	400	2200	1600	2300	1800	1100	1500	8400	13000	15000	2600	3100	2100	620	780	3000	3800
0.31	500	2200	1600	75	54	1100	1500	3400	4200	15000	2600	150	130	610	780	1300	1500
0.37	600	2200	1600	45	40	1100	1500	2800	3500	15000	2600	80	74	580	760	1000	1300
0.43	700	1900	1400	29	28	970	1200	1900	2500	13000	2200	50	49	490	690	640	880
0.5	800	1300	960	24	22	610	770	1500	2100	8600	1500	45	44	340	470	460	650
0.56	900	110	62	23	20	83	91	1500	2100	250	90	44	44	47	56	460	650
0.62	1000	100	60	23	20	80	88	1500	2100	250	86	44	44	47	56	470	660
0.68	1100	100	59	23	20	80	88	1800	2600	240	86	44	44	47	56	560	77
0.75	1200	100	59	23	20	80	88	2100	3000	240	86	44	44	47	56	660	880
0.81	1300	100	59	23	20	80	88	2100	3100	240	86	44	44	47	56	680	900
0.87	1400	100	59	23	20	80	88	2100	3100	240	86	44	44	47	56	680	900
0.93	1500	100	59	23	20	80	88	2100	3000	240	86	44	44	47	56	670	860
0.99	1600	100	59	23	20	80	88	2000	3000	240	86	44	44	47	56	660	810
1.06	1700	100	59	19	17	80	88	2000	3000	240	86	35	36	47	56	660	810
1.12	1800	100	59	16	14	80	88	2000	3000	240	86	30	32	47	56	660	810

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-330 (Sheet 2 of 3)**  
**Water Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
1.18	1900	100	59	14	12	80	88	2000	3000	240	86	27	28	47	56	660	810
1.24	2000	100	59	14	12	80	88	2000	2900	240	86	25	27	47	56	630	780
1.3	2100	98	56	12	11	72	79	1900	2800	230	81	20	22	45	53	590	750
1.37	2200	91	51	11	9.7	65	71	1800	2700	210	74	18	21	42	50	550	720
1.43	2300	58	28	8.2	7.8	34	38	1400	2100	120	40	13	16	25	32	440	560
1.49	2400	41	18	6.9	6.9	21	24	800	1000	74	24	11	12	18	22	320	270
1.55	2500	32	14	5.8	6	17	18	800	1000	55	18	8.9	8.6	12	16	320	270
1.62	2600	27	13	5.7	6	14	16	800	1000	48	15	8.8	8.5	10	14	320	270
1.68	2700	27	13	5.7	6	14	16	800	1000	48	15	8.8	8.5	10	14	320	270
1.74	2800	16	7.2	5.7	5.9	9.5	10	800	1000	27	8.3	8.8	8.4	5.6	7.9	320	270
1.8	2900	14	6.1	5.4	5.4	8.5	8.9	800	1000	24	6.9	8.5	8.2	4.8	7.1	320	270
1.86	3000	14	6.1	5.1	5	8.5	8.9	750	950	24	6.9	8.2	7.7	4.8	7.1	300	260
1.93	3100	14	6.1	3.8	3.3	8.5	8.9	630	800	24	6.9	7.1	5.8	4.8	7.1	260	220
1.99	3200	14	6.1	3.8	3.3	8.5	8.9	660	810	24	6.9	7.1	5.8	4.8	7.1	270	230
2.05	3300	10	4.7	3.4	3	6.4	7	680	820	18	5.2	5.3	5.2	3.5	4.9	280	240
2.11	3400	9.1	4.4	3.3	2.9	5.9	6.6	680	820	16	4.8	4.5	4.8	3.1	4.4	280	240
2.17	3500	9.1	4.4	3.3	2.9	5.9	6.6	680	820	16	4.8	4.5	4.8	3.1	4.4	280	240
2.24	3600	9.1	4.4	3.3	2.9	5.9	6.6	490	550	16	4.8	4.5	4.8	3.1	4.4	180	160

RCOL2\_02  
.03.02-2

RCOL2\_02  
03.02-4 S01

RCOL2\_02  
03.02-4  
RCOL2\_02  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-330 (Sheet 3 of 3)**  
**Water Deposition**

CP COL 2.3(1)

Directions are directions to which the plume is headed.

kg/km<sup>2</sup>/month

(mi)	(m)	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
2.3	3700	9.1	4.4	3.3	2.9	5.9	6.6	440	470	16	4.8	4.5	4.8	3.1	4.4	150	140
2.36	3800	9.1	4.4	3.3	2.9	5.9	6.6	410	450	16	4.8	4.5	4.8	3.1	4.4	150	130
2.42	3900	9.1	4.4	3.3	2.9	5.9	6.6	360	430	16	4.8	4.5	4.8	3.1	4.4	130	120
2.49	4000	9.1	4.4	3.3	2.9	5.9	6.6	330	410	16	4.8	4.5	4.8	3.1	4.4	120	100
2.55	4100	9.1	4.4	3.3	2.9	5.9	6.6	330	410	16	4.8	4.5	4.8	3.1	4.4	120	100
2.61	4200	9.1	4.4	3.3	2.9	5.9	6.6	330	410	16	4.8	4.5	4.8	3.1	4.4	120	100

Note: These can be converted to inches per year of increased precipitation by multiplying by  $4.7 \times 10^{-7}$

RCOL2\_02  
.03.02-2

RCOL2\_02.  
03.02-4 S01

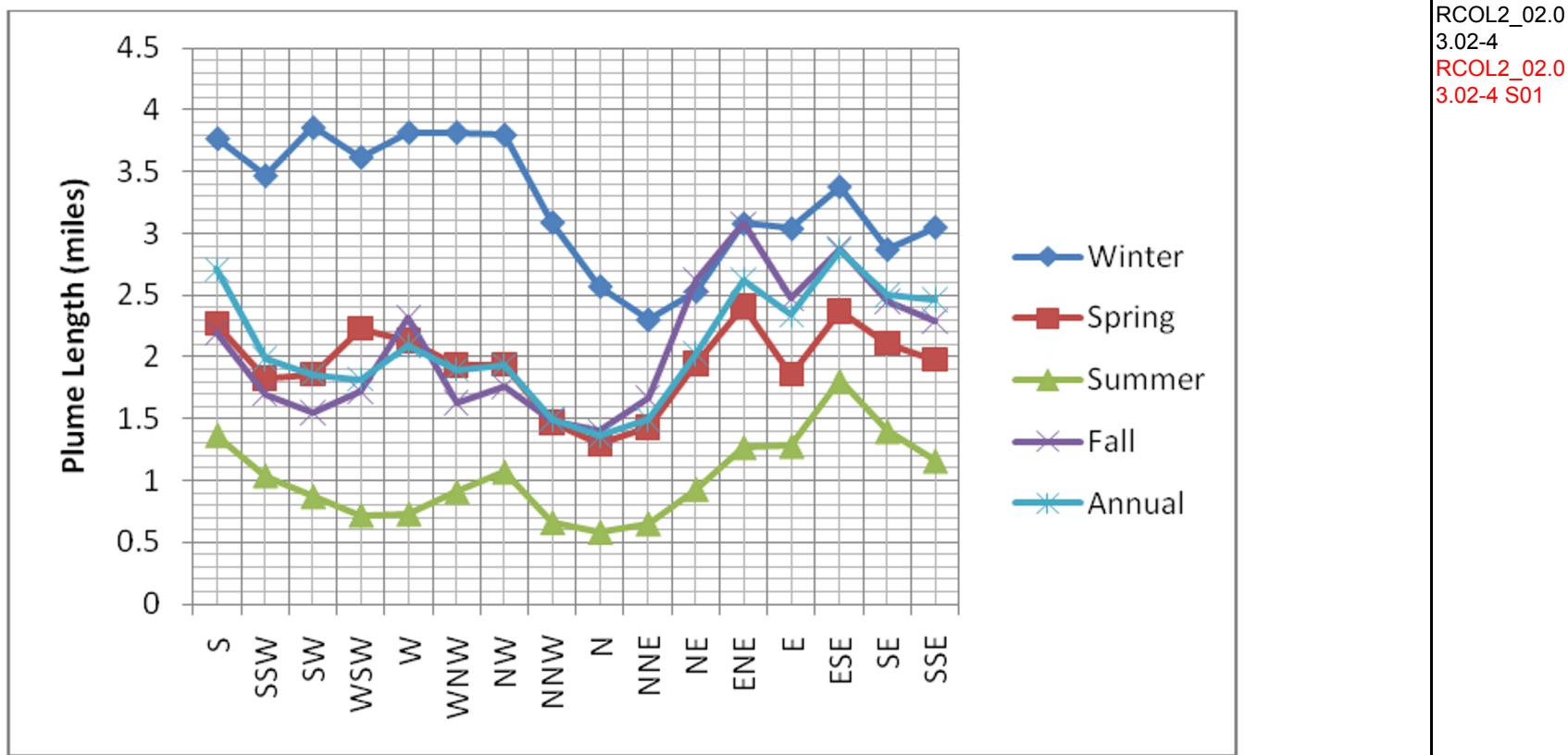
RCOL2\_02.  
03.02-4  
RCOL2\_02.  
03.02-4 S01

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**Table 2.3-331**  
**Visible Plume Length Summary**

CP COL 2.3(1)	Winter	Spring	Summer	Fall	
Most Frequent Plume Heading Directions	N,NNW,SSE,S	N,NNW,NW	N,NNW,NW	N,NNW,NW,S	
Percent of Plumes < 1/3 mi	<del>33.4</del> <ins>32.4</ins>	<del>60.0</del> <ins>59.3</ins>	<del>79.0</del> <ins>78.2</ins>	<del>56.4</del> <ins>55.7</ins>	RCOL2_02.0 3.02-4 <del>RCOL2_02.0</del> 3.02-4 S01
Percent of Plumes >1/3 to 2/3 mi	<del>3.5</del> <ins>9.4</ins>	<del>2.8</del> <ins>7.7</ins>	<del>2.0</del> <ins>6.3</ins>	<del>2.8</del> <ins>8.4</ins>	
Percent of Plumes >2/3 to 5 mi	<del>23.7</del> <ins>19.8</ins>	<del>48.3</del> <ins>15.0</ins>	<del>11.4</del> <ins>8.4</ins>	<del>18.6</del> <ins>14.4</ins>	
Percent of Plumes >5 mi	<del>38.8</del> <ins>37.7</ins>	<del>48.6</del> <ins>17.7</ins>	<del>7.2</del> <ins>6.7</ins>	<del>21.3</del> <ins>20.6</ins>	

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



**Figure 2.3-372 CPNPP Cooling Tower Seasonal Visible Plume Length**

Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application  
Part 2, FSAR

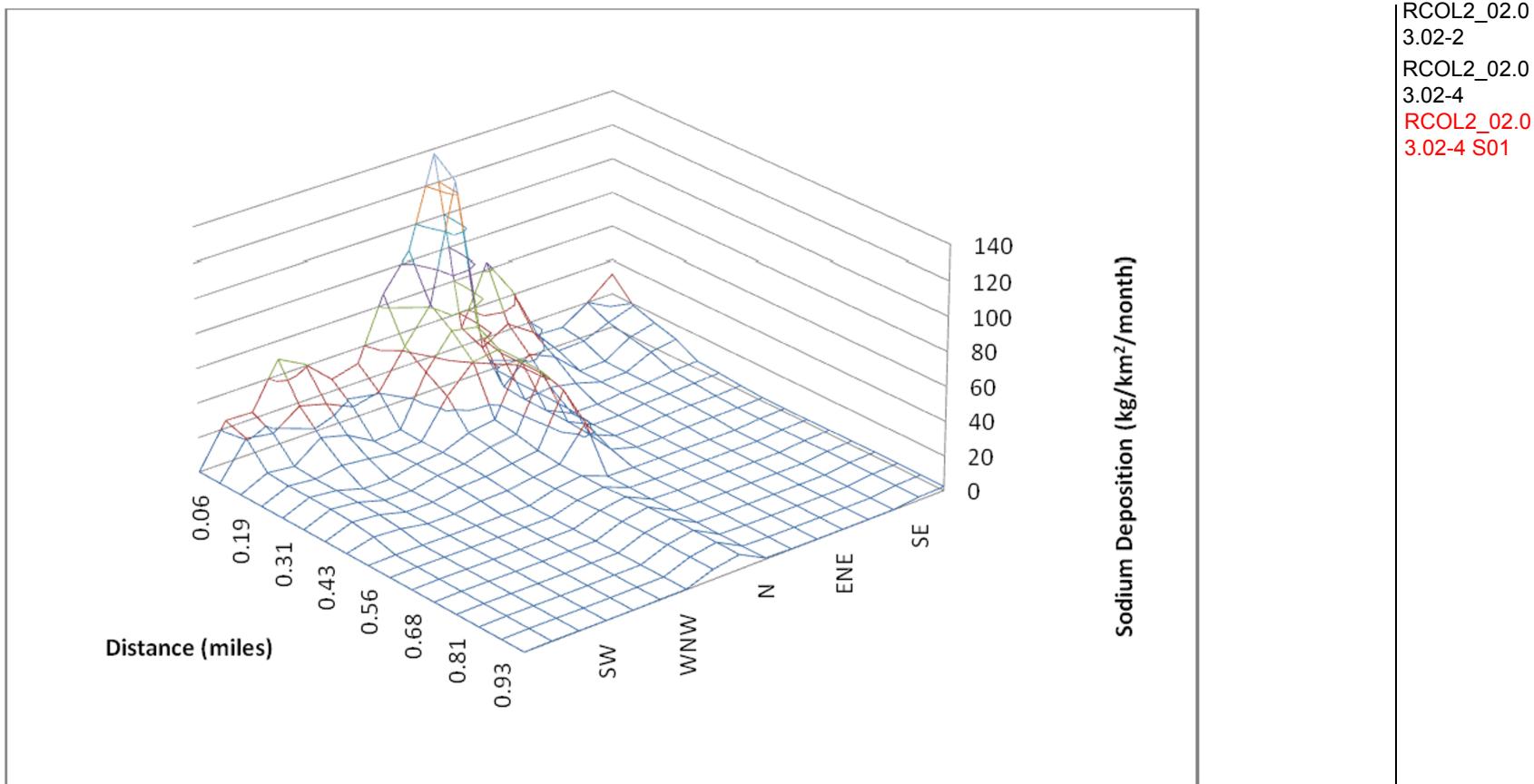
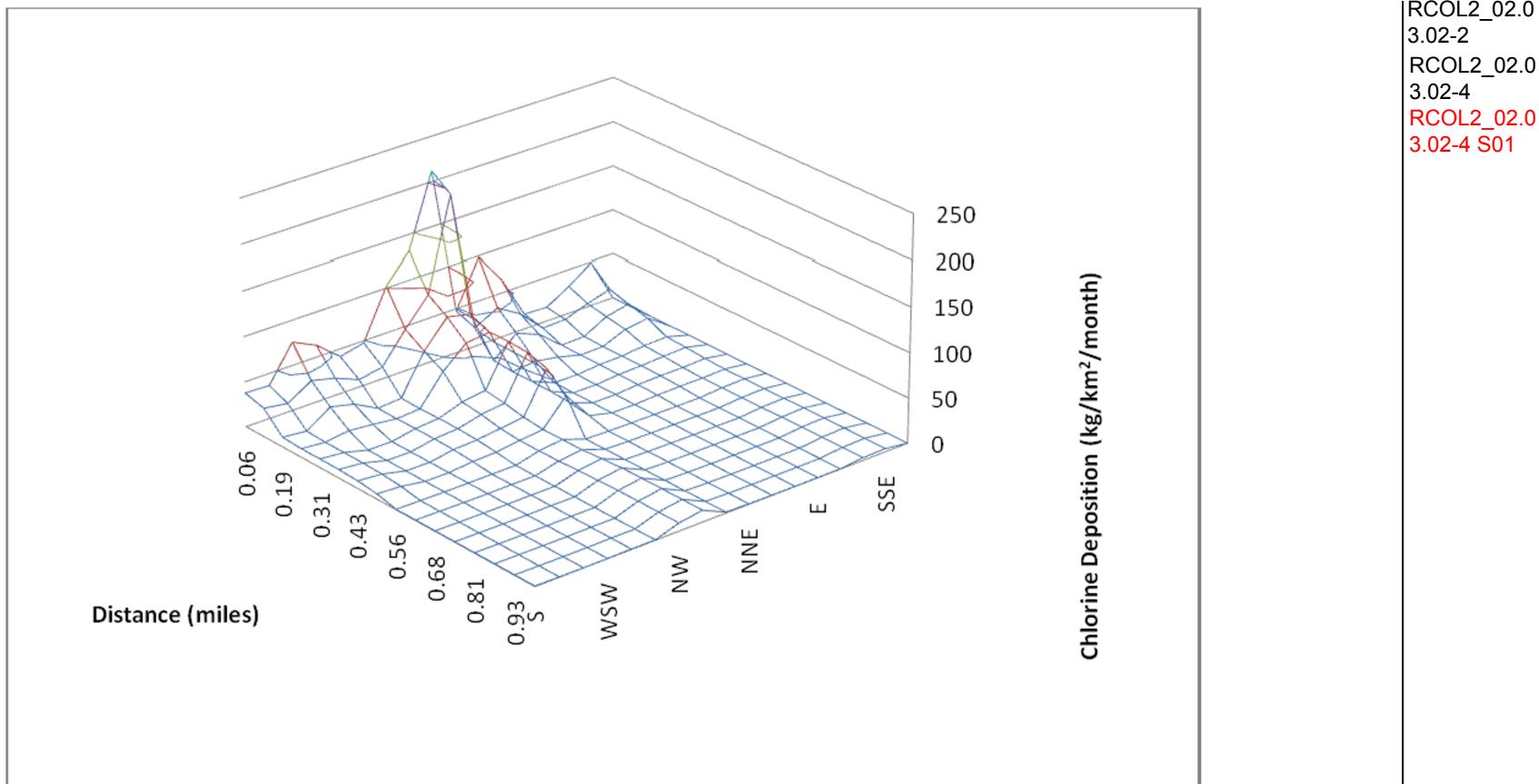


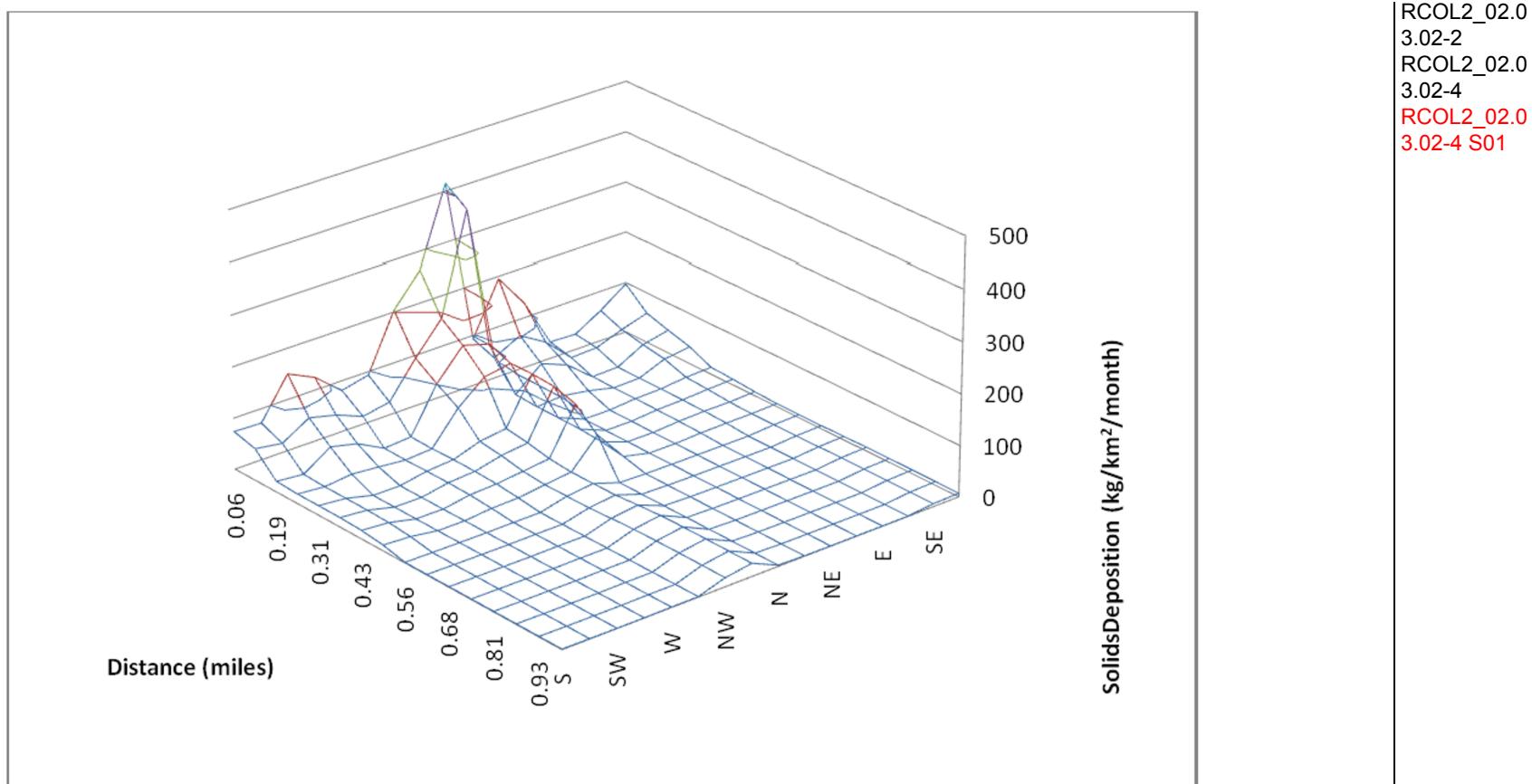
Figure 2.3-373 CPNPP Cooling Tower **Annual Sodium Salt Deposition**

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



**Figure 2.3-374 CPNPP Cooling Tower Annual Chloride Deposition**

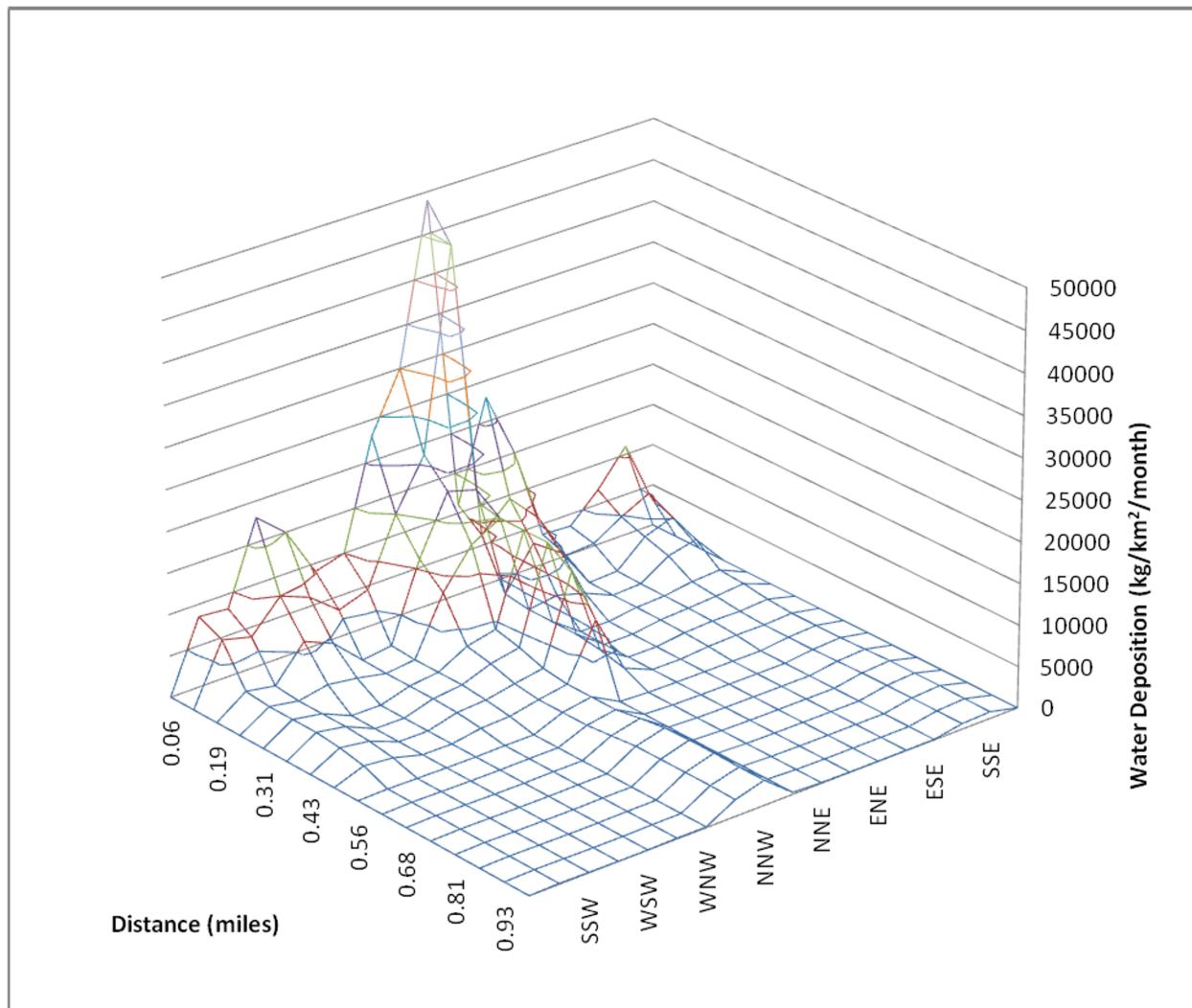
**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



**Figure 2.3-375 CPNPP Cooling Tower ~~Annual~~ Total Dissolved Solids Deposition**

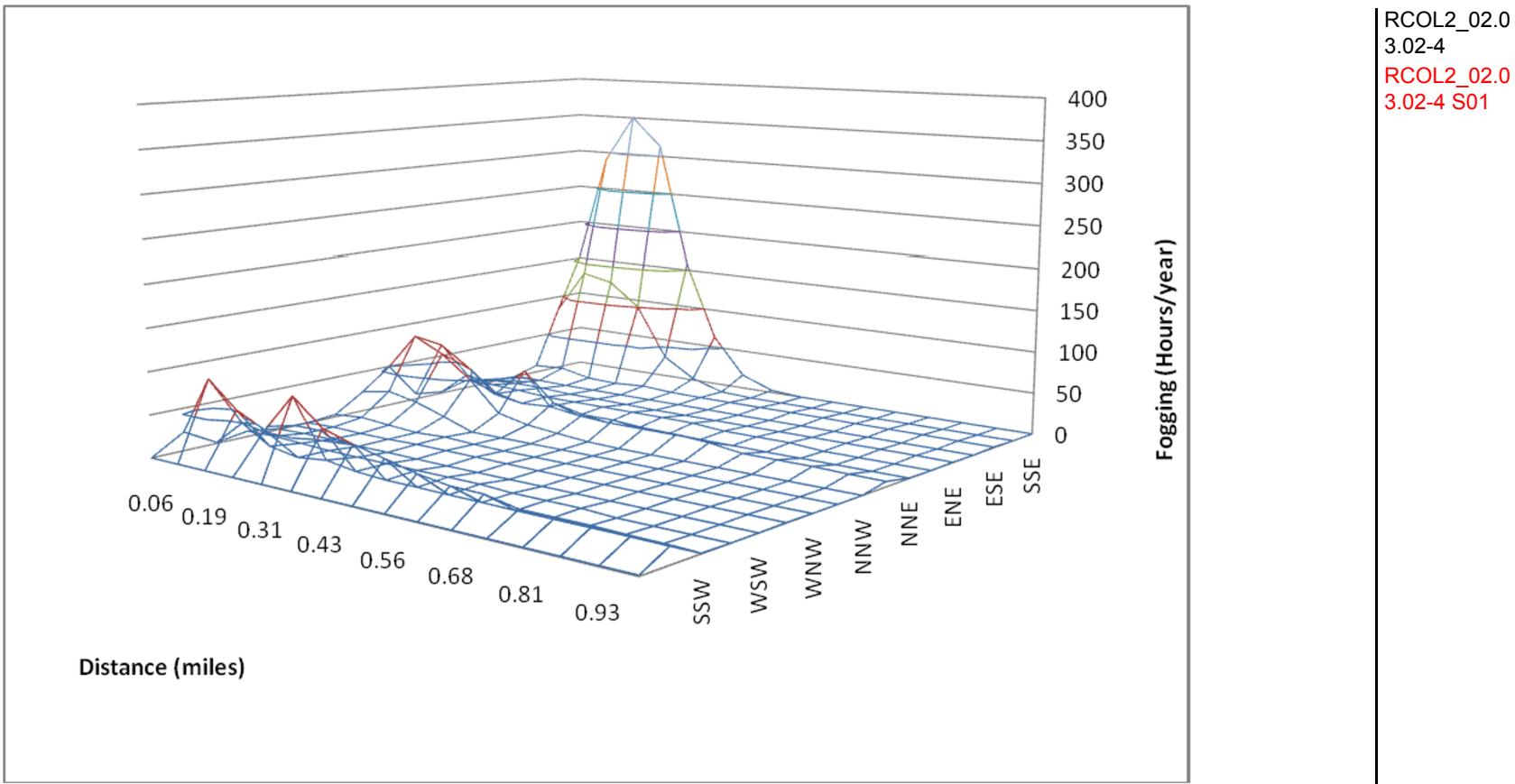
**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

RCOL2\_02.0  
3.02-2  
RCOL2\_02.0  
3.02-4  
**RCOL2\_02.0**  
**3.02-4 S01**



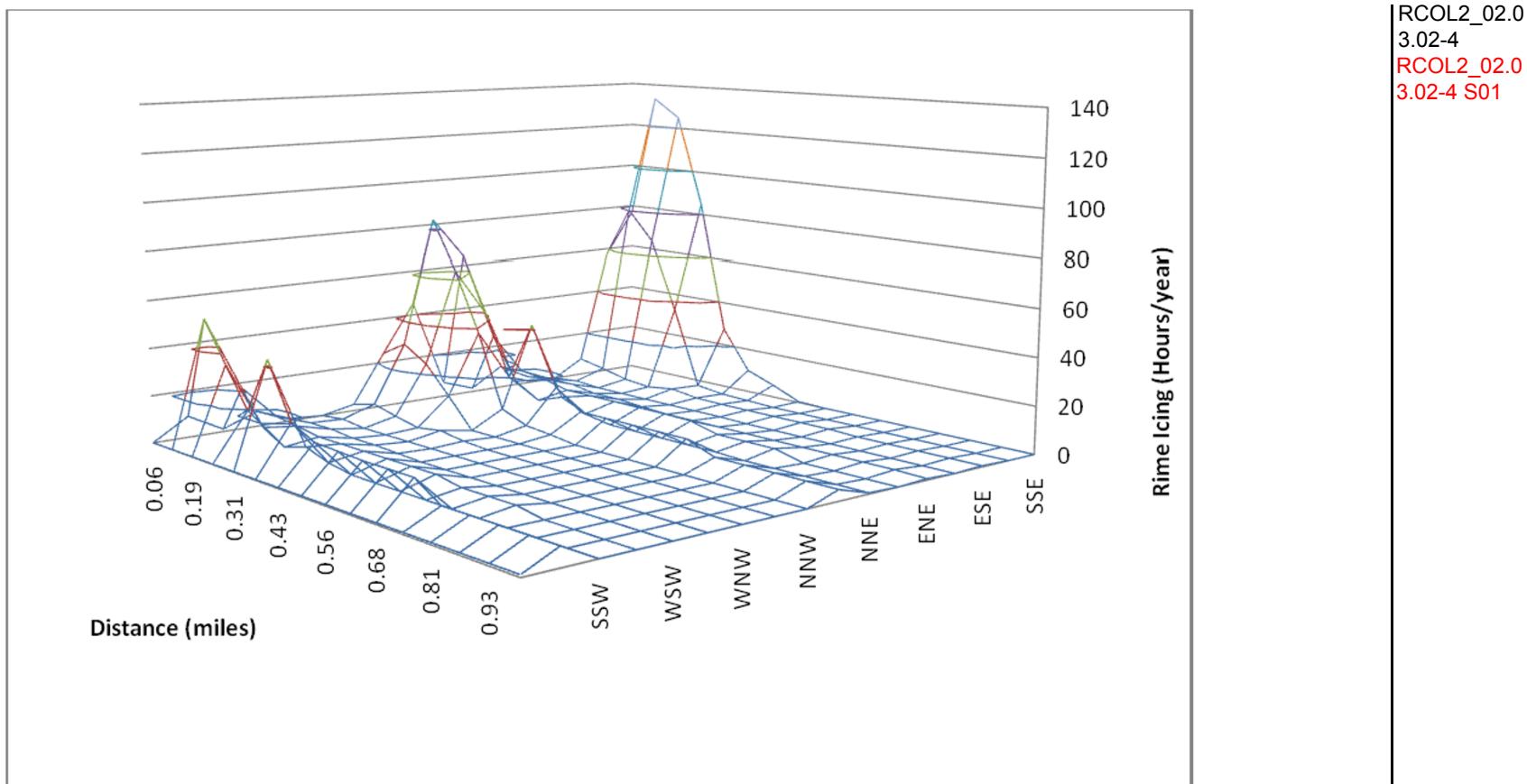
**Figure 2.3-376 CPNPP Cooling Tower ~~Annual Water Deposition in kg/(km<sup>2</sup> month)~~**

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



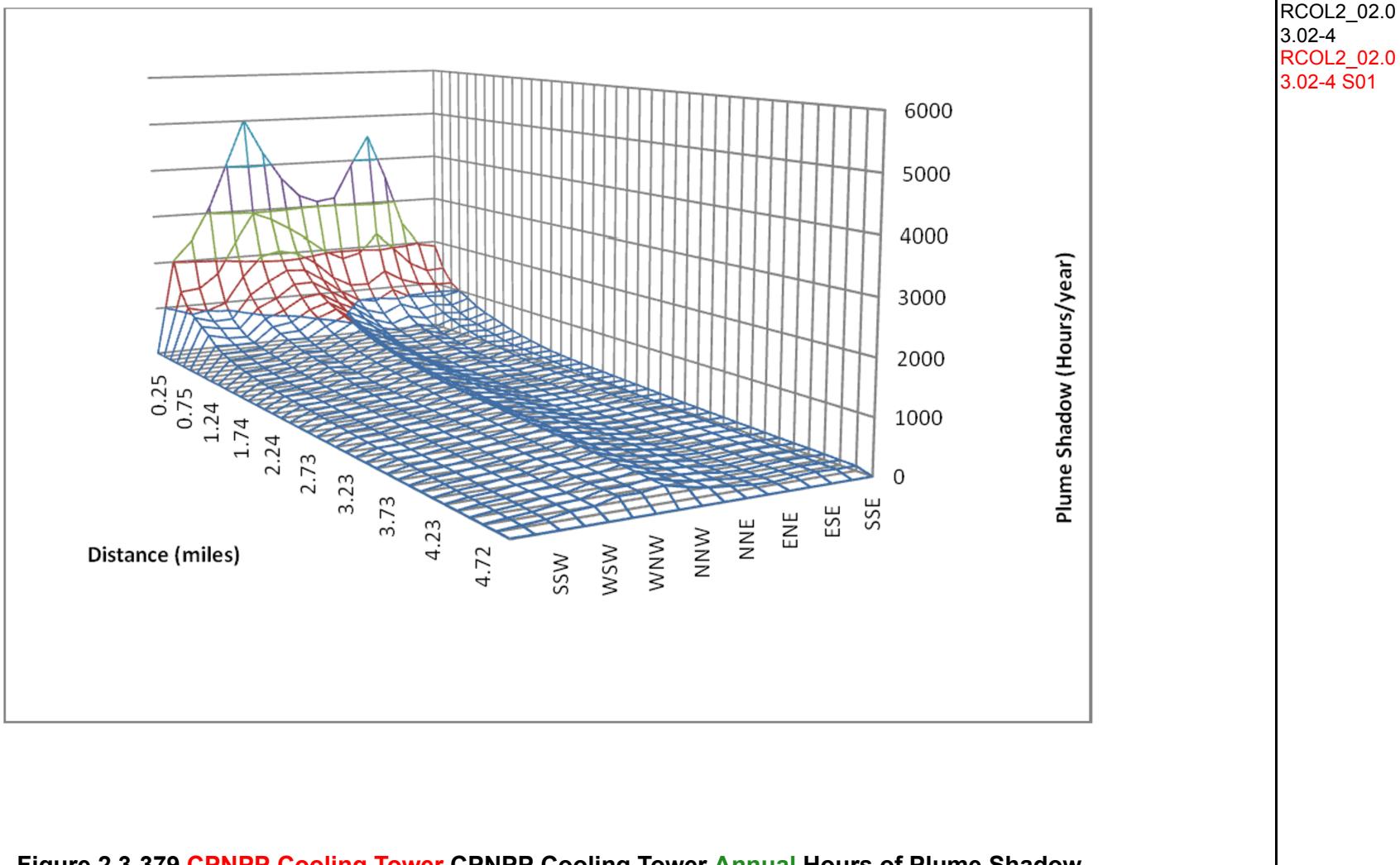
**Figure 2.3-377 CPNPP Cooling Tower Annual Hours per Year Fogging**

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



**Figure 2.3-378 CPNPP Cooling Tower Annual Hours per Year Rime Icing**

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**



**Figure 2.3-379 CPNPP Cooling Tower Annual Hours of Plume Shadow**