Environmental Resources Management

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Daniel Jamieson
Air Permits Division
Texas Commission on Environmental Quality
Building C, Mail Code 162
12100 Park 35 Circle
Austin, TX 78753

Dear Mr. Jamieson:

Degussa Engineered Carbons, L.P. (DEC) operates a carbon black production facility located in Borger, Texas DEC submitted a Best Available Retrofit Technology refined exemption modeling analysis to the Texas Commission on Environmental Quality (TCEQ) in April 2007. Since this submission, DEC and Environmental Resources Management (ERM) have been in contact with TCEQ and other air quality regulatory authorities regarding some modifications that were made to the CALPUFF dispersion model and CALMET meteorological model as part of the exemption analysis. During a conference call on August 28, 2007 between ERM, TCEQ, EPA and a Federal Land Manager (FLM) representative, it was decided to re-submit the CALPUFF modeling results using a new EPA approved version of the CALPUFF model. The specific changes that were agreed to are as follows:

- Re-run the CALMET and subsequent CALPUFF analyses using Version 5.8 for both models.

- Represent Big Bend NP and Mingo Wilderness Class I areas in the revised analysis. In the original submission to TCEQ, DEC noted that although screening modeling results indicated that these Class I areas had one 24-hr impact exceeding the 0.5 deciview exemption threshold, these Class I areas were located at distances exceeding the limits of the proposed refined modeling domain. DEC provided justification for excluding these two Class I areas from the refined analysis in the original exemption report; however comments from EPA and the FLM indicated that a more thorough analysis was required. During the August 28th conference call, it was agreed that placing receptors on the edge of the domain along the direction between the facility and each of the

two Class I areas would be an acceptable conservative approach to modeling these Class I areas using the existing refined domain. ERM placed receptors at 1 km intervals along the domain edge for each Class I area. Mingo Wilderness was represented by 29 receptors and Big Bend National Park was represented by 25 receptors. Elevations at each receptor were assigned to the highest elevation found in the standard National Park Service (NPS) receptor files for the individual Class I areas.

The results of this revised modeling analysis indicates that the emissions from BART eligible units at the DEC facility do not cause a daily visibility impact in any surrounding Class I area greater than 0.5 deciviews on a 98th percentile basis annually. Summaries of the results of the original screening modeling, and of the revised refined modeling using CALPUFF and CALMET version 5.8, are presented in the following tables.

Original Screening Modeling Results

	# of Days > 0.5 dv			Largest Impact (dv)			Rank of 1st Impact < 0.5 dv		
	Year			Year			Year		
Class I Area	2001	2002	2003	2001	2002	2003	2001	2002	2003
Bandelier Wilderness	1	0	0	0.544	0.270	0.187	2	1	1
Big Bend	0	1	0	0.181	0.691	0.277	1	2	1
Bosque del Apache	0	0	0	0.144	0.324	0.235	1	1	1
Breton Wilderness	0	0	0	0.067	0.099	0.110	1	1	1
Caney Creek	0	0	0	0.447	0.418	0.208	1	1	1
Carlsbad Caverns	0	0	0	0.402	0.384	0.201	1	1	1
Great Sand Dunes	0	1	0	0.131	0.865	0.292	1	2	1
Guadalupe Mountains	0	0	0	0.299	0.447	0.195	1	1	1
Hercules-Glades	0	0	0	0.209	0.301	0.240	1	1	1
La Garita	0	0	0	0.369	0.216	0.080	1	1	1
Mesa Verde	1	0	0	0.678	0.183	0.049	2	1	1
Mingo Wilderness	1	0	0	0.616	0.310	0.120	2	1	1
Pecos Wilderness	0	0	0	0.506	0.354	0.378	1	1	1
Salt Creek Wildlife	0	3	0	0.416	0.599	0.341	1	4	1
San Pedro Parks	1	0	0	0.586	0.238	0.114	2	1	1
Upper Buffalo	0	0	0	0.282	0.245	0.175	1	1	1
Weminuche Wilderness	1	0	0	0.699	0.237	0.069	2	1	1
Wheeler Peak	0	0	0	0.328	0.367	0.260	1	1	1
White Mountain	0	0	0	0.272	0.387	0.270	1	1	1
Wichita Mountains	0	2	0	0.410	0.805	0.397	1	3	1

Refined Results – CALPUFF/CALMET Version 5.8

Class I Area	# of Days > 0.5 dv			Largest Impact (dv)			Rank of 1st Impact < 0.5 dv		
	Year			Year			Year		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
Bandelier Wilderness	0	0	0	0.136	0.145	0.254	1	1	1
Bosque del Apache	0	0	0	0.109	0.163	0.151	1	1	1
Carlsbad Caverns	0	0	0	0.260	0.162	0.204	1	1	1
Great Sand Dunes	0	1	0	0.230	1.374	0.436	1	2	1
Guadalupe Mountains	0	0	0	0.155	0.184	0.183	1	1	1
La Garita	0	0	0	0.245	0.171	0.106	1	1	1
Mesa Verde	0	0	0	0.360	0.087	0.029	1	1	1
Pecos Wilderness	0	0	0	0.209	0.225	0.469	1	1	1
Salt Creek Wildlife	0	0	0	0.236	0.260	0.313	1	1	1
San Pedro Parks	0	0	0	0.129	0.136	0.140	1	1	1
Weminuche Wilderness	0	0	0	0.324	0.097	0.092	1	1	1
Wheeler Peak	0	0	0	0.097	0.320	0.311	1	1	1
White Mountain	0	0	0	0.138	0.273	0.196	1	1	1
Wichita Mountains	0	2	0	0.291	0.697	0.478	1	3	1
Big Bend NP	0	0	0	0.146	0.221	0.233	1	1	1
Mingo Wilderness	0	0	0	0.333	0.216	0.314	1	1	1

A CD or DVD containing all revised CALPUFF, CALMET and CALPOST files used in this analysis will be delivered to you shortly. If you have any questions regarding this modeling analysis, please contact me at 610-524-3890. Thank you.

Sincerely,

Environmental Resources Management

Thomas S. Wickstrom

cc: Don Birtell - DEC
Eric Quiat – ERM
Mark Garrison – ERM