

**Appendix 2-1: Public Participation Process**

## **Contents of Appendix 2-1**

List of Texas newspapers sent public hearing notice

Public hearing notice

Public hearing notice published in *Texas Register*

Mailing List of Adjacent State's plus over 20 Environmental Departments, Councils of Government or Metropolitan Planning Organizations around the state

Transcript of February 19, 2008 Public Hearing including petition submitted by Mr. Brandt Mannchen for the record

**Subject:** List of Texas newspapers sent regional haze public hearing notices  
**To:** Earnest, Margaret  
**Date:** 3/21/2008 11:12:23 AM

- Austin American-Statesman
- El Paso Times
- Fort Worth Star-Telegram
- Houston Chronicle
- Midland Reporter-Telegram
- Alpine Avalanche

All published on December 21, 2007.

In addition, notices were sent to four surrounding state environmental departments and more than 20 other city environmental departments, Councils of Government, and Metropolitan Planning Organizations around Texas.

**NOTICE OF PUBLIC HEARING  
ON PROPOSED REVISIONS TO THE STATE IMPLEMENTATION PLAN**

The Texas Commission on Environmental Quality (commission or TCEQ) will conduct a public hearing to receive testimony regarding proposed revisions to the state implementation plan (SIP) to meet the requirements of the Federal Clean Air Act (FCAA), §110(a)(2)(D)(i)(II), 169A and 169B addressing visibility impairment due to regional haze in Federal Class I areas. The proposed revisions reference existing control strategies to reduce haze causing emissions in Texas, as well as reference the state's participation in the Federal Best Available Retrofit Technology (BART) process and the Federal Clean Air Interstate Rule (CAIR).

The proposed revision demonstrates the federal requirements towards reasonable progress in reducing visibility impairment at Federal Class I areas, including Big Bend and Guadalupe Mountains National Parks, resulting from man-made pollution. If adopted, the proposed revisions would fulfill Texas' obligation under sections 169A and 169B of the Federal Clean Air Act to submit a SIP revision to the EPA. There is no associated rulemaking with this SIP revision.

A public hearing on this proposal will be held in Austin, on February 19, 2007, at 2:00 p.m., at TCEQ's Austin Headquarters Office, 12100 Park 35 Circle, Building E, Room 201-S. The hearing will be structured for the receipt of oral or written comments by interested persons. Registration will begin 30 minutes prior to the hearing. Individuals may present oral statements when called upon in order of registration. There will be no open discussion during the hearing; however, TCEQ staff will be available to answer questions on the proposal 30 minutes prior to the hearing. A summary of the Federal Land Managers' conclusions and recommendations on the proposed SIP revision, if any, will be available after January 18, 2008. Notification of the availability of this information will be posted on the commission's web site <http://www.tceq.state.tx.us/implementation/air/sip/Hottop.html>.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact the Air Quality Division at (512) 239-4900. Requests should be made as far in advance as possible.

Comments may be submitted to Margaret Earnest, MC 206, Air Quality Division, Chief Engineer's Office, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-5687. Electronic comments may be submitted at [www5.tceq.state.tx.us/rules/ecomments/](http://www5.tceq.state.tx.us/rules/ecomments/). File size restrictions may apply to comments being submitted via the eComments system. All comments pertaining to the proposed Regional Haze SIP revision should reference Project Number 2007-016-SIP-NR. The comment period closes on February 22, 2008. Copies of the proposed revision may be viewed at the commission's web site at [http://www.tceq.state.tx.us/implementation/air/sip/bart/haze\\_sip.html](http://www.tceq.state.tx.us/implementation/air/sip/bart/haze_sip.html). For further information, please contact Margaret Earnest, Air Quality Planning Section, (512) 239-4581.

DEC 27 2007

The Texas Commission on Environmental Quality (commission) will conduct a public hearing to receive testimony concerning proposed amendments to 30 TAC Chapter 328, Waste Minimization and Recycling, under the requirements of Texas Health and Safety Code, §382.017; Texas Government Code, Chapter 2001, Subchapter B.

The proposed rulemaking requires persons that manufacture or sell new computer equipment to implement a convenient and environmentally sound program for the collection, recycling, and reuse of used computer equipment. The commission will be responsible for oversight of some of the administrative and regulatory requirements of the program.

The commission will hold a public hearing on this proposal in Austin on January 14, 2008 at 10:00 a.m. at the Texas Commission on Environmental Quality Complex located at 12100 Park 35 Circle in Building E, Room 201S. The hearing will be structured for the receipt of oral or written comments by interested persons. Registration will begin 30 minutes prior to the hearing. Individuals may present oral statements when called upon in order of registration. There will be no open discussion during the hearing; however, commission staff will be available to informally discuss the proposal 30 minutes before the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Kristin Smith, Office of Legal Services, at (512) 239-0177.

In addition to comments on the proposed sections, the TCEQ invites any other comments appropriate to the effective implementation of the program consistent with the statute. Comments may be submitted to Kristin Smith, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at <http://www5.tceq.state.tx.us/rules/ecomments>. File size restrictions may apply to comments submitted through the eComments system. Comments should reference Rule Project Number 2007-036-328-AS. The comment period closes February 4, 2008. Copies of the proposed rules can be obtained from the commission's Web site at [http://www.tceq.state.tx.us/nav/rules/propose\\_adopt.html](http://www.tceq.state.tx.us/nav/rules/propose_adopt.html). For further information, please contact G. Michael Lindner, Small Business and Environmental Assistance, (512) 239-3045.

TRD-200706196  
Robert Martinez  
Director, Environmental Law Division  
Texas Commission on Environmental Quality  
Filed: December 7, 2007

✓ Notice of Public Hearing on Proposed Revisions to the State Implementation Plan

The Texas Commission on Environmental Quality (commission or TCEQ) will conduct a public hearing to receive testimony regarding proposed revisions to the state implementation plan (SIP) to meet the requirements of the Federal Clean Air Act (FCAA), §110(a)(2)(D)(i)(II), 169A and 169B addressing visibility impairment due to regional haze in Federal Class I areas. The proposed revisions reference existing control strategies to reduce haze causing emissions in Texas, as well as reference the state's participation in the Federal Best Available Retrofit Technology (BART) process and the Federal Clean Air Interstate Rule (CAIR).

The proposed revision demonstrates the federal requirements towards reasonable progress in reducing visibility impairment at Federal Class I areas, including Big Bend and Guadalupe Mountains National Parks, resulting from man-made pollution. If adopted, the proposed revisions would fulfill Texas' obligation under sections 169A and 169B of the

Federal Clean Air Act to submit a SIP revision to the United States Environmental Protection Agency (EPA). There is no associated rulemaking with this SIP revision.

A public hearing on this proposal will be held in Austin, on February 19, 2008, at 2:00 p.m., at TCEQ's Austin Headquarters Office, 12100 Park 35 Circle, Building E, Room 201-S. The hearing will be structured for the receipt of oral or written comments by interested persons. Registration will begin 30 minutes prior to the hearing. Individuals may present oral statements when called upon in order of registration. There will be no open discussion during the hearing; however, TCEQ staff will be available to answer questions on the proposal 30 minutes prior to the hearing. A summary of the Federal Land Managers' conclusions and recommendations on the proposed SIP revision, if any, will be available after January 18, 2008. Notification of the availability of this information will be posted on the commission's web site at <http://www.tceq.state.tx.us/implementation/air/sip/Hottop.html>.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact the Air Quality Division at (512) 239-4900. Requests should be made as far in advance as possible.

Comments may be submitted to Margaret Earnest, MC 206, Air Quality Division, Chief Engineer's Office, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-5687. Electronic comments may be submitted at [www5.tceq.state.tx.us/rules/ecomments/](http://www5.tceq.state.tx.us/rules/ecomments/). File size restrictions may apply to comments being submitted via the eComments system. All comments pertaining to the proposed Regional Haze SIP revision should reference Project Number 2007-016-SIP-NR. The comment period closes on February 22, 2008. Copies of the proposed revision may be viewed at the commission's web site at [http://www.tceq.state.tx.us/implementation/air/sip/bart/haze\\_sip.html](http://www.tceq.state.tx.us/implementation/air/sip/bart/haze_sip.html). For further information, please contact Margaret Earnest, Air Quality Planning Section, (512) 239-4581.

TRD-200706283  
Robert Martinez  
Director, Environmental Law Division  
Texas Commission on Environmental Quality  
Filed: December 11, 2007

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Notice of Water Quality Applications

The following notices were issued during the period of November 20, 2007 through December 3, 2007.

The following require the applicants to publish notice in a newspaper. Public comments, requests for public meetings, or requests for a contested case hearing may be submitted to the Office of the Chief Clerk, Mail Code 105, P.O. Box 13087, Austin, Texas 78711-3087, WITHIN 30 DAYS OF THE DATE OF NEWSPAPER PUBLICATION OF THE NOTICE.

INFORMATION SECTION

ARTHUR EDWARD BAYER has applied for a renewal of TPDES Permit No. WQ0013819001, which authorizes the discharge of treated domestic wastewater at a daily average flow not to exceed 60,000 gallons per day. The facility is located adjacent to the east right-of-way of Lemm Gully, approximately 1,400 feet south of Spring-Cypress Road in Harris County, Texas.

AUC GROUP LP as applied for a new permit, proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014724002, to authorize the discharge of treated domestic waste-

## ADJACENT STATES MAILING LIST

(A copy of the attached letter was sent to each person on this list)

Mr. Chris Roberie, Administrator  
Air Quality Assessment Division  
Louisiana Department of Environmental Quality  
Office of Environmental Assessment  
P.O. Box 4314  
Baton Rouge, Louisiana 70821-4314

Mr. Mike Bonds, Chief  
Air Division  
Arkansas Department of Pollution Control & Ecology  
8001 National Drive  
Little Rock, Arkansas 72209

Mr. Eddie Terrill, Director  
Air Quality Division  
Oklahoma Department of Environmental Quality  
P.O. Box 1677  
Oklahoma City, Oklahoma 73101-1677

Ms. Mary Uhl, Acting Bureau Chief  
New Mexico Environmental Department  
Air Quality Bureau  
2048 Galisteo Street  
Santa Fe, New Mexico 87505

## LOCAL-PROGRAM MAILING LIST

(A copy of this letter was sent to each person on this list)

Jorge Magaña, M.D., Director  
El Paso City-County Health and Environmental District  
5115 El Paso Drive  
El Paso, Texas 79905-2818

Attention: Mr. Mark Everett, Administrator

cc: Mr. Jesus J. Reynoso, Supervisor, Air Pollution Control Program, El Paso City-County Health  
District, El Paso  
Mr. Archie Clouse, Regional Director, El Paso  
Mr. Kevin Smith, Manager, Regional Air Program, El Paso

Mr. Stephen Williams, Director  
Houston Department of Health and Human Services  
8000 North Stadium Drive  
Houston, Texas 77054

Attention: Mr. Michael Terraso, Assistant Director for Environmental Control

cc: Mr. Arturo Blanco, Chief, Bureau of Air Quality Control, Department of Health and Human  
Services, Houston  
Ms. Donna Phillips, Regional Director, Houston

Mr. B.Z. Karachiwala, Division Director  
Environmental Public Health  
Harris County Public Health and Environmental Services  
107 North Munger  
Pasadena, Texas 77506

cc: Ms. Donna Phillips, Regional Director, Houston

Mark Guidry, M.D., M.P.H., Director  
Galveston County Health District  
Post Office Box 939  
La Marque, Texas 77568

Attention: Mr. Ronald B. Schultz, Director, Pollution Control Division

cc: Ms. Donna Phillips, Regional Director, Houston

Mr. Brian Boerner, Director  
City of Fort Worth  
Environmental Management Department  
1000 Throckmorton Street  
Fort Worth, Texas 76102

Attention: Mr. T. C. Michael, Program Manager, Air Quality

cc: Mr. Tony Walker, Regional Director, Dallas/Fort Worth

Ms. Karen Rayzer  
Environmental and Health Services  
City of Dallas  
1500 Marilla St.  
7A North  
Dallas, Texas 75201

cc: Mr. Tony Walker, Regional Director, Dallas/Fort Worth  
Mr. Rodger Jayroe, Manager, Environmental and Health Sciences, Dallas  
Mr. David Miller, P.E., Manager, Air Pollution Control, Environmental and Health Services,  
Dallas

Sam Peacock, Ph.D.  
City of Dallas Department of Aviation  
LB16 Love Field Terminal Bldg.  
8008 Cedar Springs Road  
Dallas, Texas 75235

cc: Mr. Tony Walker, Regional Director, Dallas/Fort Worth

## COG-MPO MAILING LIST

(A copy of this letter was sent to each person on this list)

Mr. Bob Dickinson, Director  
Transportation and Environmental Resources  
South East Texas Regional Planning Commission  
2210 Eastex Freeway  
Beaumont, Texas 77703-4929

cc: Ms. Georgie Volz, Regional Director, Beaumont  
Mr. Stuart Mueller, Regional Air Program Manager, Beaumont

Mr. Ricardo Dominguez  
Transportation Planning Manager  
El Paso Metropolitan Planning Organization  
The Gateway Business Center  
10767 Gateway Blvd. West, Suite 605  
El Paso, Texas 79935

cc: Mr. Archie Clouse, Regional Director, El Paso  
Mr. Kevin Smith, Manager, Regional Air Program, El Paso

Ms. Debbie Spillane  
Transportation Modeling Program  
Texas Transportation Institute  
Texas A&M University System  
College Station, Texas 77843-3135

cc: Ms. Anna Dunbar, Regional Director, Waco

Mr. Michael Eastland, Executive Director  
North Central Texas Council of Governments  
P.O. Drawer 5888  
Arlington, Texas 76005-5888

cc: Mr. John Promise, Director, Environmental Resources and Energy, North Central Texas Council of Governments, Arlington  
Mr. Michael Morris, Director of Transportation, North Central Texas Council of Governments, Arlington  
Mr. Tony Walker, Regional Director, Dallas/Fort Worth

Mr. Ray Miller Jr.  
Victoria Metropolitan Planning Organization  
City of Victoria Planning Department  
P.O. Box 1758  
Victoria, Texas 77902-1758

cc: Ms. Susan Clewis, Regional Director, Corpus Christi

Mr. Mike Leary  
Federal Highway Administration  
Planning and Environmental Section  
826 Federal Office Building  
300 East 8th Street  
Austin, Texas 78701

cc: Ms. Patty Reeh, Regional Director, Austin

Ms. Dianna Noble, Director  
Environmental Affairs Division  
Texas Department of Transportation  
P.O. Box 5051  
Austin, Texas 78763-5051

cc: Ms. Patty Reeh, Regional Director, Austin

Mr. Jack Foster, P.E., Director  
Systems Planning Section  
Transportation Planning and Programming Division  
Texas Department of Transportation  
P.O. Box 149217  
Austin, Texas 78714-9217

cc: Ms. Patty Reeh, Regional Director, Austin

Mr. Jack Steele, Executive Director  
Houston-Galveston Area Council  
3555 Timmons Lane, Suite 120  
Houston, Texas 77027-6466

cc: Mr. Steve Howard, Director, Program Operations, Houston-Galveston Area Council, Houston  
Mr. Alan Clark, Transportation Planning Manager, Houston-Galveston Area Council, Houston  
Ms. Donna Phillips, Regional Director, Houston

Ms. Gloria Arriaga, Executive Director  
Alamo Area Council of Governments  
8700 Tesoro Drive  
San Antonio, Texas 78217

cc: Mr. Richard Garcia, Regional Director, San Antonio

Ms. Betty Voights, Executive Director  
Capital Area Planning Council  
P.O. Box 17848  
Austin, Texas 78760

cc: Ms. Patty Reeh, Regional Director, Austin

Mr. Glynn Knight, Executive Director  
East Texas Council of Governments  
3800 Stone Road  
Kilgore, Texas 75662

cc: Mr. Leroy Biggers, Regional Director, Tyler

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PUBLIC HEARING REGISTRATION

**Location:** 12100 Park 35 Circle, Building E, Room 201S, Austin

**Date:** February 19, 2008

**Concerning:** Regional Haze State Implementation Plan (SIP)

NAME	REPRESENTING	PRESENTING ORAL TESTIMONY? (CIRCLE ONE)
KEN KRAMER	LONE STAR CHAPTER, SIERRA CLUB	<input checked="" type="radio"/> Yes    No
Brandt Maunche	5431 Caven, Hb, Tx 77096 self	<input checked="" type="radio"/> Yes    No
LISA KOST	GULF <del>COAST</del> COAST LIGHTS COALITION (JACKSON WALKER LLP)	Yes <input checked="" type="radio"/> No
		Yes    No
		Yes    No
		Yes    No

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

12100 PARK 35 CIRCLE, BUILDING 3 201S.

AUSTIN, TEXAS

FEBRUARY 19, 2008

2:00 P.M.

**ORIGINAL**

1 MR. MARS: Good afternoon, I would like to welcome  
2 everyone to this public hearing being conducted by the Texas  
3 Commission on Environmental Quality. My name is Keith Mars with  
4 the Air Quality Division of the Chief Engineer's office at TCEQ.  
5 We are here this afternoon to receive oral and written comments  
6 on the proposed Regional Haze Implementation Plan. The proposed  
7 revision demonstrates that Texas has adequately addressed the  
8 federal requirements showing reasonable progress and improving  
9 visibility at Class -- Federal Class I areas including Big Bend,  
10 the Guadalupe Mountains National Park from reductions and  
11 afrogenic (phonetic) pollution.

12 If adopted, the proposed revisions would fulfill  
13 Texas' obligation under Sections 169A and 169B of the Federal  
14 Clean Air Act to submit a SIP provision to the United States  
15 Environmental Protection Agency. The proposed revision  
16 references existing control strategies to reduce haze causing  
17 emissions in Texas. The proposal also references Texas'  
18 participation in a Federal Best Available Retrofit Technology  
19 BART process and a Federal Clean Air Intrastate Rule also known  
20 as CAIR.

21 There is no associated rule making with this SIP  
22 provision. If you intend to present oral comments and have not  
23 registered, please sign in now. Copies of the proposed Regional  
24 Haze Implementation Plan are available on the registration  
25 table. We also have copies of the hearing notice, that if you

1 are planning to submit written comments or submit comments via  
2 the E-comments system, you can quickly find this information on  
3 how to submit those comments. We will continue to accept  
4 written comments on this proposal until this Friday, February  
5 22nd, 2008.

6 This hearing is structured simply for the receipt of  
7 oral or written comments. Oral comments would be limited to  
8 five minutes. Open discussion during the hearing is not  
9 allowed. However, if anyone has any additional questions  
10 regarding the proposal, there will be another opportunity after  
11 the hearing to talk with staff. We will now begin receiving  
12 comments in the order in which you registered. Once I call your  
13 name, please come up to the podium and state your name and who  
14 you represent and begin your comments. And we will start out  
15 with Ken Kramer representing the Lonestar Chapter of the Sierra  
16 Club. Ken?

17 MR. KRAMER: Thank you. I'm Ken Kramer,  
18 representing the Lonestar Chapter of the Sierra Club and I just  
19 have a couple of brief oral comments today. The Sierra Club  
20 will be submitting some written comments through the E-comments  
21 system or in some other fashion by the comment deadline this  
22 Friday. The Sierra Club, as I think most people know, is an  
23 interesting organization in that we fight to protect the  
24 environment both of our state and our nation and our world. But  
25 we also enjoy a great deal of activity with regard to the

1 outdoors including both Sierra Club informal outings and more  
2 formal trips to places like Big Bend National Park, and  
3 Guadalupe Mountains National Park in Texas and many other  
4 national parks or public lands throughout the United States,  
5 including for some of our groups in Texas venturing on outings  
6 to national parks and wilderness areas in neighboring states  
7 such as Arkansas. And therefore issues that relate to these  
8 kind of national parks and wilderness areas are very important  
9 to the Sierra Club for a number of reasons.

10 We value these places both for their outdoor  
11 experiences as well as for the natural areas that they  
12 represent. As a consequence, we're very concerned about the  
13 proposed Regional Haze SIP Revisions that we feel are inadequate  
14 to address the visibility issue at national parks such as Big  
15 Bend, Guadalupe Mountains and some of the other areas in  
16 neighboring states. We understand that there are difficulties  
17 in trying to address the regional haze issues here in Texas  
18 because the transport of some of the pollutants that contribute  
19 to the haze issue from other parts of the country as well as  
20 from other nations. But we also point out that the TCEQ in its  
21 SIP revision does state that a considerable percentage of the  
22 impact on regional haze issue in our national parks is a result  
23 of pollution from Texas sources. And we think more needs to be  
24 done to address those Texas sources.

25 As we understand it, in the proposed SIP revisions

1     there really are no particular controls strategies over and  
2     above what is already required by state or federal law to  
3     achieve other purposes that are included to address the regional  
4     haze issue directly. And we do believe at a minimum that the  
5     regional haze SIP ought to outline those control strategies that  
6     are necessary and will be pursued to directly deal with regional  
7     haze. At a minimum, we would hope that there would be  
8     recommendations in the SIP revision that would outline  
9     additional control strategies or measures that could be taken in  
10    order to achieve faster progress in meeting natural visibility  
11    conditions. In some cases, those additional control strategies  
12    might be achievable through rule making or other policy actions  
13    by the agency itself.

14             In other cases, it may require some additional  
15    statutory authority for the agency. But I think it would be  
16    incumbent upon the agency to identify what additional strategies  
17    or statutory authority would be needed to adopt control  
18    strategies that would directly address the regional haze  
19    problem. And I think that you would find a reservoir of support  
20    from many organizations including my own to go to the  
21    legislature to argue for the adoption of those authorities to  
22    achieve those control strategies. And so I would certainly urge  
23    the agency at a minimum to include in the SIP revisions  
24    identification of additional control strategies that would be  
25    plausible in terms of reducing the regional haze problem from

1 Texas sources and identifying what additional authority might be  
2 needed in order to achieve those controls strategies.

3 A second point I'd like to make is that we are  
4 somewhat concerned about the extensiveness of the input thus far  
5 into the process of developing the regional haze SIP revisions.  
6 Although it's not always possible for all the groups that might  
7 be interested in such an issue to be involved in the  
8 discussions, we think there are a number of other organizations  
9 and individuals who because of their great interest in places  
10 like Big Bend National Park and Guadalupe Mountains National  
11 Park and national parks and wilderness areas in general, would  
12 like to be aware of and have input into the SIP revision  
13 process. And we will certainly endeavor in the next few days to  
14 make more people aware of this.

15 But I think it would be incumbent upon the agency to  
16 look at the extensiveness of their outreach and we will  
17 certainly suggest names and contact information for others that  
18 might be included in the process. And we will encourage those  
19 other groups and individuals to become involved in the process.  
20 I think that it's probably self-evident to say that Big  
21 Bend National Park and Guadalupe Mountains National Park, as  
22 examples, are premiere areas in Texas both for preservation of  
23 natural heritage as well as for outdoor experiences that they  
24 offer. And I think there are a number of Texans, whether they  
25 are members of environmental organizations or not, that want to

1 see those areas kept in as pristine a condition as possible and  
2 restored to a pristine condition where necessary.

3 Visibility is part of the outdoor experience for those  
4 of us who enjoy especially the more remote areas like Big Bend  
5 and Guadalupe Mountains. And we would certainly urge the agency  
6 to place a high priority on addressing the visibility issue in  
7 those areas. As I said, we will submit written comments later.  
8 Thank you very much.

9 MR. MARS: Thank you. Next we have Brandt  
10 Mannchen.

11 MR. MANNCHEN: I like to face people. My name is  
12 Brandt Mannchen. I'm here representing myself today. And I'm  
13 speaking as a citizen, as a person who was born and raised in  
14 Texas who has enjoyed going to Big Bend and Guadalupe National  
15 Parks and also areas Great Sand Dunes National Park and Preserve  
16 and other areas in New Mexico, Arkansas, Oklahoma that are, as  
17 the plan states, affected by regional haze from Texas sources.  
18 And I'm very disappointed with the plan. I have been looking at  
19 SIPs since 1977. And I've known people in the Texas Air Control  
20 Board, Texas Natural Resource Conservation Commission, and the  
21 Texas Commission on Environmental Quality over all those 30  
22 years. I've known a lot of good people.

23 Jim Price, I've known for many years. And Cathy  
24 Pendleton I've known for many years. And what I'm saying is not  
25 to insult any of you. But this is the worst SIP I have ever

1 read and commented on. I thought I'd seen the worst last year  
2 with the Galveston -- with the Houston/Galveston Brazoria SIP  
3 for Ozone Eight Hour Non-attainment which obviously didn't reach  
4 attainment. But this plan, as Ken has mentioned previously,  
5 other than what other programs the TCEQ is doing, does nothing.  
6 It delays things for five years and says we'll look at it in  
7 five years.

8 That's not good enough for me as a citizen, as someone  
9 who visits these areas. And even if I don't visit those areas,  
10 I read about these areas. I watch TV about these areas. I read  
11 magazines. I -- I just enjoy knowing that they're there and  
12 they provide me with important values, spiritual values,  
13 recreational values, physical values of just getting out there.  
14 And these, for me, are a core value for me for living my life is  
15 getting out into the outdoors. And it bothers me that the  
16 compliance dates that are set in here for reaching compliance  
17 for regional haze for Big Bend and for Guadalupe Mountains, I  
18 will be dead. I will never have clean air and be able to look  
19 at the vast vistas that are in those places. My children will  
20 never been able to and probably my grandchildren will never be  
21 able to either.

22 And I consider that very sad that Texas isn't -- TCEQ  
23 is a steward of our air resources. And to not give more  
24 emphasis to reducing the air pollution than is done in this plan  
25 is very sad. And for me, as a citizen, I feel like TCEQ is not

1 doing its job. I pay taxes so you can do your job so you clean  
2 up the air so that I can enjoy those areas. And I feel like I'm  
3 not getting it. In my opinion, we're not making reasonable  
4 progress. When we do nothing for five years, that's no progress  
5 in my book. In fact, that's zero progress.

6 And it bothers me that TCEQ is using a 20 percent  
7 impact cutoff. That according to letters from the Federal Land  
8 Managers are four times higher than any other SIP that they have  
9 looked at so far. Now, why are we setting things so high so  
10 that we don't have to reduce? That bothers me. What is it  
11 about us that is different that we can set such a high impact  
12 cutoff level so we don't have to reduce where other states don't  
13 do that? To me, Texas is not being a good neighbor, a good  
14 friend. Because this is -- these are national wilderness  
15 systems, national park systems. It's not just Texans that are  
16 dealing with soil laundry here. It's three hundred million  
17 people in the United States who have a stake in this. And Texas  
18 is saying forget it for five years.

19 I have included with my comments a environmental  
20 offense Sierra Club document that was submitted to the EPA  
21 recently. That's a petition regarding the failure of TCEQ to  
22 properly implement the prevention of significant deterioration  
23 permit program. It lists at least seven deficiencies in that  
24 program that lead me to believe that the TCEQ is not requiring  
25 the emission reductions it should. That -- and some of these

1 emission reductions that should be required are regional haze  
2 visibility emissions. So it bothers me that we have a  
3 permitting program that in essence is allowing more regional  
4 haze than it should.

5 I don't understand a regional haze plan that says  
6 we're worried about compensatory overcontrol. I have never seen  
7 an SIP over control ever by the TACB, the TNRCC or the TCEQ.  
8 It's never happened in the 30 years I've been looking at SIP.  
9 And I guaranty you this one wouldn't overcontrol if you required  
10 some controls. We know the emissions inventories are incorrect.  
11 We do the best job we can. But the recent rapid synthesis  
12 document that came out in August 31st of 2007 that TCEQ put out  
13 talks about emissions of Nox and VOC that are much greater when  
14 you do the airplane overflies and you look at what's coming off  
15 certain areas that are in your emissions inventory than what the  
16 emissions inventory shows. So probably there's some errors in  
17 this emissions inventory, too. Because it uses some of the  
18 existing emissions inventories that are wrong.

19 And that same document, that synthesis study, it  
20 talked about CO. Now, CO, I always thought, was easily  
21 measured. Talks about CO levels from 2000 to about 2004 or 6  
22 that were way off. If we can't even measure CO right because we  
23 haven't required sufficient emissions monitoring technology,  
24 what about the rest of our emissions inventory? I'm really  
25 concerned that that's the whole ball game. If we don't get that

1 right, Synwrap modeling doesn't mean a thing. Doesn't matter  
2 how many models you use. You can use Huff. You can use  
3 everything. Cowline, Kanex, doesn't matter. Because it's  
4 garbage in garbage out for computers. You don't put good stuff  
5 in, you're going to get incorrect outputs. So I'm really  
6 concerned that emission inventory is incorrect.

7 To think that we can't even meet a 56 year away  
8 compliance deadline and we're going to miss that by 17 years  
9 with Guadalupe and 91 years for Big Bend makes no sense. I  
10 don't like this document, because to me it's like a little kid  
11 who points at others. Mexico did it, Central America did it, oh  
12 those darn natural dust emissions. We're pointing at everything  
13 except ourselves. We're doing it. The citizens of Texas, the  
14 TCEQ, industry, we're all doing that. We need to say: We're  
15 doing that and we need to get some controls on. And I don't  
16 care if it's only 20 percent. I would like it more like 50  
17 percent. I would like something so that in five years we can  
18 look at our monitoring and we look at our modelling and say:  
19 How's it going? We can't say that in five years, because we're  
20 not going to do anything new. How can this be a good scientific  
21 sound based document when you say the Mexican 1999 inventory was  
22 held constant until 2019? We all know that's not true. I mean,  
23 make some assumption. Make some guesses but do something.  
24 Don't just hold it steady. And tell me that that modelling is  
25 correct and therefore we don't have to do anything for five

1 years.

2 I'm also concerned that we're looking at BART sources  
3 that aren't far enough away. In the rapid science synthesis  
4 report it states on pages 43 and 95: A dramatic example of  
5 nocturnal transport has been documented for September 8th, 2006  
6 when high daytime concentration of ozone that had accumulated  
7 over Houston during the previous day travelled to Dallas  
8 overnight contributing to enhanced concentrations in Dallas the  
9 next day. Ozone can be transported into the Dallas area in the  
10 Houston area. So in fact, air pollution in that case travelled  
11 four hundred kilometers or 250 miles. And yet, we're looking at  
12 50 kilometers which is 31 miles or a hundred kilometers in 62  
13 miles. I don't care if EPA says that's what you can do. Do  
14 better than that. Because we know this pollution transports  
15 much farther away. Why are we using BART on such close sources?  
16 Why not farther away?

17 As a citizen, the most disappointing thing in this  
18 document is the absolute assurance that it gives off. It's  
19 almost like an arrogance. And I don't mean to be nasty to  
20 y'all. But, you know, we list all these regulations that say  
21 how great we're doing. And, you know, it's Mexico's fault. And  
22 all this sort of stuff. But this characterization is misleading  
23 because it does not acknowledge that other states do not have  
24 ozone non-attainment problems that Texas does, the huge number  
25 of regional haze sources that Texas has. And that the EPA

1 programs that TCEQ points as being weaker were set up for  
2 different purposes and therefore would not be stronger than the  
3 programs TCEQ has implemented for massive ozone problems that we  
4 have where we have failed the deadline on numerous occasions.  
5 So don't puff out your chest when you're not doing anything.  
6 Just be humble. This document needs to be humble.

7 And you don't differentiate between the boundaries of  
8 the Synwrap model and admit that because of that some of that  
9 boundary uncertainty may be due to our emissions and not Central  
10 America or Illinois or whoever. And you shouldn't hold offshore  
11 emissions constant. Come on guys. We got lots of folks out in  
12 the gulf who are going crazy trying to go deeper and deeper and  
13 deeper. Look at that more carefully.

14 Also, under page 11-10, 11.44 programs and management  
15 smoke impacts, Class I areas, you need to list also the national  
16 forest and grasslands in Texas. They're doing more burning now  
17 than they've ever done before. And that's because they're doing  
18 more red cockeyed woodpecker management. Red cockeye  
19 woodpecker's an endangered species. Burning is considered  
20 helpful to restore the forest that those birds need for habitat.  
21 So instead of doing like 15, 20,000 acres a year, they're now  
22 doing 30, 40 and they hope to even get 50,000 a year on Sam  
23 Houston National Forest alone. So they're going to be burning  
24 more. So you should be aware of that. Also somewhere is here  
25 it says Guadalupe Mountains is the only place that has

1 wilderness in Texas. That is not true. We have five wilderness  
2 areas in east Texas. Now, they're Class II. But they are  
3 wilderness too. So somebody needs to correct that.

4 Finally, this is what I think you ought to do. First,  
5 you should withdraw the SIP. And you need to revise it to  
6 incorporate reductions in regional haze emissions over the next  
7 five years. If, this is not done, then my opinion as a citizen  
8 EPA should start the sanctions clock. Because this is not a  
9 sufficient and reasonable further progress SIP in my estimation.  
10 We need to do more. You know, Texans always talk about how they  
11 do it the Texas way and how good we are. Is this really the  
12 best we can do? We can do better than this, you know. Our  
13 state agency has many, many good people in it. We've got all  
14 kinds of resources. I realize y'all don't have as much as you  
15 want. And I've lobbied for years to get you more resources.  
16 But as a citizen, I don't believe this is your best work. And I  
17 encourage you to do your best work and send it back out to the  
18 public. Thank you.

19 MR. MARS: Thank you.

20 MR. MANSION: And my name is B-R-A-N-D-T last name  
21 M-A-N-N-C-H-E-N.

22 MR. MARS: Thank you. Is there anyone else who  
23 would like to present comments at this time? Once again, the  
24 commission will continue to accept written comments on this  
25 proposal until Friday, February 22nd, 2008. We appreciate your

1 comments and we thank you for coming. If there are no further  
2 comments, this hearing is now closed.

3 (Hearing adjourned at 2:35 p.m.)  
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1 THE STATE OF TEXAS )

2 COUNTY OF TRAVIS )

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4 I, AISHA WHITE, Certified Shorthand Reporter for  
5 Travis County, Texas do hereby certify that the above-captioned  
6 matter came on for hearing before the TEXAS COMMISSION ON  
7 ENVIRONMENTAL QUALITY as hereinbefore set out.

8 I FURTHER CERTIFY that the proceedings of said hearing  
9 were reported by me, accurately reduced to typewriting under my  
10 supervision and control, and, after being so reduced, were filed  
11 with the TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.

12 GIVEN UNDER MY OFFICIAL hand and seal of office  
13 on the 28th day of February, 2008.

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AISHA WHITE, Texas CSR # 5021  
Expiration date: 12/31/2009  
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Dallas, Texas 75247  
(214) 520-6868  
Firm Registration No. 478

BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

\_\_\_\_\_ )  
In the Matter of: )  
 )  
Petition for a Clean Air Act Section )  
113(a)(5) Order Regarding Construction )  
of New PSD Sources in Texas and for )  
Sanctions Pursuant to Clean Air Act )  
Section 179(b) )  
 )  
\_\_\_\_\_ )

**CITIZEN PETITION FOR ACTION PURSUANT TO THE CLEAN AIR ACT  
REGARDING THE CONSTRUCTION OF NEW SOURCES IN TEXAS**

I. INTRODUCTION

Environmental Defense and Sierra Club petition the Administrator of the Environmental Protection Agency (“Administrator” or “EPA”), pursuant to the Administrative Procedure Act, 5 U.S.C. 551 *et seq.*, the Clean Air Act (“CAA” or “the Act”), 42 U.S.C. § 7401 *et seq.*, and the Act’s implementing regulations, to address the failure of the State of Texas to implement properly the Act’s Prevention of Significant Deterioration (“PSD”) permitting program. The State, which administers the PSD program through rules approved into the Texas State Implementation Plan (“Texas SIP”), is failing in several fundamental ways to comply with SIP requirements when issuing and enforcing PSD permits. The State’s failings are not simply the product of poor individual permitting decisions. These errors are repeated in permit after permit and reflect a statewide policy of ignoring the CAA and Texas SIP. Similarly, when permit provisions prove constraining, they are relaxed rather than enforced. In enacting the CAA, Congress foresaw that states would be tempted to subvert PSD requirements to other policy objectives, and wisely provided EPA with ample authority to remedy exactly the kind of illegal action now prevalent in the Texas PSD program. Consequently, Environmental Defense and Sierra Club petition EPA to use this statutory authority to address the deficiencies in the Texas PSD program enumerated below by (1) prohibiting the construction of new sources in Texas under 42 U.S.C. § 7413(a)(5) and (2) imposing sanctions on the State under 42 U.S.C. § 7509(b). These measures must remain in place until the State comes into compliance.

## II. PETITIONERS

Petitioner Environmental Defense is a non-profit environmental organization existing under the laws of New York and with offices in Austin, Texas, New York, New York, Washington, D.C., and other locations across the country. Environmental Defense is a national membership organization with over 400,000 members residing throughout the United States, including over 14,000 members who live in Texas. Environmental Defense is dedicated to carrying out the interests of its members in protecting and enhancing the quality of the human and natural environment, and Environmental Defense's activities include public education, advocacy and litigation to enforce environmental laws. Environmental Defense's mission is to protect the environmental rights of all people including future generations. Among these rights are clean air, clean water, healthy food and flourishing ecosystems. Environmental Defense and its members are greatly concerned about the effects of air pollution on human health and the environment and have a long history of involvement in activities related to air quality.

Sierra Club is the nation's oldest and largest conservation organization, with approximately 700,000 members nationwide. Sierra Club is a non-profit corporation, incorporated in the State of California, with chapters, offices and programs in Texas. The Lone Star chapter of Sierra Club has approximately 24,000 Texas members, who are dedicated to exploring, enjoying, and protecting Texas's natural resources and wild places. Sierra Club promotes the responsible use of the earth's ecosystem and resources, and educates and works to restore the quality of the natural and human environment. In addition to organizing nature outings and public education campaigns, Sierra Club and its Texas members pursue advocacy and litigation on issues including clean air and clean water, solid waste reduction, and sustainable energy and land use policies.

The actions of the State of Texas in failing to implement the PSD program in a manner consistent with the Texas SIP and the Clean Air Act are causing injury to the aesthetic, recreational, environmental, economic, and health related interests of Environmental Defense's and Sierra Club's members. These interests include, but are not limited to: (1) breathing air free from health impairing sulfur dioxide, sulfates, nitrogen oxides, hydrocarbons, smog (ground-level ozone), and other pollutants, (2) viewing natural scenery and wildlife unimpaired by these pollutants, and (3) enjoying the benefits of lakes, rivers, streams, terrestrial ecosystems, and other natural environments unsullied by these pollutants.

## III. ARGUMENT

### **A. THE STATE OF TEXAS MUST ADHERE TO THE CLEAN AIR ACT AND ITS OWN STATE IMPLEMENTATION PLAN.**

Under the Clean Air Act, a State may not adopt or enforce regulations that are less stringent than its current SIP. Section 116 of the Act, provides that,

if an emission standard or limitation is in effect under an applicable implementation plan or under section 7411 or 7412 of this title, such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.

42 U.S.C. § 7416. See also 40 C.F.R. § 51.105 (SIP revisions “will not be considered part of an applicable [SIP] until such revisions have been approved by the Administrator in accordance with this part”). Under the terms of section 116, if a state wishes to implement an emission standard or limitation that is less stringent than a provision in its SIP, the state may not effectuate that provision until it is approved into the state’s SIP.<sup>1</sup> As demonstrated below, Texas’ PSD program violates section 116 in many respects.

**B. IN IMPLEMENTING ITS PSD PERMITTING PROGRAM, THE STATE OF TEXAS DOES NOT ADHERE TO THE CLEAN AIR ACT AND ITS OWN STATE IMPLEMENTATION PLAN.**

***1. IN ISSUING PSD PERMITS, THE STATE OF TEXAS FAILS TO USE THE CORRECT DEFINITION OF BACT.***

In approving PSD permits, Texas must use the correct definition of Best Available Control Technology (“BACT”). The EPA’s definition of BACT is set out at 40 C.F.R. § 52.21(b)(12), which provides as follows:

Best available control technology means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the Administrator determines that technological or economic

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<sup>1</sup> The Act provides an expansive definition of the terms “emission standard” and “emission limitation.” As used in the Act, these terms “mean a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.” 42 U.S.C. § 7602(k).

limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

See also 42 U.S.C. § 7479(3) (CAA definition of BACT). The version of the Texas SIP currently approved by EPA incorporates this definition of BACT by reference. See 40 C.F.R. § 52.2270; 30 TX Rg 6.B.6 § 116.160(a).<sup>2</sup> In fact, Texas's incorporation of EPA's BACT definition was crucial to EPA's approval of the State's PSD program. See 54 Fed. Reg. 52,823, 52,825 (Dec. 22, 1989). However, without any explanation, TCEQ deleted this incorporation of the federal BACT definition from its regulations in 2006. 31 Tex. Reg. 538 (Jan. 27, 2006). Not surprisingly, EPA has never approved this SIP revision. Therefore, according to section 116 of the Act, this is the definition of BACT that Texas must apply in implementing the State's PSD permitting program. See 40 C.F.R. § 51.105; General Motors v. U.S., 496 U.S. 530, 540 (1990).

However, in clear violation of section 116 and its approved SIP, Texas has promulgated and is applying its own definition of BACT:

Best available control technology (BACT)--BACT with consideration given to the technical practicability and the economic reasonableness of reducing or eliminating emissions from the facility.

30 TAC § 116.10(3).<sup>3</sup> Although codified since 1998 in the Texas Administrative Code, this definition has never been approved by EPA for incorporation into the Texas SIP. See 40 C.F.R. § 52.2270; TX Rg 6.B.6 § 116.10(3).<sup>4</sup> In fact, when the EPA approved other 1998 Texas Administrative Code revisions into the Texas SIP, it specifically withheld approval of this definition of BACT. 67 Fed. Reg. 58,697, 58,700 (Sept. 18, 2002). Nevertheless, the State is using this unincorporated definition in conducting BACT analyses, as the State's own guidance for carrying out BACT determinations makes clear. See Air Permits Division, Texas Commission on Environmental Quality, Evaluating Best Available Control Technology (BACT) in Air Permit Applications (hereinafter "Three Tier Guidance") at 2 (referring only to the unincorporated definition in defining BACT).<sup>5</sup>

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<sup>2</sup> Available at: <http://yosemite1.epa.gov/r6/Sip0304.nsf/dc994a1edbcf32c08625651c00552ed8/ae06649fb980698886256ed9007aa880!OpenDocument> (last visited January 8, 2008).

<sup>3</sup> Available at: [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p\\_dir=&p\\_rloc=&p\\_tloc=&p\\_ploc=&pg=1&p\\_tac=&ti=30&pt=1&ch=116&rl=10](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=116&rl=10) (last visited January 14, 2008).

<sup>4</sup> Available at: <http://yosemite1.epa.gov/r6/Sip0304.nsf/dc994a1edbcf32c08625651c00552ed8/ebe595fa1af0a9f98625737f0072cadc!OpenDocument> (last visited January 10, 2008).

<sup>5</sup> Available at: <http://tceq.com/assets/public/permitting/air/Guidance/NewSourceReview/bactdoc.pdf> (last visited January 10, 2008).

Testimony from Erik Hendrickson, Combustion and Coatings Team Leader for the Texas Commission on Environmental Quality ("TCEQ"), confirms that when TCEQ performs BACT determinations for PSD sources, it uses its own definition, not the definition in the Texas SIP. At a deposition of Mr. Hendrickson on September 9, 2005, Mr. Hendrickson discussed TCEQ's understanding of BACT:

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17 Q What is BACT?

18 A BACT is defined in Texas in, of course, two  
19 locations. It's defined in the Health and Safety  
20 Code. If you look at -- if you look at 382.0518 of  
21 the Texas Health and Safety Code, it's in a  
22 requirement to get a preconstruction permit, is what  
23 we're dealing with here. It says that best available  
24 control technology is considering the technical  
25 practicability and economic reasonableness of reducing

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1 or eliminating emissions resulting from the facility.  
2 That same definition is located in our Chapter 30 TAC  
3 116. It's Item (3); "Best available control  
4 technology, BACT, with consideration given to  
5 technical practicability and economic reasonableness  
6 of reducing or eliminating emissions from the  
7 facility."

8 Q Is that the definition of BACT that you have  
9 used in your review of the CPS application?

10 A Yes, it is.

11 Q Does the TCEQ's definition of BACT also apply  
12 in review of PSD regulated air contaminants in Texas?

13 A Yes, it does.

Oral Deposition of Erik Hendrickson, September 9, 2005, at 50-51, In re: Application of City Public Service for Texas Air Quality Permit No. 70492 and PSD Permit No. PSD-TX-1037, SOAH Docket No. 582-05-4852. At a deposition last year, Mr. Hendrickson again explained that, when making BACT determinations, the State of Texas uses its own definition of BACT:

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2 Q

3 ...

4 When you were reviewing the six pending

5 TXU applications for compliance with BACT, is this the

6 rule -- is this the definition of "BACT"? And I  
7 mean -- when I say "this," the definition -- the  
8 federal definition incorporated by reference in 30 TAC  
9 116.160. Is the federal definition of "BACT"  
10 incorporated there, the one that you applied to the  
11 six pending TXU applications?  
12 A We -- we applied the Texas definition of  
13 "BACT."

Videotaped and Oral Deposition of Erik Hendrickson, January 25, 2007, at 49, Consolidated Applications of TXU Generating Company L.P. for State Air Quality Permits and PSD Permits, SOAH Docket No. 582-07-0614 (hereinafter "2007 Dep. of Erik Hendrickson").

By applying its own definition of BACT when conducting permitting determinations, Texas creates numerous opportunities for error. First, the Texas definition is circular. Fundamentally, the definition provides that "BACT is BACT." A circular definition is meaningless; thus BACT determinations in Texas become standardless. Beyond that problem, the Texas definition of BACT has the following flaws:

1. It does not include the concept that BACT is an emission limitation;
2. It does not include the requirement that the emission limitation must be based upon "the maximum degree of reduction" that is "achievable."
3. It does not include the requirement that BACT must be derived through a case-by-case process;
4. It does not include the requirement that in determining BACT, there must be a consideration of "production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques";
5. It does not include the requirement that energy and environmental impacts be considered in establishing the emission limit; and
6. It does not include the requirement that the BACT emission limit include a visible emission limit.

The State's definition of BACT also alters the federal definition of the term by emphasizing consideration of "technical practicability" and "economic reasonableness." This departure from strict application of the federal BACT definition skews the BACT analysis in favor of weaker emission standards that are less burdensome to PSD applicants. Because Texas is basing its BACT determinations on its own inadequate definition, which has not been incorporated into the Texas SIP and because the State's BACT determination does not include a number of requirements that are fundamental to any BACT determination, the State is not, when issuing PSD permits, acting in compliance with the Act or its own SIP.

*2. IN ISSUING PSD PERMITS, TCEQ'S USE OF ITS THREE TIER GUIDANCE CIRCUMVENTS THE REQUIRED BACT DETERMINATIONS.*

The State's Three Tier Guidance sets out TCEQ's approach to conducting BACT determinations. The stated purposes of this document are to "provide[] instruction and guidance for preparing and evaluating" BACT proposals submitted to TCEQ in air permit applications. Three Tier Guidance at 1. "Written primarily for permit reviewers," the Three Tier Guidance "establishes the process for determining the scope of the BACT review and defines the process by which the reviewer determines acceptability of a BACT proposal." Id.

As its name implies, this guidance document divides BACT analysis into three tiers. The first tier "involves a comparison of the applicant's BACT proposal to emission reduction performance levels accepted as BACT in recent permit reviews." Id. at 3. The second tier "involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry." Id. The third tier is essentially the same as EPA's top-down process for determining BACT. Compare id. at 4 (listing five steps of Tier III), with EPA, New Source Review Workshop Manual (Draft October, 1990) (hereinafter, "NSR Manual") at B.6 Table B.1 (listing the steps in EPA's top-down BACT process). According to TCEQ, its BACT determination "begins at the first tier and continues sequentially through subsequent tiers only if necessary." Three Tier Guidance at 3. The Three Tier Guidance indicates that "Tier III evaluation is rarely necessary," and that "[o]rdinarily, it is in the best interest of both the applicant and [TCEQ] to avoid the third tier of evaluation." Id. at 4.

In limiting true BACT determinations to a last resort, TCEQ's process completely undermines the efficacy of the Act's PSD program in Texas. First, TCEQ's guidance fails to recognize the "technology forcing" nature of BACT determinations.<sup>6</sup> Rather than establishing a static emission limit for new sources, Congress chose to require an emission limit based on the "maximum degree of reduction . . . achievable." 42 U.S.C. § 7479(3) (CAA BACT definition). Congress created the BACT concept in order "to minimize emissions." S. Rep. No. 95-127 at 29 (1977). One of the core aims of the 1977 Amendments to the Act was to compel the "rapid adoption of improvements in technology as new sources are built." Id. at 18. Indeed, Congress intended BACT as "[p]ossibly [the] most important" of the 1977 Act's many technology-fostering measures. Id. This technology-forcing philosophy was "fundamental" to Congress's adoption of the BACT requirement and congressional efforts throughout the 1977 amendments "to accentuate technological innovation in the control of air pollutants." Id. at 10.

Under Tier One of TCEQ's guidance, if the applicant's "proposed performance [is] greater than or equal to that accepted as BACT in recent permit reviews for the same industry" and TCEQ's staff are not aware of "other emission reduction options with greater performance," then the analysis need go no further. Three Tier Guidance at 15-16. Leaving aside for the moment that what constitutes a "recent" permit review is undefined, a system that relies on emission limits established in other permits merely perpetuates what has gone before; emission limits will not keep pace with technological advancement. The CAA's BACT standard is turned into a "LACT" standard - or "last available control technology." It is true that TCEQ

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<sup>6</sup> As phrased in a recent court opinion, in a BACT analysis, "the question . . . is not, 'What have other plants achieved in the past?' but rather, 'What can this plant achieve for the future?'" Order Remanding Permit to the Cabinet, Sierra Club v. Environmental and Public Protection Cabinet, at 8 (Ky. Cir. Ct. Aug. 6, 2007), available at: <http://kentucky.sierraclub.org/news/ky/Peabodycircuitcourtdecision.pdf> (last visited January 10, 2008).

acknowledges Tier One is only appropriate “if no new technical developments have been made that indicate additional reductions are economically or technically reasonable.” *Id.* at 3. However, the problem is that applicants are not required to conduct an analysis to determine whether any technological or cost-effectiveness progress has occurred. *See* “New Source Review General Application Form,” at 14-15.<sup>7</sup> Rather, TCEQ relies simply on its own awareness of new developments to trigger an applicant’s duty to conduct further research. Three Tier Guidance at 16-17. Thus, by merely asserting that its chosen control technology meets TCEQ’s arbitrary “LACT” standard, the applicant can evade having to conduct a BACT analysis.

The Three Tier Guidance is also fundamentally flawed because it subverts the “case-by-case” nature of the BACT determination process. A BACT emission limit must include a case-by-case analysis of the maximum degree of reduction available based on, among other things, site-specific considerations. *In re: Kawaihae Cogeneration Project*, 7 E.A.D. 107, 117 (EAB 1997). Carrying over an emission limit from one permit to another for a facility without a site-specific inquiry conflicts with EPA’s BACT definition and defeats the technology-forcing purpose of the CAA.

EPA has already indicated its disapproval of TCEQ BACT determinations that do not consider the control effectiveness and cost-effectiveness of all available options. In comment letters sent to TCEQ regarding proposed PSD permits for seven new coal-fired power plants, EPA criticized TCEQ’s approach and requested “the State’s rationale for the BACT determinations, including an analysis of the technical and economic feasibility of available control technologies.” *See* EPA Comment Letters, appended hereto as Attachment 1.

The State of Texas is failing to implement the PSD program in a manner consistent with the Act and the Texas SIP. TCEQ’s use of the Three Tier Guidance does not ensure that emission limits will be set based upon the maximum degree of reduction considering site-specific energy, environmental, and economic impacts. It also does not ensure that emission limitations will be set on a case-by-case manner. Finally, it does not ensure that BACT emission limits are based on technology that is available – only on technology of which a TCEQ official might be aware.

*3. IN MAKING BACT DETERMINATIONS, TCEQ FAILS TO TAKE INTO ACCOUNT ALL AVAILABLE PRODUCTION PROCESSES OR AVAILABLE METHODS, SYSTEMS, AND TECHNIQUES, INCLUDING FUEL CLEANING OR TREATMENT OR INNOVATIVE FUEL COMBUSTION TECHNIQUES.*

The definition of BACT in the Texas SIP requires that the emission limit be established through consideration of the maximum reductions achievable through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. However, in conducting its BACT determinations, TCEQ illegally excludes considerations of alternative processes, fuel

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<sup>7</sup> Available at: <http://tceq.com/assets/public/permitting/air/Forms/NewSourceReview/10252.pdf> (last visited January 10, 2008).

cleaning or treatment, and innovative combustion techniques. For example, when an applicant proposes to construct a new coal-fired power plant, TCEQ refuses to take into account emission limitations that might be achieved through use of integrated gasification combined cycle (“IGCC”) technology.

The requirement in the SIP-approved BACT definition that alternative processes, methods, systems, and techniques be considered in determining BACT comes straight from the definition of BACT in the Clean Air Act itself. 42 U.S.C. 7479(3). The legislative history of the amendment adding the term “innovative fuel combustion techniques” confirms that coal gasification is exactly the type of technique Congress had in mind when it added the term to the BACT definition.

Mr. HUDDLESTON. Mr. President, the proposed provisions for application of best available control technology to all new major emission sources, although having the admirable intent of achieving consistently clean air through the required use of best controls, if not properly interpreted may deter the use of some of the most effective pollution controls.

The definition in the committee bill of best available control technology indicates a consideration for various control strategies by including the phrase “through application of production processes and available methods systems, and techniques, including fuel cleaning or treatment.” And I believe it is likely that the concept of BACT is intended to include such technologies as low Btu gasification and fluidized bed combustion. But, this intention is not explicitly spelled out, and I am concerned that without clarification, the possibility of misinterpretation would remain.

It is the purpose of this amendment to leave no doubt that in determining best available control technology, all actions taken by the fuel user are to be taken into account—be they the purchasing or production of fuels which may have been cleaned or up-graded through chemical treatment, gasification, or liquefaction; use of combustion systems such as fluidized bed combustion which specifically reduce emissions and/or the post-combustion treatment of emissions with cleanup equipment like stack scrubbers.

The purpose, as I say, is just to be more explicit, to make sure there is no chance of misinterpretation.

123 Cong. Rec. S9421, S9434-35 (June 10, 1977) (emphasis added). Thus, when the issue is the production of electricity from coal, Congress recognized the existing “production processes” language should cover coal gasification, but added “innovative fuel combustion techniques” so as “to leave no doubt.” TCEQ’s failure to consider alternative processes as part of a BACT determination therefore undermines congressional intent regarding the scope and breadth of BACT determinations.

The State’s improper exclusion of alternative processes, fuel cleaning or treatment, and

innovative combustion techniques from its BACT determinations stems, in part, from Texas employing its revised definition of BACT. The following excerpts from the January 2007 deposition of TCEQ's Erik Hendrickson make this clear:

65

22 Q I've heard the term or the phrase before that  
23 Texas or TCEQ does not "redefine the source" in  
24 evaluating BACT. What does that mean?

25 A When an applicant proposes a source, that's

66

1 the source that we evaluate. To change the physical  
2 or chemical properties, the process in such a way that  
3 it completely changes that, that would be redefining  
4 the source from that which was proposed.

5 Q Where in the Texas rules, air quality rules,  
6 does it say that in conducting a BACT analysis an  
7 applicant does not have to "redefine the source?"

8 A I would have to look at the rules, which I'm  
9 willing to do, but I can also tell you from  
10 long-standing practice, which in my mind has the  
11 effect of a rule, after years and years of doing  
12 these, we just don't do that.

13 I also understand that the fed -- the  
14 EPA doesn't do that as well, but we can look at the  
15 rule, and we can look at where -- where that is.

16 MR. WEBER: I'm going to object as  
17 nonresponsive.

18 Q (By Mr. Weber) But I will ask you to pull  
19 whatever rule you think you need to look at to  
20 determine where it is in Texas rules that it says you  
21 do not have to -- that an applicant does not have to  
22 redefine the source in conducting a BACT analysis.

23 A Okay. This might take a while.

24 MR. WEBER: We'll go off the record.

\* \* \*

277

5 Q ... I asked  
9 you where in TCEQ's rules does it say that a PSD  
10 applicant conducting a BACT review does not have to  
11 redefine the source.

12 A And you asked me to show you where that was.  
13 Q I asked you where in the rules does it say  
14 that.  
15 A Okay.  
16 MR. THIELE: I'm going to object to  
17 form. I didn't hear a question.  
18 MR. WEBER: Okay. Let me restate it  
19 then for Mr. Thiele.  
20 Q (By Mr. Weber) Where in TCEQ's rules does it  
21 say -- does it create a standard that a PSD applicant  
22 conducting a BACT review does or does not have to  
23 redefine the source?  
24 A It -- the way I look at it is Chapter  
25 116.111.

278

1 Q We're talking about TAC -- 30 TAC 116.111?  
2 A 111(c).  
3 Q Okay.  
4 A When it talks about best available control  
5 technology, it says, "The proposed facility will  
6 utilize BACT with consideration given to technical  
7 practicability and economic reasonableness of reducing  
8 or eliminating the emissions from the facility." The  
9 main word there is the "proposed facility."  
10 "Proposed" is the operative word there.  
11 Your question is where does it say that  
12 you can't. The way -- again, I'm not a lawyer, but  
13 the way that the -- I understand that the agency works  
14 is we have to be given authority to do something. And  
15 what we have been given authority to do is do a BACT  
16 review on proposed facilities. We have not been given  
17 authority to change -- we've not been explicitly given  
18 the authority to redefine the source. We've been  
19 given the authority to do a BACT review on proposed  
20 facilities.

2007 Dep. of Erik Hendrickson at 65-66, 277-78. These deposition excerpts demonstrate that TCEQ, in conducting its BACT determinations, systematically eliminates the federal BACT requirement that a PSD applicant consider alternative processes, fuel cleaning or treatment, and innovative combustion techniques.

EPA has concluded that, for specific proposed facilities, consideration of certain alternative processes, fuel cleaning or treatment, or innovative combustion techniques may not be required. However, EPA's decisions allowing the exclusion of such measures from BACT

analysis have relied on the unusual siting circumstances of the particular facility at issue. Thus, in EPA's Response to Public Comments on the draft PSD permit for Deseret's Bonanza Power Project in Utah, PSD Permit No. PSD-OU-0002-04.00, Aug. 30, 2007, EPA announced that it did not agree with comments arguing that "the Clean Air Act requires a detailed evaluation of IGCC for the proposed facility." *Id.* at 10 (Response #2.a.). However, a key aspect of the agency's reasoning was that employing IGCC technology would "fundamentally alter the objective and purpose of Deseret to make productive use of a coal supply that was previously considered a waste." *Id.* at 15 (Response #2.a.). In other words, the Deseret plant was being constructed specifically to capitalize on a unique fuel supply, one that EPA concluded "is not technically feasible to use . . . in the IGCC process." *Id.* at 17 (Response #2.a.). Similarly, in *Sierra Club v. EPA*, 499 F.3d 653, 657 (7th Cir. 2007), the Seventh Circuit upheld EPA's refusal to require consideration of a cleaner, alternative coal supply for a proposed "mine-mouth" plant during BACT analysis. Again, the unique objectives and purposes of the permit applicant – this time, the goal of capitalizing on the coal production from an adjacent mine – were instrumental to the decision that specific controls need not be considered. *See id.* at 656 (distinguishing between mine-mouth facilities and those which merely have contracted to purchase distant coal from a particular mine).

Here, in contrast, TCEQ is not couching its rejection of alternative processes, fuel cleaning or treatment, and innovative combustion techniques on the unique circumstances of individual facilities. Instead, TCEQ systematically excludes technologies like IGCC from BACT analysis altogether, a practice that goes far beyond what EPA has endorsed in the past. EPA must therefore step in to correct this glaring deficiency in TCEQ's implementation of the PSD program.

#### *4. IN ISSUING PSD PERMITS, TCEQ FAILS TO TAKE INTO ACCOUNT CUMULATIVE AIR QUALITY IMPACTS FROM NEW SOURCES.*

Assessment of the air quality impacts from proposed facilities is an essential part of the CAA's PSD program. 40 C.F.R. § 52.21(k), which is incorporated by reference into the Texas SIP, requires applicants to perform a cumulative impacts analysis to ensure that a proposed new facility will not adversely impact the attainment of a National Ambient Air Quality Standard or cause or contribute to air pollution in violation of any applicable maximum allowable increase over the baseline concentration in any area. *See* TX Rg 6.B.6 § 116.160(a) (Texas SIP incorporation of 42 C.F.R. § 52.21(k)).

Cumulative impacts analysis becomes especially important when, as in Texas, a large number of new major stationary sources are proposed. Thus, EPA's comments on the proposed permits for seven coal-fired power plants reflect the agency's concern over TCEQ's failure to require its PSD permit applicants to undertake such an analysis:

The HARC report (Final Report, Ozone Impacts in DFW of Proposed New EGUs and an Offset Strategy, dated August 23, 2006) {further noted as H60 report} analyzed cumulative ozone impacts in the Dallas/Fort Worth area for a number of local episodes with the proposed new coal-fired EGUs and TXU's proposed offset

strategy. The ozone impacts to other areas of Texas, including Central Texas, were also examined in the modeling. The report indicates that ozone impacts differ substantially on a day-to-day basis as a result of wind direction with very significant day specific increases of 10 parts per billion or greater in some areas. The H60 report did not report the modeled ozone levels with the new EGUs and the offsets (just the change in ozone levels), so it is uncertain if the modeling indicated whether exceedences would occur. The modeling report raises concern that if the current ozone levels are in the high 70s or low 80s for the design value (DV) in central Texas areas of Waco and Robertson County, that the potential day specific cumulative impacts from multiple new power plants with the hypothetical offset distribution when added to a 79 ppb DV (4<sup>th</sup> high from Italy monitor) could result in ozone exceedences occurring. The H60 report also included proposed offsets that are not memorialized in any of the draft permit actions, thus the impact could be greater. Due to the ozone attainment challenges in Texas, EPA is concerned about the cumulative impacts of the proposed new power plants especially on ozone levels. Based on this information, we recommend that a cumulative analysis of emissions that would impact ozone levels from existing sources and new sources for which TCEQ received applications be performed and any potential issues identified be addressed either in the permitting of these sources or in the development of plans to attain and maintain the ozone NAAQS in Texas.

See EPA Comment Letters, (Attachment 1) (emphasis added).

Despite EPA's recommendations, it is clear that TCEQ has no intention of adhering to the cumulative impacts analysis requirement. In response to written questions propounded to him on December 28, 2006, Erik Hendrickson from TCEQ asserted that such analysis was ill-suited to the permitting context:

19. Do you believe that emissions from the proposed VASES Project will have regional impacts that should have been evaluated by the APD, but were not? Please explain.<sup>8</sup>

No. The NAAQS modeling for SO<sub>2</sub> and PM<sub>10</sub> provide some insight into the impacts of the proposed facility in a large area (50 km radius covers 758 square miles), but are not usually considered regional impacts. The regional impacts of concern are ozone and visibility. It is impractical to evaluate the regional impacts of facilities on a case-by-case basis because innumerable of man-made air emission sources contribute to urban ozone exceedances and visibility degradation, and it is more effective to develop broader solutions through policies and rulemaking covering categories of sources, which describes the State Implementation Plan process required by the U.S. EPA.

Deposition upon Written Questions of Erik Hendrickson, P.E., at 8, Application of TXU

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<sup>8</sup> The VASES Project refers to the Valley Steam Electric Station project, one of the new coal-fired power plants proposed by TXU. APD refers to the Air Permits Division of TCEQ.

Generating Company L.P. for State Air Quality Permit Number 78763 and PSD Permit Number PSD-TX-1068 for Valley Steam Electric Station, SOAH Docket No. 582-07-0722 (Dec. 28, 2006). Upon further questioning at the January 2007 deposition, Mr. Hendrickson explained why, in his view, it would be “impractical to evaluate regional impacts of facilities on a case-by-case basis”:

192

25 Q Okay. And then you say, "It's impractical to

193

1 evaluate the regional impacts of the facilities on a  
2 case-by-case basis." What did you mean by that?

3 A On a -- on a new permit-by-permit basis, it's  
4 impractical --

5 Q Why?

6 A -- as you receive permits. Again, I think I  
7 elaborate a little bit further, that there are --  
8 let's see. Okay. Actually I didn't -- I didn't  
9 elaborate further in this one. Mr. Hamilton had  
10 elaborated and apparently we must have cut it out, but  
11 there are other than -- there are things other than  
12 point sources that are included, and this is what we  
13 would consider a SIP-type analysis, a regional ozone  
14 analysis. You have mobile sources, as you've asked  
15 before, about trains and so forth --

16 Q Uh-huh.

17 A -- highway emissions. There are -- there are  
18 difficulties getting data for those types of sources.  
19 We rely upon, I think, the transportation department  
20 and so forth to give us up-to-date estimates for those  
21 types of things. There are so many variables involved  
22 that it's impractical given the number of variables to  
23 get an accurate estimate with things constantly  
24 changing.

25 Q On a case-by-case basis?

194

1 A On a case-by-case basis.

2 Q Okay. A broader picture needs to be drawn of  
3 the impact. Correct, sir?

4 A Well, when you ask the question regional,  
5 when the question is regional impacts, then that would  
6 suggest broader just in the question itself.

7 Q And you agree with that, you agree with that,  
8 you need to look at the regional impacts as opposed to  
9 case by case. You've got to look at the -- the sum  
10 total of all these plants --  
11 A Well --  
12 Q -- and how they're going to affect the  
13 region?  
14 A Well, I said no.  
15 Q So you don't believe you should look at the  
16 sum total of these plants and how they affect the  
17 region?  
18 A Not on a permit-by-permit basis, no. I  
19 believe the appropriate place is in the SIP modeling  
20 where you should have a much broader --

2007 Dep. Of Erik Hendrickson at 192-94. To summarize, Mr. Hendrickson argues that it does not make sense to analyze the impacts of TXU's proposed new coal-fired facilities on a permit-by-permit basis, but that it does make sense to perform an overall analysis.

However, there are two serious problems with Mr. Hendrickson's assertion. First, by not requiring this analysis as part of the PSD permit reviews, TCEQ is effectively waiving the requirement that an applicant comply with 40 C.F.R. § 52.21(k). If a cumulative impacts analysis is only done as part of a SIP review after a permit is issued (rather than on a permit-by-permit basis), then the applicant need never show that it has satisfied the requirements that 40 C.F.R. § 52.21(k) imposes. In other words, without performing a cumulative impacts analysis before permit issuance, it is impossible to say whether the applicant has met its burden of proof that it is not causing or contributing to a NAAQS violation or increment exceedance.

Moreover, even if the belated cumulative impacts analysis that Mr. Hendrickson suggested could satisfy 40 C.F.R. § 52.21(k), with respect to the numerous coal-fired power plants proposed (and, in some cases, approved) in Texas, TCEQ has failed to complete such an analysis even outside the permit-by-permit process. At a deposition conducted last year, Robert Opiela, the Team Leader of TCEQ's Air Dispersion Modeling Team, confirmed that no one at TCEQ has ever requested him to perform such an analysis:

88

18 Q (By Mr. Weber) Okay. So you've had a chance  
19 to look at the Department of -- Oklahoma Department of  
20 Environmental Quality letter. Is that correct?  
21 A Yes.  
22 Q Okay. Let me ask you to turn to the second  
23 page of Hendrickson Exhibit 8, the DEQ Oklahoma  
24 letter. Specifically, the second full paragraph, and  
25 then down towards the bottom of that paragraph, it

1 says -- and please make sure I read this correctly. . . .  
 11 . . . It  
 12 says, "Due to the monitoring data observed in  
 13 Oklahoma, DEQ is concerned about the cumulative  
 14 impacts of the proposed new EGUs, especially on ozone  
 15 levels." And EGU is electric generating unit. Is  
 16 that correct?  
 17 A Yes.  
 18 Q "DEQ recommends that a cumulative analysis  
 19 of emissions -- cumulative analysis of emissions that  
 20 would impact ozone levels from existing sources and  
 21 new sources for which TCEQ received applications be  
 22 performed and any potential issues identified be  
 23 addressed in the permitting of these sources."  
 24 To your knowledge has there been any  
 25 cumulative analysis of emissions and their impact on

1 ozone levels from existing sources and new sources  
 2 done by TCEQ?  
 3 A Not that I'm aware of.  
 4 Q What about by the applicant, TXU?  
 5 A Not that I'm aware of.  
 6 Q Has anyone asked you to conduct any analysis  
 7 in response to this letter?  
 8 A No.

Videotaped and Oral Deposition of Robert Opiela, February 7, 2007, at 88-90, Consolidated Applications of TXU Generating Company L.P. for State Air Quality Permits and PSD Permits, SOAH Docket No. 582-07-0614 (hereinafter "Dep. of Robert Opiela"). Thus, although Mr. Hendrickson suggests that a cumulative analysis would be more appropriately conducted in the SIP modeling process, both he and Mr. Opiela confirm the state has made no commitment to specifically address the cumulative impacts of PSD-permitted activities in such modeling.

Moreover, even if TCEQ were to complete the analysis that Mr. Hendrickson suggests, any reliance on such modeling would be arbitrary and capricious. First, as noted above, Mr. Hendrickson is referring to SIP modeling for purposes of preparing attainment demonstrations for nonattainment areas. Such modeling by design is focused only on air quality inside nonattainment areas; it does not assess whether PSD-permitted sources are contributing, or will contribute to NAAQS or increment violations in the vast parts of the state that lie outside of nonattainment areas.

Second, there are numerous significant gaps in the emissions data on which permit

applicants and TCEQ rely. TCEQ maintains two separate databases of emissions: a database of allowable emissions (the Point Source Database (PSDB)) and a database of actual emissions (the State of Texas Air Reporting System (STARS)). As detailed in Mr. Opiela's testimony, both databases are seriously deficient. For example, the PSDB has not been updated since 2000 and its coverage prior to that date is evidently suspect:

40

- 19 Q Okay. I'm going to start with existing  
20 sources. Do you know -- when an existing source, for  
21 example, comes in and gets a permit amendment for some  
22 reason or gets a standard permit and has some change  
23 at the site, do you know how or even if those changes  
24 are incorporated in the PSDB?  
25 A Anything recently, no, it does not get in

41

- 1 there.  
2 Q And when you say "recently," how far back are  
3 we talking about?  
4 A After 2000.  
5 Q Now, how about new facilities that come along  
6 since 2000? Some new plant comes in and gets an NSR  
7 permit. Are the allowables from that new plant  
8 included in the PSDB?  
9 A No, they are not.  
10 Q And prior to 2000, would a new -- a plant  
11 that got its NSR permit prior to 2000, would one  
12 expect to find that it would be in the PSDB?  
13 A It's possible.

Dep. of Robert Opiela at 40-41. In fact, Mr. Opiela's concerns are well founded. An audit that compared PSDB emissions figures for 24 permitted sources with allowable emissions figures from the most recent permits for these sources found inaccuracies in 20 of the 24 files. Direct Testimony of Steven H. Ramsey, February 9, 2007, 17, Applications of TXU Generating Company, L.P. for State Air Quality Permits and PSD Permits for Steam Electric Generating Units 3 and 4 at its Tradinghouse Steam Electric Station and Steam Electric Generating Unit 3 at its Lake Creek Steam Electric Station, SOAH Consolidated Docket No. 2006-1851-AIR. These errors went beyond simple inaccuracies in quantities of emissions. Some permitted emissions sources were absent from the PSDB entirely, while other sources found in the PSDB were not included in the most recent permits. Id. at 18.

The STARS database suffers from similar gaps in coverage. By definition the PSDB is intended to include only point sources. However, the STARS database repeats this exclusion of emissions from area sources or mobile sources. Mr. Opiela's testimony confirms that emissions

from these sources are entirely left out of air quality impact analysis in Texas.

46

24 Q Does the STARS database have the area  
25 sources?

47

1 A Yes. And I believe that's in there, too. At  
2 this point, we don't make a distinction between  
3 whether it's a point or an area. It's just we have  
4 that location, and we just apply --

5 Q Okay. And when -- let's make sure we're both  
6 using the same terminology for area source. When I  
7 asked the question, what I meant was area sources in  
8 the sense of like a wastewater treatment lagoon or a  
9 coal pile, something that wasn't really a point.

10 A Yeah. An area source in the modeling  
11 world -- in my modeling world is a source that is  
12 represented as something two dimensional, not an  
13 individual point.

14 Q But an area source in the modeling world  
15 would not include such things as the cumulative -- the  
16 accumulation of vents from residential hot water  
17 heaters?

18 A Residential hot water heaters aren't required  
19 to have a construction permit issue, nor are they  
20 required to submit an emissions inventory.

21 Q Which I know.

22 A Right.

23 Q So the answer is that STARS does not reflect  
24 those sources, which some people call area sources, I  
25 think.

48

1 A Okay. In the -- unfortunately, EPA, when  
2 they brought up the term "area source" -- I think it  
3 even comes from the Title V days -- area source in  
4 their lingo was something that was a non-major source.

5 Q Okay.

6 A When I talk about a source, I'm talking about  
7 an individual point of where a contaminant enters the  
8 atmosphere. And they're -- in EPA lingo, a source is  
9 the whole site. So in their term, area source, it's a

10 site that is not a major source.  
11 Q Okay. Okay.  
12 A So just to -- it's the same term,  
13 unfortunately, but in my world, it has a completely  
14 different meaning.  
15 Q Okay. What about the mobile sources? How  
16 does ADMT check, if it does, that the applicant has  
17 included the increment consumers that are mobile  
18 sources in the database on which the increment  
19 consumption is based?  
20 A Mobile sources are not included.  
21 Q None of them are included?  
22 A At least according to our procedures.

Dep. of Robert Opiela at 46-48.<sup>9</sup>

TCEQ's approach to air quality impact analysis does not meet the requirements of the Act and the Texas SIP. The cumulative impacts of proposed facilities are ignored, and the analyses that are completed rely on inaccurate and incomplete emissions data. As TCEQ's PSD program is presently run, it is impossible to determine the extent of air quality impacts from proposed facilities. These failures subvert one of the primary purposes of the PSD program.

*5. IN ISSUING PSD PERMITS, TCEQ IS FAILING TO CONSULT PROPERLY WITH FEDERAL LAND MANAGERS AS REQUIRED BY 40 C.F.R. § 52.21(p).*

Section 165(d)(2)(A) of the Act, 42 U.S.C. § 7475(d)(2)(A), as well as 40 C.F.R. § 52.21(p)(1) (incorporated into the Texas SIP) provide that federal land managers must receive notice of any permit application for a new major stationary source or a major modification the emissions from which may affect a Class I area. See TX Rg 6.B.6 § 116.160(a) (Texas SIP incorporation of 42 C.F.R. § 52.21(p)). Recently, in the context of issuing draft permits for several new coal-fired power plants, TCEQ did a "qualitative analysis" and concluded, without performing any modeling, and without requiring the applicant to do any modeling, that these facilities could not have an effect on a Class I area. Mr. Hendrickson's testimony explains TCEQ's process:

218

24 Q (By Mr. Weber) If you don't do the analysis,  
25 how can you determine whether they're affected or not?

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<sup>9</sup> ADMT stands for TCEQ's Air Dispersion Modeling Team.

9 A There are multiple ways in determining  
10 whether or not someone is affected. Obviously you can  
11 do modeling, which is the preferred method that the  
12 federal land manager suggests with the -- with the  
13 CALPUFF model and people keep talking about how  
14 CALPUFF is good to 300 kilometers. This may be true.  
15 But there are other ways that you can  
16 determine whether or not someone is affected, and we  
17 responded to the federal land managers. We looked at  
18 the existing air permit modeling that was provided,  
19 and I mentioned the grid was about 30 kilometers out.  
20 There were concentrations that existed at  
21 30 kilometers.  
22 I've written an e-mail to Ms. Judith  
23 Logan -- you probably have this. I think TXU had it  
24 as an exhibit, and it's your -- it's available. It's  
25 a production item -- in which I summarized the

220

1 concentrations that I obtained from the air permit  
2 modeling and what we make -- you can make a  
3 qualitative analysis that those areas would not be  
4 adversely affected based on the distance from the  
5 nearest TXU plant to Caney Creek, the nearest one  
6 being Monticello, I believe, at 170, 180 kilometers,  
7 in that range. And if -- based upon that finding or  
8 that analysis that that area would not be -- would not  
9 adversely affect Caney Creek, then it's logical that  
10 other areas that were further away would not.

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222

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6 So without having to do modeling, which  
7 is what people think you have to do, to come to the  
8 conclusion that that facility is not going to affect  
9 that Class I area, you don't have to do modeling to do  
10 that. You can look at other things to come up and  
11 reach that conclusion.

12 Q What you described to me, I believe, was a  
13 qualitative analysis. Correct?

14 A A qualitative analysis, that's correct.

15 Q And you've already testified you did not do a  
16 quantitative analysis. Correct?  
17 A We have not done a quantitative -- we have  
18 not done modeling, no, sir.

2007 Dep. of Erik Hendrickson at 218-20, 222. Relying on its superficial assessment of the impacts on Class I areas, TCEQ did not notify the appropriate federal land managers of the permit applications. See U.S. Department of the Interior and U.S. Forest Service Comment Letters, (Attachment 2) (indicating that the federal land managers did not receive notice).

TCEQ's failure to involve the appropriate federal land managers in the PSD permitting process both violates the requirements of the CAA and Texas SIP and undermines the preservation of pristine areas. The Act and the SIP require notice to the federal land managers whenever emissions from a proposed source "may" affect a Class I area, a broad standard that mandates notice whenever there is a possibility of an impact. EPA guidance has long required a quantitative analysis of a proposed source's impacts on Class I areas if there is "some potential" for the source to affect a Class I area. NSR Manual at E.16. In fact, a study performed at the request of Environmental Defense demonstrates that the proposed facilities will have adverse impacts on air quality related values at several Class I areas. See Mark C. Green, PhD, "Analysis of Potential Impacts to Class I Areas from Proposed TXU Generating Facilities in Texas," at 5 (2007) (Attachment 3) ("perceptible impacts to visibility from the proposed TXU power plants would occur on many days per year at Class I areas in nearby states."). This study conclusively determined that TXU's qualitative approach is no substitute for the necessary modeling. See id. ("The dismissal of potential impacts because the distances to Class I areas is greater than 100 km is contradicted by the analysis.").

TCEQ must make its decision on whether to involve federal land managers in PSD permitting processes based upon sound science and proven methodologies – not on guess-work. TCEQ's systematic failure to involve federal land managers in the permitting of several new coal-fired power plants is yet another instance of its failure to implement the PSD program in a manner consistent with the Clean Air Act and the Texas SIP.

*6. IN ISSUING PSD PERMITS, TCEQ IS FAILING TO FOLLOW THE REQUIREMENTS OF 40 C.F.R. § 52.21(m)(1) REGARDING PRE-APPLICATION MONITORING.*

40 C.F.R. § 52.21(m)(1), which is incorporated into the Texas SIP, requires that applicants for PSD permits analyze the impacts the proposed facility will have on ambient air quality for each pollutant the facility will emit in significant amounts. See TX Rg 6.B.6 § 116.160(a) (Texas SIP incorporation of 42 C.F.R. § 52.21(m)); see also 42 U.S.C. § 7475(e) (underlying CAA pre-application monitoring requirement). This section further requires that the analysis be based upon air quality monitoring data collected over a period of one year. 40 C.F.R. § 52.21(m)(1)(iv). The regulations allow exceptions to this requirement on a case-by-case basis, but an investigation performed by Environmental Defense shows that as a matter of policy, TCEQ is not requiring any PSD applicants to comply with this requirement.

Instead of requiring applicants to submit monitoring data as EPA's regulations and the Texas SIP require, TCEQ simply uses monitoring data from an existing ambient air quality monitor - often located hundreds of miles away. Testimony from Mr. Opiela confirms that TCEQ does not even consider requiring applicants to establish their own site-specific monitoring networks.

134

- 14 Q But if you're looking for preconstruction  
15 monitoring -- all right? If we're wanting to get some  
16 data from preconstruction monitoring --  
17 A Right.  
18 Q -- and there's not a monitor in Waco or in  
19 the vicinity of Lake Creek and Tradinghouse, are you  
20 telling me that you would go look at the monitoring  
21 data from Nueces County?  
22 A If it was not representative. You would  
23 think it would be more conservative. We do that for  
24 the other pollutants as well.  
25 Q But you chose to go to Temple?

135

- 1 A That seemed to be reasonably more  
2 representative than other data we had available.  
3 Q Why?  
4 A It was nearby.  
5 Q Okay. That's my --  
6 A And --  
7 Q -- point. It was nearby?  
8 A And that was one of the factors. The  
9 emissions are about the same. The activities that go  
10 on in accounting are about the same.  
11 Q Is Temple as close to Lake Creek,  
12 Tradinghouse, Big Brown, Sandy Creek as is Waco?  
13 A No.  
14 Q Is the population in Temple as big as Waco?  
15 A No.  
16 Q What are the similarities?  
17 A Emissions. Emissions are comparable.  
18 They're not -- it may be a little bit lower. It may  
19 be a little bit higher. I'm not sure of the number,  
20 but they're comparable. They're not orders of  
21 magnitude higher.  
22 Q How do you know if you don't have a monitor

23 in Waco?

24 A The emissions? There's emissions  
25 inventories.

136

1 Q Okay. But if you don't have a monitor there  
2 in Waco -- you have emissions inventories. Okay. You  
3 have emissions inventories. Do you have anything else  
4 that you would look at? You don't have any monitoring  
5 data there. Is that correct?

6 A You can't -- there aren't monitors  
7 everywhere, but where we do have monitoring data, can  
8 we use what's already existing?

9 Q And you said an order of magnitude. What do  
10 you mean by that?

11 A A factor of ten.

Dep. of Robert Opiela at 134-36. While it may be true that “there aren’t monitors everywhere,” it is clear that the possibility of requiring applicants to perform their own ambient air quality monitoring never enters TCEQ’s calculus.

There are multiple problems with TCEQ’s approach to pre-application air quality monitoring. First, TCEQ’s reliance on pre-existing monitors established for other purposes is at odds with the plain language of the CAA, which requires pre-application monitoring that is tailored to the specific PSD permit proposal at issue. The Act provides that the required analysis of ambient air quality “shall include continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the maximum allowable increases or the maximum allowable concentration permitted under this part.” 42 U.S.C. § 7475(e)(2). However, the monitoring data on which TCEQ is relying has not been gathered specifically for the purpose of determining whether increments or the NAAQS will be violated.

TCEQ might contend that EPA’s NSR Manual carves out a narrow exception to the above requirement. The NSR Manual notes that states can allow PSD applicants to rely on data from existing air quality monitors on finding that such data is “representative of the air quality for the area in which the proposed project would construct and operate.” NSR Manual at C.18. However, it further cautions that use of such data will often be inappropriate, as “the data collected by such efforts may not necessarily be adequate for the preconstruction analysis required under PSD.” Id.

Even if the exception contained in the NSR Manual somehow overrides the plain language of the Clean Air Act, TCEQ’s process for determining that ambient air quality monitoring data is representative of the air quality in the area of a proposed source is fundamentally flawed. As Mr. Opiela discussed above, TCEQ relies heavily on a comparison of emissions inventories in determining whether data from a particular monitor is representative. Thus, TCEQ prefers to use data from monitors in areas that are subject to similar air pollutant

emissions profiles as a surrogate for monitors located in the area of a proposed source. Even assuming that comparison of emissions data might generally be an appropriate method for determining that monitoring data is representative, TCEQ's reliance on its own emissions data to make such a comparison is arbitrary and capricious. As explained in section III.B.4 above, the emissions data on which TCEQ relies is inaccurate and incomplete.

Without an accurate picture of the emissions from area and mobile sources TCEQ lacks sufficient emissions data to conclude that air quality data from a monitor in one area is truly representative of the air quality in some other area. However, TCEQ is relying on its incomplete emissions data to make precisely this determination. Because TCEQ is therefore arbitrarily and capriciously allowing applicants to rely on air quality monitoring data not shown to be representative of air quality in the area of a proposed facility, TCEQ violates the CAA and the Texas SIP.

#### *7. THE STATE OF TEXAS FAILS TO ENFORCE THE TERMS AND CONDITIONS OF ITS CONSTRUCTION PERMITS.*

Major deficiencies in the State's issuance of construction permits, as outlined above, lead to weak permits to start with. These deficiencies are a prelude to a long list of additional failures in the State's willingness to actually *enforce* the terms of those permits once they are issued. Permit limits that are violated are simply relaxed, in violation of the Texas SIP and the Clean Air Act, to provide a more comfortable "fit" for the permit holder.

Permit applications include representations as to how units proposed for construction or modification will be built and operated. These representations are often relied upon by permit writers to set other permit conditions, or are themselves incorporated as permit conditions. One example is the maximum heat input that a combustion unit, such as a large power plant boiler, can consume on an hourly basis. Even where they are not spelled out in permits, representations made in PSD applications have always been treated as enforceable permit conditions, since changes in construction or operating procedures can significantly increase emissions. Rather than enforce these restrictions, TCEQ has gone out of its way to eliminate these constraints when they prove inconvenient to permit holders.

More specifically, TCEQ has removed limitations on heat input in PSD permits, notwithstanding the EPA's determination that, "a coal-fired boiler's heat input is directly related to the amount of pollution it can emit." TCEQ's actions render the permit application process meaningless, since the public cannot safely assume that a facility will actually operate in the manner represented in its application, or that emissions will not increase due to operational changes. This question is particularly urgent, as proposals for construction of several large power plants are pending, and draft permits include "limitations" on heat input that can apparently be removed at will by TCEQ.

- a. Permit Representations Are Enforceable, and Construction Permits Include Limits on Heat Input.

Federal PSD regulations provide that, “[a]ny owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this section or with the terms of any approval to construct . . . shall be subject to appropriate enforcement action.” 40 C.F.R. § 52.21(r)(1). As previously worded, they similarly provided that, “any owner or operator who constructs, modifies, or operates a stationary source not in accordance with the application, as approved and conditioned by the Administrator...shall be subject to enforcement action under section 113 of this Act.” 40 CFR § 52.21(e)(2)(1974). Similar requirements appear in the State Implementation plan at 30 TAC § 116.160, and are often explicitly incorporated into the PSD permits themselves. For example, General Condition 1 of the consolidated construction permit for Welsh Power plant in east Texas states that: “The facilities covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedure contained in the permit application shall be conditions upon which the permit is issued.”

b. Heat Input Is Used to Determine Emission Limits in PSD Permits.

Recently issued PSD permits for large combustion sources include special conditions containing heat input limits. In July 2007, TCEQ issued a final permit for two 800 megawatt lignite-fired electric generating units at TXU’s Oak Grove plant. The permit contains a condition stating that each boiler “shall be limited to a maximum heat input of 8,970 MMBtu/hr, averaged over a calendar month.” See Special Condition 10, Permit No. 76474 and PSD-TX-1056. Similarly, a recently issued Draft Permit for a large new pulverized coal boiler at NRG’s Limestone plant provides that the unit, “shall be limited to a maximum heat input of 8,000 million thermal units an hour, averaged over a 30 day period...” See Special Condition 6, Draft Permit No. 79188 and PSD-TX-1072.

Likewise, power plants built in the 1980’s also have heat input limits. For example, special conditions 2, 3, and 4 of the consolidated construction permit for AEP/SWEPCO’s Welsh power plant specified a “heat input limit” of 5,156 MMBtu per hour for Units 1, 2, and 3.

In addition, maximum heat input values were used in the application and permit-writing process to set maximum allowable “mass” emission limits, expressed in pounds per hour. For example, the consolidated PSD permit for Welsh Unit 3 limits particulate matter emissions to 0.075 lbs/MMBtu, or no more than 387 pounds per hour. The mass limit is the product of the maximum heat input and the amount of particulate matter emitted per unit of heat input, e.g., 5,156 MMBtu/hour x 0.075 lbs/MMBtu = 387 lbs per hour. This is also true of newly issued and draft PSD permits. For example, NRG’s proposed Limestone Unit 3 would be limited to 0.015 lbs per MMBtu of filterable PM<sub>10</sub>, or no more than 120 pounds per hour. Again, the mass based heat limit is the product of the maximum heat input and the amount of pollution per unit of heat input, e.g., 8,000 MMBtu/hour x 0.015 lbs/MMBtu = 120 pounds per hour. See Maximum Allowable Emission Rate Table (MAERT), Draft Permit No. 79188 and PSD-TX-1072.

These permit limitations are based on explicit representations by the applicants. For example, for the Welsh power plant, as far back as 1973, a report prepared by Sargent & Lundy

for Welsh Unit 1 indicated that predicted maximum emission rates and ground level concentrations of pollution were based on, “a maximum boiler heat input of 5156 x 10(6) Btu per hour.” The same heat input value was used to estimate emissions and ground level pollution in a 1976 Sargent & Lundy report submitted to the EPA in support of the SWEPCO’s application for a PSD permit to construct Welsh Units 2 and 3. The proposed emission limits for sulfur dioxide and particulate matter, based on a maximum heat rate of 5,156 MMBtu/hr, were adopted by the EPA in 1976 and renewed in 1978.

The Welsh facility’s application for renewal of state construction permits for all three units in the mid-1990’s used the same calculations. For example, the 1994 “Permit Continuance Application” for Unit 1 represented the maximum design heat input for the unit to be 5,156 MMBtu, and proposed that, “this value will be used in order to appropriately calculate maximum emission rates in lbs/hour and tons/year.” Construction permit renewal applications for Units 2 and 3 proposed to base emission limits for sulfur dioxide, nitrogen oxide, and particulate matter on the same maximum heat input.

These heat-based emission limits for all three Welsh units were rolled into a consolidated PSD permit in 1998, and remain in effect today. The consolidated permit also requires the Welsh permit to track heat input, and provides that such data may be used to determine compliance with emission rates.

c. The EPA Has Recognized that Heat Input Is Directly Related to Emissions.

That the 1980’s vintage Welsh power plant, or the recently permitted Oak Grove plant and currently pending Limestone power plant permits link emissions to maximum heat input is not surprising. Heat input is a measure of a combustion unit’s capacity, and as a boiler’s capacity increases, so does the amount of pollution it is capable of emitting. The U.S. Justice Department explained this relationship very well in the memorandum accompanying its motion for partial summary judgment in EPA’s Clean Air Act case against East Kentucky Power:

A boiler’s heat input rate is the amount of energy from the coal per unit of time (here, an hour). A boiler’s maximum heat input rate is thus a measure of its size or capacity. Clearly, then, a coal-fired boiler’s heat input rate is directly related to the amount of pollution it can emit.

Plaintiff United States’ Memorandum in Support of its Sixth Motion for Summary Judgment at 11, United States v. East Kentucky Power Cooperative, Inc., 498 F. Supp. 2d 995 (E.D. Ky. 2007) (No. 04-34-KSF).

Under federal New Source Review rules recently adopted by the state of Texas, heat input is one of the “basic design parameters” of an electrical generating unit. 30 TAC § 116.12(4). Exceeding a basic design parameter, e.g., by exceeding maximum heat input, is evidence of a major modification or change in operating procedures that may trigger New Source Review. See 40 C.F.R. §§ 51.166(y)(2); 52.21(cc).

d. TCEQ's Removal of Heat Input Limits from PSD Permits Violates Federally Enforceable PSD Requirements.

TCEQ apparently believes that it can unilaterally alter PSD permits to eliminate heat input conditions, even where heat input has been used to set emission limits, and despite the fact that heat input is a “basic design parameter” for New Source Review. On March 21, 2007, in response to a request from the permit holder, TCEQ “removed” the heat input limit from the Welsh power plant’s consolidated PSD permit. This action came almost three years *after* TCEQ inspectors documented that all three units at the Welsh plant had been consistently exceeding their heat input limits of 5,156 MMBtu/hour, in some cases by as much as 30 percent, and nearly two years *after* the Sierra Club and Public Citizen filed a complaint alleging similar violations.

This action was undertaken without public notice and comment, and without the PSD review that is required by law. TCEQ’s action sets an alarming precedent, and indicates that the heat input limits proposed for new plants like TXU’s Oak Grove 1 and 2 and NRG’s Limestone Unit 3 are not worth the paper they are written on. TCEQ’s decision in the Welsh case violates the following federally enforceable standards for PSD permits:

i. *Permit Amendment and BACT Review Is Required for Changes that Increase Emissions.*

30 TAC § 116.116(b)(1) requires a permit amendment whenever a facility varies from a permit representation or condition, and the change would cause, “an increase in the emission rate of any contaminant.” Once the requirement for a permit amendment is triggered, facilities must submit applications that evaluate BACT, conduct the required air quality analyses, and meet other requirements outlined in 30 TAC § 116.111. TCEQ violated both of these requirements by eliminating the Welsh facility’s heat input limit through a minor permit alteration.

TCEQ attempted to justify its decision to bypass the permit amendment process by “finding” that eliminating heat input limits would not increase emissions. This “finding” is based on the arbitrary consideration of several random data points. A more careful examination of the data (presented in Attachment 4) shows that emissions at the Welsh plant rise and fall in tandem with changes in heat input. Other factors, such as variations in the sulfur content of the fuel, will obviously also affect emissions but, as the U.S. argued in East Kentucky power, “a coal-fired boiler’s heat input is directly related to the amount of pollution it can emit.”

Ironically, the Welsh permit *retains* conditions that allow heat input to be used to track compliance with hourly emission limits. TCEQ has not explained – and cannot explain – how that can be accomplished after it has declared that there is no relationship between heat input and emissions. Notably, in the absence of a specific heat input limit, there are no reliable methods to track hourly or daily compliance with emission limits for particulate matter and carbon monoxide, as stack tests are so infrequent as to be virtually useless. In fact, no PM stack tests had been performed at the Welsh power plant since soon after the three units first became operational in the early 1980’s. Likewise, the two existing main boilers at the Limestone plant

have not undergone a PM stack test since they first came online in the mid-1980's.

TCEQ's decision to remove the heat input limit in the Welsh plant case is completely at odds with the agency's historic and current practice to rely on and include these limits, as is evident from the TXU Oak Grove permit and Limestone Unit 3 draft permit. TCEQ has not explained – because there is no rational explanation – why it continues to use maximum heat input to estimate maximum emission rates in PSD permits after determining that heat input is unrelated to emission levels in the Welsh case. However, after the Welsh decision, there is clearly nothing stopping TCEQ from eliminating the heat input limitations on any large boiler, including existing and new coal-fired power plants.

By exceeding permitted heat input levels, the Welsh plant violated mass based emission limits for particulate matter at Units 1 and 2 until at least 2004, and at Unit 3 between 2004 and the present. For example, the 1980 stack test for Unit 2 documented emission of .075 lbs per MMBtu, or 387 lbs per hour at a maximum heat input of 5,156 MMBtu, and these limits were incorporated into the consolidated PSD permit for Unit 2. By running at heat inputs as high as 6,600 MMBtu, the Welsh Unit violated its particulate matter emission limits for Unit 2 (6,600 MMBtu/hr x .075 lbs/MMBtu = 495 lbs per hour).

*ii. Amendments to PSD Permits Require a Public Hearing, and Opportunity for Notice and Comment.*

Permit amendments are subject to public hearing and notice and comment requirements under 30 TAC § 39. Applicants may also be given the opportunity to contest an agency's determination through an administrative appeals process under 30 TAC § 80. TCEQ's decision to bypass the amendment process by eliminating heat input conditions through a permit alteration violated these important requirements.

TCEQ was well aware of the significant public interest in this matter, as both Sierra Club and Public Citizen had filed suit against the Welsh plant to enjoin violations of heat input limits almost two years before the agency altered the plant's PSD permit to eliminate this requirement. Plaintiffs were rebuffed in their repeated attempts to obtain an explanation of the State's position, and learned of the TCEQ's permit alteration only after a copy was faxed to their attorneys by the EPA. The State withheld information on the grounds that the heat input question was a confidential enforcement matter, which is particularly ironic in light of the State's subsequent decision to eliminate, rather than enforce, this permit condition.

*iii. Power Plants and Other Major Sources Are Not Allowed to Deviate from Permit Representations and Conditions Without EPA Approval.*

The Welsh facility represented to both EPA and TCEQ that maximum heat input at Units 1, 2, and 3 would not exceed 5,156 MMBtu per hour, and those limits were incorporated into its consolidated PSD permit. Confronted with thousands of violations of this standard, TCEQ required only that SWEPCO submit a request to eliminate heat input as a permit condition, then

eventually removed the heat input condition altogether. In other words, the “remedy” for violating a PSD permit condition in Texas is to request its elimination, after which the permit holder is apparently free to continue its violations. Through its actions in the Welsh case, TCEQ has demonstrated that it is unable or unwilling to enforce 30 TAC § 116.116, which prohibits any deviation from permit representations or conditions unless the permit is amended or altered.

*iv. Heat Input Is a “Basic Design Parameter” in Evaluating Whether a Plant Has Triggered PSD Requirements Through a Modification or Change in Method of Operation.*

As noted above, heat input is a “basic design parameter” under New Source Review rules, and when a design parameter is exceeded, that is evidence that a significant physical or operational change has occurred that may trigger New Source Review. However, the state made no serious effort to examine whether or why heat input had changed at the Welsh plant since the units began operation, and whether this significantly affected emissions. In fact, information that SWEPCO has provided in response to an information request from EPA shows that heat input at the Welsh units rose sharply in the mid-nineties. This indicates a change in the method of operation at the Welsh plant that may have triggered corresponding increases in PSD pollutants. Although heat input is a basic design parameter for New Source Review under federal rules adopted by the state, TCEQ apparently does not take it seriously, which calls into question the state’s ability to implement and enforce NSR rules.

e. TCEQ Is Not Enforcing Particulate Matter Emission Limits Defined in the SIP.

PSD permits include federally enforceable limits on emissions of particulate matter. In Texas, the SIP clearly defines particulate matter as including both “filterable” (or “front-half”) and “condensable” (or “back-half”) particles. 30 TAC § 101.1(72). This is important, because much of the smaller particle emissions (e.g., below 2.5 microns), which are the most hazardous to human health, occur in condensable form.

In 2004, a TCEQ investigator issued a notice of violation to AEP/SWEPCO for violating these particulate matter limits at its Welsh power plant, but the company’s attorneys argued that, notwithstanding the plain language of the law, the emission limits apply only to “filterable” particles. It appears that TCEQ has accepted the company’s interpretation, but the agency has offered no authority for the proposition that the definition so clearly established in the SIP does not apply to this large coal-fired power plant.

f. TCEQ Has Unilaterally Raised Hourly Emission Limits for Particulate Matter That Were Established in a Federal PSD Permit Issued By the EPA.

On November 9, 1976, the EPA issued a “Prevention of Significant Deterioration” permit

to the Welsh power plant, limiting emissions of particulates at Unit 2 to 358.2 pounds per hour. Letter from John C. White, Regional Administrator, EPA, to John Turk, Vice President, SWEPCO (November 9, 1976). More than twenty years later, AEP/SWEPCO apparently requested an increase in allowable emissions for Unit 2, based on results from a July, 1980 stack test that showed that these limits were not being met. TCEQ obligingly increased these emission limits to 387 pounds per hour. See, e.g., Special Condition 1 and Maximum Emission Rates Table of Consolidated Permit No. 4381/PSD-TX-3. TCEQ's action thus increased Unit 2's potential to emit by ten percent on an hourly basis, and more than 120 tons per year on an annual basis.

TCEQ's action violates federal law in at least two ways. Most obviously, emission limits established in a federally enforceable PSD permit may not be inflated by TCEQ or any other state agency without undergoing a full permit review, which includes a public hearing, and a reevaluation of the best available pollution controls for that pollutant and the impact that any emission increases would have on air quality. No such analysis was conducted when the Welsh plant permit was increased. TCEQ files indicate that this illegal increase in PSD emission limits was approved by the EPA, on the grounds that the resulting emission increases would be considered "insignificant" as a matter of law. We have contacted the EPA, and they have no record of having granted such approval, which would have been prohibited under federal law.

Second, the 1980 stack test apparently showed that Welsh had failed to meet the emission limits established in its PSD permit. Rather than bring an enforcement action for this violation, TCEQ simply accepted AEP/SWEPCO's invitation to raise the emission limit. TCEQ's action reflects an unfortunate pattern of responding to permit violations by relaxing standards. The permit holder submitted a request for a higher heat input limit, and that, apparently, is the end of the matter, as far as TCEQ is concerned.

### C. THE ADMINISTRATOR MUST USE THE TOOLS PROVIDED IN THE CAA TO BRING TEXAS INTO COMPLIANCE.

EPA has a number of tools available to it to ensure that SIPs, particularly those provisions relating to permitting programs, are properly implemented. First, CAA section 179 provides that if the Administrator "finds that any requirement of an approved plan (or part of an approved plan) is not being implemented" the Administrator "shall apply" either highway sanctions or offset requirements if the deficiency has not been corrected within 18 months. 42 U.S.C. § 7509(a). Moreover, section 110(m) provides the Administrator with the discretion to waive this 18 month compliance period and begin applying the preferred sanction immediately. 42 U.S.C. § 7410(m).<sup>10</sup>

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<sup>10</sup> While the mandatory imposition of sanctions under section 179 applies only in nonattainment areas, section 110(m) provides the EPA with discretion to apply the section 179 sanctions to both attainment and nonattainment areas whenever the Administrator finds a state is ignoring any requirement in its SIP. Section 110(m) permits EPA to apply one of these sanctions "at any time . . . the Administrator makes a finding, disapproval, or determination under . . . section [179(a)] in relation to any plan or plan item . . . that is required under this chapter, with respect to any portion of the State the Administrator determines is reasonable and appropriate . . ." 42 U.S.C. § 7410(m) (emphasis added); See also 59 Fed. Reg. 1476, 1480 (Jan. 11, 1994) ("[S]ection 110(m) clearly provides for the imposition of sanctions beyond nonattainment areas. The express language of section 110(m) provides that the

Congress also provided EPA with the means to ensure that states properly implement SIP and CAA requirements relating to PSD and nonattainment new source review. Section 113(a)(5) of the Act provides as follows:

Failure to comply with new source requirements.

Whenever, on the basis of any available information, the Administrator finds that a State is not acting in compliance with any requirement or prohibition of the chapter relating to the construction of new sources or the modification of existing sources, the Administrator may –

- (A) issue an order prohibiting the construction or modification of any major stationary source in any area to which such requirement applies;
- (B) issue an administrative penalty order in accordance with subsection (d) of this section, or
- (C) bring a civil action under subsection (b) of this section.

42 U.S.C. § 7413(a)(5).

This petition provides ample evidence for the Administrator to make the findings that trigger application of these compliance incentives. As shown above, in its implementation of the PSD program, the State of Texas is not acting in compliance with the requirements of its SIP or the Act. Therefore, Environmental Defense and Sierra Club ask the Administrator issue an order (1) finding that above-referenced requirements of the approved Texas state implementation plan are not being implemented; (2) immediately applying one of the sanctions set out in 42 U.S.C. § 7509(b) within the State of Texas; (3) finding that the state of Texas is not acting in compliance with the above-described requirements and prohibitions of the Act relating to the construction of new sources or the modification of existing sources; and (4) prohibiting, pursuant to §113(a)(5)(A) of the Act, the construction or modification of any major stationary source in the portions of the State governed by the PSD program.

#### IV. CONCLUSION

For the reason set forth above, Environmental Defense and Sierra Club respectfully request that this petition be granted and that the Administrator grant the relief sought herein.

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Administrator may impose sanctions on ‘. . . any portion of the State the Administrator determines reasonable and appropriate. . . .’ Beyond that, section 110(m) provides for the discretionary imposition of sanctions for a finding that an area has failed to meet any requirement with respect to any ‘plan or plan item’ under the Act. Such requirements could apply to nonattainment, attainment, or unclassified areas.’’) (omission in original).

Respectfully submitted this \_\_\_\_<sup>th</sup> day of January, 2008.

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Counsel for Sierra Club

# Attachment 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

NOV 27 2006

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permit  
Martin Lake Steam Electric Station Unit 4, PSD-TX-1071, Rusk County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Martin Lake Steam Electric Station, located in Rusk County, Texas. We received it in our office on October 18, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, pre-construction data applicability and monitoring, and potential Class I area impacts.

We look forward to working with the Texas Commission on Environmental Quality to resolve the issues identified in our comments and to ensure that the draft permit is consistent with the requirements of the Texas PSD SIP. Please contact me at (214) 665-7250, or Stephanie Kordzi of my staff at (214) 665-7520, if you have questions. Thank you for your cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jeff Robinson".

Jeff Robinson  
Chief  
Air Permits Section

Enclosure

cc: Mr. Erik Hendrickson  
Texas Commission on Environmental Quality  
Mr. Steve Hagle  
Texas Commission on Environmental Quality

## ENCLOSURE

### Best Available Control Technology Comments (BACT)

1. The BACT analysis in the State Preliminary Determination Summary should contain a detailed administrative record documenting appropriate BACT determinations for the emissions of NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM<sub>10</sub>, and CO. In particular, there is no comparison of the proposed control units with other types of control technology for EGUs in recent PSD permits issued nationwide (with the exception of a comparison of wet and dry flue gas desulfurization for SO<sub>2</sub> control). The BACT evaluation process involves reviewing not only the EPA's BACT/LAER Clearinghouse, but also Federal/State/Local NSR permits across the country. Please provide the State's rationale for the BACT determinations, including an analysis of the technical and economic feasibility of available control technologies.
2. In particular, EPA recommends that TCEQ consider a permit currently proposed by EPA Region 9 and a permit recently issued by Nevada and reviewed by EPA's Environmental Appeals Board. The Desert Rock, (Permit No. NSR 4-1-3, AZP 04-01) in northwestern New Mexico, EPA Region 9 is proposing to establish a NO<sub>x</sub> limit of 0.06 lb/MMBtu utilizing San Juan Basin sub-bituminous coal in 2006. The Desert Rock permit application specifically states in its BACT analysis for NO<sub>x</sub>, on page 4-9, Section 4.2.1.5. that "No adverse costs, energy, or environmental impacts have been identified that would prevent the proposed project from continuously achieving 0.06 lb/MMBtu as a 24-hour average." The permit for Newmont Nevada Energy, (Permit No. AP4911-1349) located in southern Nevada, became effective June 4, 2005, with a 0.067 lb/MMBtu emission rate for NO<sub>x</sub> utilizing Powder River Basin sub-bituminous coal. Both of these emission rates are 24-hour rolling averages. The TCEQ should evaluate whether TXU could achieve either of these BACT emissions limits.
3. The BACT emission rate for lead identified by TXU in its RACT/BACT/LAER Clearinghouse Results for Cities Public Services is  $8.4 \times 10^{-6}$  lb/MMBtu (annual average). The lead BACT emission rate proposed by TXU is  $1.2 \times 10^{-5}$  lb/MMBtu. The TCEQ should discuss in its BACT Evaluation why the emission rate for City Public Service was not utilized in the proposed TXU permit action based on technical and economic feasibility.

### Startup, Shutdown and Maintenance Emissions and Malfunctions

4. EPA recommends that TCEQ follow EPA policy for addressing periods of startup, shutdown, or maintenance emissions (MSS Emissions in Texas). EPA's long held policy is that BACT emission limitations apply at all times. BACT limits may not be waived during periods of startup, shutdown and maintenance. However, where the permitting authority has made an on-the-record determination that compliance with BACT emission limitations is infeasible during startup, shutdown and maintenance, the permitting

authority may establish secondary BACT limits or work practices for those periods. Such secondary limits or work practices must be justified as BACT and the permitting authority must ensure that all PSD requirements are met, including compliance with NAAQS and PSD increment provisions.<sup>1</sup>

Please clarify the requirements of condition #8 of the draft permit as it applies to MSS emissions. The draft permit states that performance standards are applicable at all times except during periods of MSS. The draft permit further states that during periods of MSS the holder of the permit shall not exceed the hourly mass emission limits in the MAERT. Please explain whether MSS emissions are required to be included in compliance determinations with all BACT emission limitations. Also, please explain whether total startup, shutdown or maintenance-event time is limited by the permit.

Startup, shutdown and maintenance emissions must be subject to the permitted emission limits and supported by adequate monitoring and recordkeeping provisions in the PSD permit. If the draft permit for this facility does exempt the source from compliance with long-term BACT emission limits during certain periods, TCEQ should provide an on-the-record analysis as to why compliance with those normal BACT limits is infeasible during startup, shutdown, or maintenance, and if so, what design, control, methodology, work practice (such as a limitation on total startup and shutdown event time) or other change is appropriate for inclusion in the permit to minimize excess emissions during those periods. The TCEQ should perform and provide its analysis to support the BACT determination for MSS for this unit. We recommend that the State's Preliminary Determination Summary and that the draft permit be supplemented to provide the BACT analysis for emissions from startup, shutdown and maintenance.

5. The Preliminary Determination Summary states that the hourly emissions include routine MSS. Please confirm that the hourly emission rate containing MSS is in compliance with BACT and include the BACT evaluation for MSS in the analysis referenced in Comment 4 above.
6. Please confirm that excess emissions from malfunctions not authorized by the PSD permit which exceed applicable emission limitations are included in determination of compliance with BACT emission limitations.

#### Modeling Required Under PSD

7. EPA had difficulty in evaluating the air quality impact analysis (modeling) of individual PSD permit applications since the receipt sequence of complete permit applications determines the scope of modeling required for each PSD permit, and the sequence was

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<sup>1</sup> See *In re Prairie State Generating Co.*, PSD Appeal No. 05-05, at 113-118 (EAB, August 24, 2006), 13 E.A.D. \_\_\_; *In re Tallmadge Generating Station*, PSD Appeal No. 02-12, at 28 (EAB, May 21, 2003); *In re Indeck-Niles Energy Center*, PSD Appeal No. 04-01, at 15-18 (EAB, Sept. 30, 2004); *In re Rockgen Energy Center*, 8 E.A.D. 536, 554 (EAB 1999)

not obvious in the permitting record. When different applicants submit permit requests on separate days, the sequence and domain of the modeling is clear. In this case multiple applications were submitted and deemed complete on the same day. Since all TXU applications were deemed administratively complete simultaneously, TXU's modeling should have sequentially accounted for emissions from other complete applications and emissions from existing sources, or cumulative air quality modeling including all existing sources and proposed sources should have been performed. Did TXU sequentially model each source accounting for other complete applications with respect to determining whether increment would be consumed or whether NAAQS would be violated?

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In addition, EPA is concerned with the approach that the applicant utilized in attempting to assess ozone impacts from the proposed Martin Lake Unit 4 in its PSD permit application. EPA has commented to TCEQ on the inaccuracy of using Scheffe Point Source Screening Tables alone for determining ozone ambient impacts in previous permit comment letters. TCEQ Air Quality Modeling Guidelines establish a process by which the permit applicant communicates with the TCEQ staff and develops a modeling protocol that will be followed. We could not determine whether pre-application or modeling protocol meetings were held between the applicant and TCEQ, nor could we see where a modeling protocol was developed or submitted by TXU. In recent years, EPA has worked with applicants and state and local permitting authorities including Texas to address potential single-source ozone impacts.<sup>2</sup> We recommend the development of a modeling protocol for this permit consistent with what is required by the Texas SIP, and we wish to work with TCEQ to facilitate an appropriate ozone impact analysis for Martin Lake Unit 4.

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8. The Texas PSD SIP at Section 116.160, which incorporates 40 CFR Part 52.21(p)(1), requires written notice of any permit application for a proposed major source where emissions from the new source may affect a Class I area. EPA received a copy of the comment letters provided by the Federal Land Managers (FLMs) for Caney Creek Wilderness dated November 15, 2006, and the Wichita Mountains National Wildlife Refuge dated November 20, 2006, indicating that the applicant and TCEQ did not consult with the FLMs on the need for potential Class I impact analysis for Martin Lake Unit 4. We request that the TCEQ Executive Director determine whether Class I impacts are possible from this facility and whether consultation with the FLM is required, and if so, notify the Federal Land Manager (FLM). The Class I areas of interest are the following: Caney Creek Wilderness in Arkansas and Wichita Mountain Wildlife Area in Oklahoma. Also, we encourage the TCEQ to work with the respective FLMs to resolve concerns about the cumulative impacts of all power plants in East and Central Texas for which the TCEQ has received applications. If consultation is required, when it has occurred with the FLMs, additional review and public comment periods may be necessary. EPA Region 6 is willing to assist TCEQ during any consultation process with the FLMs.

#### Cumulative Air Quality Impacts

9. The HARC report (Final Report, Ozone Impacts in DFW of Proposed New EGUs and an Offset Strategy, dated August 23, 2006) {further noted as H60 report} analyzed cumulative ozone impacts in the Dallas/Fort Worth area for a number of local episodes with the proposed new coal-fired EGUs and TXU's proposed offset strategy. The ozone impacts to other areas of Texas, including Central Texas, were also examined in the modeling. The report indicates that ozone impacts differ substantially on a day-to-day basis as a result of wind direction with very significant day specific increases of 10 parts per billion or greater in some areas. The H60 report did not report the modeled ozone levels with the new EGUs and the offsets (just the change in ozone levels), so it is uncertain if the modeling indicated whether exceedences would occur. The modeling report raises concern that if the current ozone levels are in the high 70s or low 80s for the design value (DV) in central Texas areas of Waco and Robertson County, that the potential day specific cumulative impacts from multiple new power plants with the hypothetical offset distribution when added to a 79 ppb DV (4<sup>th</sup> high from Italy monitor) could result in ozone exceedences occurring. The H60 report also included proposed offsets that are not memorialized in any of the draft permit actions, thus the impact could be greater. Due to the ozone attainment challenges in Texas, EPA is concerned about the cumulative impacts of the proposed new power plants especially on ozone levels. Based on this information, we recommend that a cumulative analysis of emissions that would impact ozone levels from existing sources and new sources for which TCEQ received applications be performed and any potential issues identified be addressed either in the permitting of these sources or in the development of plans to attain and maintain the ozone NAAQS in Texas.

10. EPA is also concerned about the lack of continuous air quality monitoring data in East Texas. Section 116.160(c)(2)(C) of the Texas PSD SIP, which incorporates by reference 40 CFR §52.21(m)(1)(iii) requires that an application contain an analysis of ambient air quality in the area where the major stationary source would have an effect using continuous air quality monitoring data. Please clarify for the record, if TCEQ accepted the pre-construction monitoring data utilized by TXU as appropriate, or does TCEQ consider it outlying data for the source area? EPA recommends that the TCEQ discuss why the pre-construction monitoring data utilized by TXU is representative for ozone and why additional pre-construction monitoring is not required.

In addition, a PSD permitting authority has the discretion to require post-construction monitoring when determined to be necessary to determine the effect emission from a stationary source or modification are having on air quality in any area. 40 C.F.R. § 52.21(m)(2). EPA recommends that Texas consider post-construction monitoring in East Texas in this case in light of the FLM's concerns about SO<sub>2</sub> increment consumption at Caney Creek Wilderness. The monitoring criteria in 40 CFR Part 58 – Subpart B and EPA's Ambient Monitoring Guidelines for PSD (EPA-450/4-87-007) should be utilized for additional monitoring. EPA is willing to assist TCEQ, TXU, and other sources in the East Texas area in selecting appropriate sites for additional monitoring.

#### General Comments

11. Special Conditions, No. 4.B. – EPA recommends that TCEQ reflect the emission limitations found in Part 63, Subpart DDDDD in the permit. These limits are for filterable PM at 0.025 lb/MMBtu of heat input or 0.0003 lb per MMBtu of heat input; HCl at 0.02 lb per MMBtu of heat input; and CO at 400 ppm by volume on a dry basis corrected to 7 percent oxygen (30 day rolling average).
12. TCEQ should review whether any significant changes to the draft permit which result from revised modeling, modeling documentation, or other changes to the air quality analysis or draft permit are subject to public notice and comment in accordance with the requirements of Chapter 39 and the Texas PSD SIP.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

NOV 27 2006

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permit  
Monticello Steam Electric Station Unit 4, PSD-TX-1069, Titus County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Monticello Steam Electric Station, located in Titus County, Texas. We received it in our office on October 18, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, pre-construction data applicability and monitoring, and potential Class I area impacts.

We look forward to working with the Texas Commission on Environmental Quality to resolve the issues identified in our comments and to ensure that the draft permit is consistent with the requirements of the Texas PSD SIP. Please contact me at (214) 665-7250, or Stephanie Kordzi of my staff at (214) 665-7520, if you have questions. Thank you for your cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jeff Robinson".

Jeff Robinson  
Chief  
Air Permits Section

Enclosure

cc: Mr. Erik Hendrickson  
Texas Commission on Environmental Quality  
Mr. Steve Hagle  
Texas Commission on Environmental Quality

## ENCLOSURE

### Best Available Control Technology Comments (BACT)

1. The BACT analysis in the State Preliminary Determination Summary should contain a detailed administrative record documenting appropriate BACT determinations for the emissions of NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM<sub>10</sub>, and CO. In particular, there is no comparison of the proposed control units with other types of control technology for EGUs in recent PSD permits issued nationwide (with the exception of a comparison of wet and dry flue gas desulfurization for SO<sub>2</sub> control). The BACT evaluation process involves reviewing not only the EPA's BACT/LAER Clearinghouse, but also Federal/State/Local NSR permits across the country. Please provide the State's rationale for the BACT determinations, including an analysis of the technical and economic feasibility of available control technologies.
2. In particular, EPA recommends that TCEQ consider a permit currently proposed by EPA Region 9 and a permit recently issued by Nevada and reviewed by EPA's Environmental Appeals Board. The Desert Rock, (Permit No. NSR 4-1-3, AZP 04-01) in northwestern New Mexico, EPA Region 9 is proposing to establish a NO<sub>x</sub> limit of 0.06 lb/MMBtu utilizing San Juan Basin sub-bituminous coal in 2006. The Desert Rock permit application specifically states in its BACT analysis for NO<sub>x</sub>, on page 4-9, Section 4.2.1.5. that "No adverse costs, energy, or environmental impacts have been identified that would prevent the proposed project from continuously achieving 0.06 lb/MMBtu as a 24-hour average." The permit for Newmont Nevada Energy, (Permit No. AP4911-1349) located in southern Nevada, became effective June 4, 2005, with a 0.067 lb/MMBtu emission rate for NO<sub>x</sub> utilizing Powder River Basin sub-bituminous coal. Both of these emission rates are 24-hour rolling averages. The TCEQ should evaluate whether TXU could achieve either of these BACT emissions limits.
3. The BACT emission rate for lead identified by TXU in its RACT/BACT/LAER Clearinghouse Results for Cities Public Services is  $8.4 \times 10^{-6}$  lb/MMBtu (annual average). The lead BACT emission rate proposed by TXU is  $1.2 \times 10^{-5}$  lb/MMBtu. The TCEQ should discuss in its BACT Evaluation why the emission rate for City Public Service was not utilized in the proposed TXU permit action based on technical and economic feasibility.

### Startup, Shutdown and Maintenance Emissions and Malfunctions

4. EPA recommends that TCEQ follow EPA policy for addressing periods of startup, shutdown, or maintenance emissions (MSS Emissions in Texas). EPA's long held policy is that BACT emission limitations apply at all times. BACT limits may not be waived during periods of startup, shutdown and maintenance. However, where the permitting authority has made an on-the-record determination that compliance with BACT emission limitations is infeasible during startup, shutdown and maintenance, the permitting

authority may establish secondary BACT limits or work practices for those periods. Such secondary limits or work practices must be justified as BACT and the permitting authority must ensure that all PSD requirements are met, including compliance with NAAQS and PSD increment provisions.<sup>1</sup>

Please clarify the requirements of condition #8 of the draft permit as it applies to MSS emissions. The draft permit states that performance standards are applicable at all times except during periods of MSS. The draft permit further states that during periods of MSS the holder of the permit shall not exceed the hourly mass emission limits in the MAERT. Please explain whether MSS emissions are required to be included in compliance determinations with all BACT emission limitations. Also, please explain whether total startup, shutdown or maintenance event time is limited by the permit.

Startup, shutdown and maintenance emissions must be subject to the permitted emission limits and supported by adequate monitoring and recordkeeping provisions in the PSD permit. If the draft permit for this facility does exempt the source from compliance with long-term BACT emission limits during certain periods, TCEQ should provide an on-the-record analysis as to why compliance with those normal BACT limits is infeasible during startup, shutdown, or maintenance, and if so, what design, control, methodology, work practice (such as a limitation on total startup and shutdown event time) or other change is appropriate for inclusion in the permit to minimize excess emissions during those periods. The TCEQ should perform and provide its analysis to support the BACT determination for MSS for this unit. We recommend that the State's Preliminary Determination Summary and that the draft permit be supplemented to provide the BACT analysis for emissions from startup, shutdown and maintenance.

5. The Preliminary Determination Summary states that the hourly emissions include routine MSS. Please confirm that the hourly emission rate containing MSS is in compliance with BACT and include the BACT evaluation for MSS in the analysis referenced in Comment 4 above.
6. Please confirm that excess emissions from malfunctions not authorized by the PSD permit which exceed applicable emission limitations are included in determination of compliance with BACT emission limitations.

#### Modeling Required Under PSD

7. EPA had difficulty in evaluating the air quality impact analysis (modeling) of individual PSD permit applications since the receipt sequence of complete permit applications determines the scope of modeling required for each PSD permit, and the sequence was

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 6

1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

**NOV 27 2006**

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permit  
Morgan Creek Steam Electric Station Unit 7, PSD-TX-1066, Mitchell County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Morgan Creek Steam Electric Station, located in Mitchell County, Texas. We received it in our office on October 27, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, ambient air quality monitoring, and potential Class I area impacts.

We look forward to working with the Texas Commission on Environmental Quality to resolve the issues identified in our comments and to ensure that the draft permit is consistent with the requirements of the Texas PSD SIP. Please contact me at (214) 665-7250, or Stephanie Kordzi of my staff at (214) 665-7520, if you have questions. Thank you for your cooperation.

Sincerely yours,

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Jeff Robinson  
Chief  
Air Permits Section

Enclosure

cc: Mr. Erik Hendrickson  
Texas Commission on Environmental Quality  
Mr. Steve Hagle  
Texas Commission on Environmental Quality

## ENCLOSURE

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authority may establish secondary BACT limits or work practices for those periods. Such secondary limits or work practices must be justified as BACT and the permitting authority must ensure that all PSD requirements are met, including compliance with NAAQS and PSD increment provisions.<sup>1</sup>

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#### Cumulative Air Quality Impacts

9. The HARC report (Final Report, Ozone Impacts in DFW of Proposed New EGUs and an Offset Strategy, dated August 23, 2006) {further noted as H60 report} analyzed cumulative ozone impacts in the Dallas/Fort Worth area for a number of local episodes with the proposed new coal-fired EGUs and TXU's proposed offset strategy. The ozone impacts to other areas of Texas, including Central Texas, were also examined in the modeling. The report indicates that ozone impacts differ substantially on a day-to-day basis as a result of wind direction with very significant day specific increases of 10 parts per billion or greater in some areas. The H60 report did not report the modeled ozone levels with the new EGUs and the offsets (just the change in ozone levels), so it is uncertain if the modeling indicated whether exceedences would occur. The modeling report raises concern that if the current ozone levels are in the high 70s or low 80s for the design value (DV) in central Texas areas of Waco and Robertson County, that the potential day specific cumulative impacts from multiple new power plants with the hypothetical offset distribution when added to a 79 ppb DV (4<sup>th</sup> high from Italy monitor) could result in ozone exceedences occurring. The H60 report also included proposed offsets that are not memorialized in any of the draft permit actions, thus the impact could be greater. Due to the ozone attainment challenges in Texas, EPA is concerned about the cumulative impacts of the proposed new power plants especially on ozone levels. Based on this information, we recommend that a cumulative analysis of emissions that would impact ozone levels from existing sources and new sources for which TCEQ received applications be performed and any potential issues identified be addressed either in the permitting of these sources or in the development of plans to attain and maintain the ozone NAAQS in Texas.

10. A PSD permitting authority has the discretion to require post-construction monitoring when determined to be necessary to determine the effect emission from a stationary source or modification are having on air quality in any area. 40 C.F.R. § 52.21(m)(2). EPA recommends that Texas consider post-construction monitoring in West Texas in this case in light of the potential ozone impacts detailed in the H60 report referenced above. The monitoring criteria in 40 CFR Part 58 – Subpart B and EPA’s Ambient Monitoring Guidelines for PSD (EPA-450/4-87-007) should be utilized for additional monitoring. EPA is willing to assist TCEQ, TXU, and other sources in the West Texas area in selecting appropriate sites for additional monitoring.

#### General Comments

11. Special Conditions, No. 4.B. – EPA recommends that TCEQ reflect the emission limitations found in Part 63, Subpart DDDDD in the permit. These limits are for filterable PM at 0.025 lb/MMBtu of heat input or 0.0003 lb per MMBtu of heat input; HCl at 0.02 lb per MMBtu of heat input; and CO at 400 ppm by volume on a dry basis corrected to 7 percent oxygen (30 day rolling average).
12. TCEQ should review whether any significant changes to the draft permit which result from revised modeling, modeling documentation, or other changes to the air quality analysis or draft permit are subject to public notice and comment in accordance with the requirements of Chapter 39 and the Texas PSD SIP.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 6

1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

**NOV 27 2006**

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permit  
Lake Creek Steam Electric Station Unit 3, PSD-TX-1070, McLennan County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Lake Creek Steam Electric Station, located in McLennan County, Texas. We received it in our office on October 19, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, pre-construction data applicability and monitoring, and potential Class I area impacts.

We look forward to working with the Texas Commission on Environmental Quality to resolve the issues identified in our comments and to ensure that the draft permit is consistent with the requirements of the Texas PSD SIP. Please contact me at (214) 665-7250, or Stephanie Kordzi of my staff at (214) 665-7520, if you have questions. Thank you for your cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jeff Robinson", written over a horizontal line.

Jeff Robinson  
Chief  
Air Permits Section

Enclosure

cc: Mr. Erik Hendrickson  
Texas Commission on Environmental Quality  
Mr. Steve Hagle  
Texas Commission on Environmental Quality

## ENCLOSURE

### Best Available Control Technology Comments (BACT)

1. The BACT analysis in the State Preliminary Determination Summary should contain a detailed administrative record documenting appropriate BACT determinations for the emissions of NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM<sub>10</sub>, and CO. In particular, there is no comparison of the proposed control units with other types of control technology for EGUs in recent PSD permits issued nationwide (with the exception of a comparison of wet and dry flue gas desulfurization for SO<sub>2</sub> control). The BACT evaluation process involves reviewing not only the EPA's BACT/LAER Clearinghouse, but also Federal/State/Local NSR permits across the country. Please provide the State's rationale for the BACT determinations, including an analysis of the technical and economic feasibility of available control technologies.
2. In particular, EPA recommends that TCEQ consider a permit currently proposed by EPA Region 9 and a permit recently issued by Nevada and reviewed by EPA's Environmental Appeals Board. The Desert Rock, (Permit No. NSR 4-1-3, AZP 04-01) in northwestern New Mexico, EPA Region 9 is proposing to establish a NO<sub>x</sub> limit of 0.06 lb/MMBtu utilizing San Juan Basin sub-bituminous coal in 2006. The Desert Rock permit application specifically states in its BACT analysis for NO<sub>x</sub>, on page 4-9, Section 4.2.1.5. that "No adverse costs, energy, or environmental impacts have been identified that would prevent the proposed project from continuously achieving 0.06 lb/MMBtu as a 24-hour average." The permit for Newmont Nevada Energy, (Permit No. AP4911-1349) located in southern Nevada, became effective June 4, 2005, with a 0.067 lb/MMBtu emission rate for NO<sub>x</sub> utilizing Powder River Basin sub-bituminous coal. Both of these emission rates are 24-hour rolling averages. The TCEQ should evaluate whether TXU could achieve either of these BACT emissions limits.
3. The BACT emission rate for lead identified by TXU in its RACT/BACT/LAER Clearinghouse Results for Cities Public Services is  $8.4 \times 10^{-6}$  lb/MMBtu (annual average). The lead BACT emission rate proposed by TXU is  $1.2 \times 10^{-5}$  lb/MMBtu. The TCEQ should discuss in its BACT Evaluation why the emission rate for City Public Service was not utilized in the proposed TXU permit action based on technical and economic feasibility.

### Startup, Shutdown and Maintenance Emissions and Malfunctions

4. EPA recommends that TCEQ follow EPA policy for addressing periods of startup, shutdown, or maintenance emissions (MSS Emissions in Texas). EPA's long held policy is that BACT emission limitations apply at all times. BACT limits may not be waived during periods of startup, shutdown and maintenance. However, where the permitting authority has made an on-the-record determination that compliance with BACT emission limitations is infeasible during startup, shutdown and maintenance, the permitting

authority may establish secondary BACT limits or work practices for those periods. Such secondary limits or work practices must be justified as BACT and the permitting authority must ensure that all PSD requirements are met, including compliance with NAAQS and PSD increment provisions.<sup>1</sup>

Please clarify the requirements of condition #8 of the draft permit as it applies to MSS emissions. The draft permit states that performance standards are applicable at all times except during periods of MSS. The draft permit further states that during periods of MSS the holder of the permit shall not exceed the hourly mass emission limits in the MAERT. Please explain whether MSS emissions are required to be included in compliance determinations with all BACT emission limitations. Also, please explain whether total startup, shutdown or maintenance event time is limited by the permit.

Startup, shutdown and maintenance emissions must be subject to the permitted emission limits and supported by adequate monitoring and recordkeeping provisions in the PSD permit. If the draft permit for this facility does exempt the source from compliance with long-term BACT emission limits during certain periods, TCEQ should provide an on-the-record analysis as to why compliance with those normal BACT limits is infeasible during startup, shutdown, or maintenance, and if so, what design, control, methodology, work practice (such as a limitation on total startup and shutdown event time) or other change is appropriate for inclusion in the permit to minimize excess emissions during those periods. The TCEQ should perform and provide its analysis to support the BACT determination for MSS for this unit. We recommend that the State's Preliminary Determination Summary and that the draft permit be supplemented to provide the BACT analysis for emissions from startup, shutdown and maintenance.

5. The Preliminary Determination Summary states that the hourly emissions include routine MSS. Please confirm that the hourly emission rate containing MSS is in compliance with BACT and include the BACT evaluation for MSS in the analysis referenced in Comment 4 above.
6. Please confirm that excess emissions from malfunctions not authorized by the PSD permit which exceed applicable emission limitations are included in determination of compliance with BACT emission limitations.

#### Modeling Required Under PSD

7. EPA had difficulty in evaluating the air quality impact analysis (modeling) of individual PSD permit applications since the receipt sequence of complete permit applications determines the scope of modeling required for each PSD permit, and the sequence was

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not obvious in the permitting record. When different applicants submit permit requests on separate days, the sequence and domain of the modeling is clear. In this case multiple applications were submitted and deemed complete on the same day. Since all TXU applications were deemed administratively complete simultaneously, TXU's modeling should have sequentially accounted for emissions from other complete applications and emissions from existing sources, or cumulative air quality modeling including all existing sources and proposed sources should have been performed. Did TXU sequentially model each source accounting for other complete applications with respect to determining whether increment would be consumed or whether NAAQS would be violated?

Each individual PSD permit is required to meet certain regulatory burdens with regard to the approach utilized for air quality impact analysis. The Texas PSD SIP at Sections 116.160 and 116.161, and TCEQ's Air Quality Modeling Guidelines require an air quality impact analysis for ozone. TCEQ should clearly identify the units that were included in the modeling analysis for the proposed Lake Creek Unit 3 other than those units identified from the Point Source Database inventory. This information should be included in the modeling report. Additionally, TCEQ should provide a list of pollutants and modeled emission rates from each of these units. The modeling should include existing sources, including sources for which a permit has been issued but is not yet operational, and sources that have submitted complete permit applications but for which permits have not yet been issued. If some of the new proposed facilities (including new EGUs), meeting these criteria were not included in the modeling, they should be included.

In addition, EPA is concerned with the approach that the applicant utilized in attempting to assess ozone impacts from the proposed Lake Creek Unit 3 in its PSD permit application. EPA has commented to TCEQ on the inaccuracy of using Scheffe Point Source Screening Tables alone for determining ozone ambient impacts in previous permit comment letters. TCEQ Air Quality Modeling Guidelines establish a process by which the permit applicant communicates with the TCEQ staff and develops a modeling protocol that will be followed. We could not determine whether pre-application or modeling protocol meetings were held between the applicant and TCEQ, nor could we see where a modeling protocol was developed or submitted by TXU. In recent years, EPA has worked with applicants and state and local permitting authorities including Texas to address potential single-source ozone impacts.<sup>2</sup> We recommend the development of a modeling protocol for this permit consistent with what is required by the Texas SIP, and we wish to work with TCEQ to facilitate an appropriate ozone impact analysis for Lake Creek Unit 3.

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10. EPA is also concerned about the lack of continuous air quality monitoring data in Central Texas. Section 116.160(c)(2)(C) of the Texas PSD SIP, which incorporates by reference 40 CFR §52.21(m)(1)(iii) requires that an application contain an analysis of ambient air quality in the area where the major stationary source would have an effect using continuous air quality monitoring data. Please clarify for the record, if TCEQ accepted the pre-construction monitoring data utilized by TXU as appropriate, or does TCEQ consider it outlying data for the source area? EPA recommends that the TCEQ discuss why the pre-construction monitoring data utilized by TXU is representative for ozone and why additional pre-construction monitoring is not required.

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NOV 27 2006

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

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12. TCEQ should review whether any significant changes to the draft permit which result from revised modeling, modeling documentation, or other changes to the air quality analysis or draft permit are subject to public notice and comment in accordance with the requirements of Chapter 39 and the Texas PSD SIP.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

NOV 27 2006

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permit  
Big Brown Steam Electric Station Unit 3, PSD-TX-1065, Freestone County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Big Brown Steam Electric Station, located in Freestone County, Texas. We received it in our office on October 27, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, pre-construction data applicability and monitoring, and potential Class I area impacts.

We look forward to working with the Texas Commission on Environmental Quality to resolve the issues identified in our comments and to ensure that the draft permit is consistent with the requirements of the Texas PSD SIP. Please contact me at (214) 665-7250, or Stephanie Kordzi of my staff at (214) 665-7520, if you have questions. Thank you for your cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jeff Robinson".

Jeff Robinson  
Chief  
Air Permits Section

Enclosure

cc: Mr. Erik Hendrickson  
Texas Commission on Environmental Quality  
Mr. Steve Hagle  
Texas Commission on Environmental Quality

## ENCLOSURE

### Best Available Control Technology Comments (BACT)

1. The BACT analysis in the State Preliminary Determination Summary should contain a detailed administrative record documenting appropriate BACT determinations for the emissions of NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM<sub>10</sub>, and CO. In particular, there is no comparison of the proposed control units with other types of control technology for EGUs in recent PSD permits issued nationwide (with the exception of a comparison of wet and dry flue gas desulfurization for SO<sub>2</sub> control). The BACT evaluation process involves reviewing not only the EPA's BACT/LAER Clearinghouse, but also Federal/State/Local NSR permits across the country. Please provide the State's rationale for the BACT determinations, including an analysis of the technical and economic feasibility of available control technologies.
2. In particular, EPA recommends that TCEQ consider a permit currently proposed by EPA Region 9 and a permit recently issued by Nevada and reviewed by EPA's Environmental Appeals Board. The Desert Rock, (Permit No. NSR 4-1-3, AZP 04-01) in northwestern New Mexico, EPA Region 9 is proposing to establish a NO<sub>x</sub> limit of 0.06 lb/MMBtu utilizing San Juan Basin sub-bituminous coal in 2006. The Desert Rock permit application specifically states in its BACT analysis for NO<sub>x</sub>, on page 4-9, Section 4.2.1.5. that "No adverse costs, energy, or environmental impacts have been identified that would prevent the proposed project from continuously achieving 0.06 lb/MMBtu as a 24-hour average." The permit for Newmont Nevada Energy, (Permit No. AP4911-1349) located in southern Nevada, became effective June 4, 2005, with a 0.067 lb/MMBtu emission rate for NO<sub>x</sub> utilizing Powder River Basin sub-bituminous coal. Both of these emission rates are 24-hour rolling averages. The TCEQ should evaluate whether TXU could achieve either of these BACT emissions limits.
3. The BACT emission rate for lead identified by TXU in its RACT/BACT/LAER Clearinghouse Results for Cities Public Services is  $8.4 \times 10^{-6}$  lb/MMBtu (annual average). The lead BACT emission rate proposed by TXU is  $1.2 \times 10^{-5}$  lb/MMBtu. The TCEQ should discuss in its BACT Evaluation why the emission rate for City Public Service was not utilized in the proposed TXU permit action based on technical and economic feasibility.

### Startup, Shutdown and Maintenance Emissions and Malfunctions

4. EPA recommends that TCEQ follow EPA policy for addressing periods of startup, shutdown, or maintenance emissions (MSS Emissions in Texas). EPA's long held policy is that BACT emission limitations apply at all times. BACT limits may not be waived during periods of startup, shutdown and maintenance. However, where the permitting authority has made an on-the-record determination that compliance with BACT emission limitations is infeasible during startup, shutdown and maintenance, the permitting

authority may establish secondary BACT limits or work practices for those periods. Such secondary limits or work practices must be justified as BACT and the permitting authority must ensure that all PSD requirements are met, including compliance with NAAQS and PSD increment provisions.<sup>1</sup>

Please clarify the requirements of condition #8 of the draft permit as it applies to MSS emissions. The draft permit states that performance standards are applicable at all times except during periods of MSS. The draft permit further states that during periods of MSS the holder of the permit shall not exceed the hourly mass emission limits in the MAERT.

Please explain whether MSS emissions are required to be included in compliance determinations with all BACT emission limitations. Also, please explain whether total startup, shutdown or maintenance event time is limited by the permit.

Startup, shutdown and maintenance emissions must be subject to the permitted emission limits and supported by adequate monitoring and recordkeeping provisions in the PSD permit. If the draft permit for this facility does exempt the source from compliance with long-term BACT emission limits during certain periods, TCEQ should provide an on-the-record analysis as to why compliance with those normal BACT limits is infeasible during startup, shutdown, or maintenance, and if so, what design, control, methodology, work practice (such as a limitation on total startup and shutdown event time) or other change is appropriate for inclusion in the permit to minimize excess emissions during those periods. The TCEQ should perform and provide its analysis to support the BACT determination for MSS for this unit. We recommend that the State's Preliminary Determination Summary and that the draft permit be supplemented to provide the BACT analysis for emissions from startup, shutdown and maintenance.

5. The Preliminary Determination Summary states that the hourly emissions include routine MSS. Please confirm that the hourly emission rate containing MSS is in compliance with BACT and include the BACT evaluation for MSS in the analysis referenced in Comment 4 above.
6. Please confirm that excess emissions from malfunctions not authorized by the PSD permit which exceed applicable emission limitations are included in determination of compliance with BACT emission limitations.

#### Modeling Required Under PSD

7. EPA had difficulty in evaluating the air quality impact analysis (modeling) of individual PSD permit applications since the receipt sequence of complete permit applications determines the scope of modeling required for each PSD permit, and the sequence was

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not obvious in the permitting record. When different applicants submit permit requests on separate days, the sequence and domain of the modeling is clear. In this case multiple applications were submitted and deemed complete on the same day. Since all TXU applications were deemed administratively complete simultaneously, TXU's modeling should have sequentially accounted for emissions from other complete applications and emissions from existing sources, or cumulative air quality modeling including all existing sources and proposed sources should have been performed. Did TXU sequentially model each source accounting for other complete applications with respect to determining whether increment would be consumed or whether NAAQS would be violated?

Each individual PSD permit is required to meet certain regulatory burdens with regard to the approach utilized for air quality impact analysis. The Texas PSD SIP at Sections 116.160 and 116.161, and TCEQ's Air Quality Modeling Guidelines require an air quality impact analysis for ozone. TCEQ should clearly identify the units that were included in the modeling analysis for the proposed Big Brown Unit 3 other than those units identified from the Point Source Database inventory. This information should be included in the modeling report. Additionally, TCEQ should provide a list of pollutants and modeled emission rates from each of these units. The modeling should include existing sources, including sources for which a permit has been issued but is not yet operational, and sources that have submitted complete permit applications but for which permits have not yet been issued. If some of the new proposed facilities (including new EGUs), meeting these criteria were not included in the modeling, they should be included.

In addition, EPA is concerned with the approach that the applicant utilized in attempting to assess ozone impacts from the proposed Big Brown Unit 3 in its PSD permit application. EPA has commented to TCEQ on the inaccuracy of using Scheffe Point Source Screening Tables alone for determining ozone ambient impacts in previous permit comment letters. TCEQ Air Quality Modeling Guidelines establish a process by which the permit applicant communicates with the TCEQ staff and develops a modeling protocol that will be followed. We could not determine whether pre-application or modeling protocol meetings were held between the applicant and TCEQ, nor could we see where a modeling protocol was developed or submitted by TXU. In recent years, EPA has worked with applicants and state and local permitting authorities including Texas to address potential single-source ozone impacts.<sup>2</sup> We recommend the development of a modeling protocol for this permit consistent with what is required by the Texas SIP, and we wish to work with TCEQ to facilitate an appropriate ozone impact analysis for Big Brown Unit 3.

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<sup>2</sup> EPA Region 6 has worked in consultation with Texas on several projects for PSD ozone impact analyses using photochemical modeling including Toyota in San Antonio, CPS Power in San Antonio, and Formosa Plastics in Point Comfort. Within EPA Region 6, Oklahoma has also utilized photochemical modeling to determine potential ozone impacts for several PSD permits. EPA also worked with Arkansas to determine potential impacts from hypothetical sources to support Arkansas's Economic Development Zone petition for Crittenden County.

8. The Texas PSD SIP at Section 116.160, which incorporates 40 CFR Part 52.21(p)(1), requires written notice of any permit application for a proposed major source where emissions from the new source may affect a Class I area. EPA received a copy of the comment letters provided by the Federal Land Managers (FLMs) for Caney Creek Wilderness dated November 15, 2006, and the Wichita Mountains National Wildlife Refuge dated November 20, 2006, indicating that the applicant and TCEQ did not consult with the FLMs on the need for potential Class I impact analysis for Big Brown Unit 3. We request that the TCEQ Executive Director determine whether Class I impacts are possible from this facility and whether consultation with the FLM is required, and if so, notify the Federal Land Manager (FLM). The Class I areas of interest are the following: Caney Creek Wilderness in Arkansas and Wichita Mountain Wildlife Area in Oklahoma. Also, we encourage the TCEQ to work with the respective FLMs to resolve concerns about the cumulative impacts of all power plants in East and Central Texas for which the TCEQ has received applications. If consultation is required, when it has occurred with the FLMs, additional review and public comment periods may be necessary. EPA Region 6 is willing to assist TCEQ during any consultation process with the FLMs.

#### Cumulative Air Quality Impacts

9. The HARC report (Final Report, Ozone Impacts in DFW of Proposed New EGUs and an Offset Strategy, dated August 23, 2006) {further noted as H60 report} analyzed cumulative ozone impacts in the Dallas/Fort Worth area for a number of local episodes with the proposed new coal-fired EGUs and TXU's proposed offset strategy. The ozone impacts to other areas of Texas, including Central Texas, were also examined in the modeling. The report indicates that ozone impacts differ substantially on a day-to-day basis as a result of wind direction with very significant day specific increases of 10 parts per billion or greater in some areas. The H60 report did not report the modeled ozone levels with the new EGUs and the offsets (just the change in ozone levels), so it is uncertain if the modeling indicated whether exceedences would occur. The modeling report raises concern that if the current ozone levels are in the high 70s or low 80s for the design value (DV) in central Texas areas of Waco and Robertson County, that the potential day specific cumulative impacts from multiple new power plants with the hypothetical offset distribution when added to a 79 ppb DV (4<sup>th</sup> high from Italy monitor) could result in ozone exceedences occurring. The H60 report also included proposed offsets that are not memorialized in any of the draft permit actions, thus the impact could be greater. Due to the ozone attainment challenges in Texas, EPA is concerned about the cumulative impacts of the proposed new power plants especially on ozone levels. Based on this information, we recommend that a cumulative analysis of emissions that would impact ozone levels from existing sources and new sources for which TCEQ received applications be performed and any potential issues identified be addressed either in the permitting of these sources or in the development of plans to attain and maintain the ozone NAAQS in Texas.

10. EPA is also concerned about the lack of continuous air quality monitoring data in Central Texas. Section 116.160(c)(2)(C) of the Texas PSD SIP, which incorporates by reference 40 CFR §52.21(m)(1)(iii) requires that an application contain an analysis of ambient air quality in the area where the major stationary source would have an affect using continuous air quality monitoring data. Please clarify for the record, if TCEQ accepted the pre-construction monitoring data utilized by TXU as appropriate, or does TCEQ consider it outlying data for the source area? EPA recommends that the TCEQ discuss why the pre-construction monitoring data utilized by TXU is representative for ozone and why additional pre-construction monitoring is not required.

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#### General Comments

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NOV 27 2006

Office of the Chief Clerk  
Texas Commission on  
Environmental Quality (MC-105)  
P.O. Box 13087  
Austin, TX 78711-3087

RE: Prevention of Significant Deterioration (PSD) Draft Permits  
Valley Steam Electric Station Unit 4, PSD-TX-1068, Fannin County, Texas

To Whom It May Concern:

We have reviewed the draft PSD permit for the Valley Steam Electric Station, located in Fannin County, Texas. We received it in our office on October 27, 2006. The draft permit was evaluated to ensure consistency with the Texas PSD State Implementation Plan (SIP) and Federal Clear Air Act requirements. Our comments on the permit are enclosed.

Our comments identify a number of areas of concern that we request that you address prior to issuance of the final permit. The major issues include the State's Best Available Control Technology determination, air quality impact analyses, pre-construction data applicability and monitoring, and potential Class I area impacts.

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Jeff Robinson  
Chief  
Air Permits Section

Enclosure

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Texas Commission on Environmental Quality  
Mr. Steve Hagle  
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## ENCLOSURE

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Central Texas. Section 116.160(c)(2)(C) of the Texas PSD SIP, which incorporates by reference 40 CFR §52.21(m)(1)(iii) requires that an application contain an analysis of ambient air quality in the area where the major stationary source would have an affect using continuous air quality monitoring data. Please clarify for the record, if TCEQ accepted the pre-construction monitoring data utilized by TXU as appropriate, or does TCEQ consider it outlying data for the source area? EPA recommends that the TCEQ discuss why the pre-construction monitoring data utilized by TXU is representative for ozone and why additional pre-construction monitoring is not required.

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# Attachment 2



File Code: 2580-3

Date: November 15, 2006

David Schanbacher  
Chief Engineer  
Texas Commission on Environmental Quality  
MC-168  
P.O. Box 13087  
Austin, TX 78711-3087

Dear Mr. Schanbacher:

Thank you for this opportunity to comment and provide input.

The Ouachita National Forest consists of approximately 1.8 million acres of National Forest System lands in southeast Arkansas and eastern Oklahoma. Part of this grand, national treasure is the Caney Creek Wilderness located south and east of Mena, Arkansas.

As the Federal Land Manager, the U.S. Forest Service is charged with protecting the air quality related values (AQRVs) in the Caney Creek Wilderness a Class I Area.

I was recently made aware of several proposed projects in Texas that may have possible bearing on the Caney Creek Wilderness on the Ouachita National Forest

It is my understanding that four of these projects are within 300 km of Caney Creek Wilderness and that the project proposals are out for public comment with a closing on November 20.

I would like to request an extension of the comment period for 60 days from the date we receive pertinent material including a Class I air quality analysis for the following projects:

- Big Brown Steam Electric Station Unit 3, PSD-TX-1065, Freestone Co., Texas;
- Martin Lake Steam Electric Station Unit 4, PSD-TX-1071, Rusk Co., Texas;
- Monticello Steam Electric Station Unit 4, PSD-TX-1069, Titus Co., Texas;
- Valley Steam Electric Station Unit 4, PSD-TX-1068, Fannin Co., Texas

My rationale for the request are based on the following:

There are several procedures required by the Clean Air Act and its implementing regulations that appear to have been overlooked in these cases as I understand them at this time.

These include notification of Federal Land Managers (FLMs) and informing the public of impacts at class I areas.

According to 40 CFR 51.07 and 51.166 (p), the FLM (in the case of Caney Creek Wilderness-The U.S. Forest Service/Ouachita National Forest) is supposed to be provided with all pertinent materials (application, including class I air quality analysis; draft permit or plan approval; and state air regulators technical review documents) 60 days prior to a public hearing.



To my current knowledge, this has not occurred with any of the proposed projects.

It is also my current understanding that neither my staff nor I received official notification from TCEQ regarding the Oak Grove 1 & 2 or Sandow 5 public comment periods.

It is my understanding that we did receive notification of the public comment period for the Big Brown project; however, we were not provided with any of the pertinent material prior to the public meeting or prior to the comment period.

It is my understanding that the comment period for Big Brown has now gone straight to a contested hearing and we still have not received the pertinent material from your office.

Without notification of opportunity and receipt of pertinent materials, I feel we have not been afforded the opportunity to comment, or to comment in a meaningful manner.

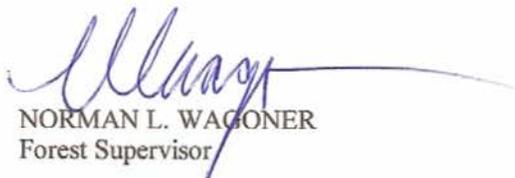
Because these plants are projected to provide over 9,064 additional MWs of energy, the impact of the associated emissions needs to be analyzed as it pertains to Caney Creek Wilderness. I would like to see a cumulative impact analysis for all of the proposed power plants in East and Central Texas (TXU's and other applicants) and their effect on Caney Creek Wilderness.

One reason for my concern over possible impact to Caney Creek Wilderness relates to information my staff have on a cumulative increment analysis from another PSD from Western Farmers in Hugo, Oklahoma that shows that increment consumption has already occurred.

It is my hope and goal to develop a positive and beneficial working relationship that will help us address issues in the near and long term future effectively and timely. To that end, I would like to offer our assistance in exploring the possibility to develop a Memorandum of Understanding that helps clarify roles and responsibilities, and outlines communications between TCEQ, and FLMs.

I look forward to receiving the pertinent information for TXU's projects as soon as possible and will make every effort practical to provide timely response. If you have any questions or comments, please do not hesitate to contact our air resource specialist, Judith Logan at 501-321-5341.

Sincerely,



NORMAN L. WAGONER  
Forest Supervisor

cc: Michael Sanders, Erik Snyder, Erick Henderson, Paul Coon, Meredith Bond



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
National Wildlife Refuge System  
Branch of Air Quality  
7333 W. Jefferson Ave., Suite 375  
Lakewood, CO 80235-2017

IN REPLY REFER TO:

FWS/ANWS-AR-AQ

November 20, 2006

Richard A. Hyde, PE  
Director, Air Permits Division  
Office of Permitting, Remediation, and Registration  
Texas Commission on Environmental Quality  
Mail Code 163  
P.O. Box 13087  
Austin, TX 78711-3087

Subject: TXU Generation Company LP Permit Actions

Dear Mr. Hyde:

The Fish and Wildlife Service (FWS), Branch of Air Quality, recently became aware of several new source review permit actions for coal fired boilers at several TXU Generating Company, LP, (TXU) facilities. It is my understanding that the permit projects listed in Table 1 of the enclosure are currently nearing the end of a public comment period. This letter provides the FWS comments for each of the seven permit actions listed in Table 1.

The Wilderness Area at Wichita Mountains National Wildlife Refuge, managed by the FWS, is designated a Class I Area under the Clean Air Act. As such, it is afforded special protections to air quality and air quality related values (AQRV). I am very concerned about potential impacts to AQRV's, including visibility, at the Wichita Mountains Wilderness that may result from the proposed coal fired boilers. Based upon the information that I have at this time, it appears that TXU provided neither your office, nor the federal land management agencies, with any Class I AQRV analyses for any of these proposed facilities.

This morning, I spoke with Erik Hendrickson of your Combustion and Coatings New Source Review Permits Section. He explained the coordinated initiative that TXU is undertaking – that it involves significant emissions reductions at up to nine existing lignite fired units throughout the TXU system, and that it will result in a system-wide “cap” on emissions that would approximate the requirements of the federal Clean Air Interstate Rule for the existing units, while also seeking further reductions at those units to “make space under the cap” for the new proposed boilers. The overall cap would represent approximately 20% lower emission limits system wide based upon the 2005 actual emissions from the existing nine units; and, in order to achieve that cap and allow for the new units as well, the existing units will actually need reductions of up to 70% from the 2005 actual emission baseline, depending upon the air pollutant being considered.

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Mr. Hendrickson also directed me to a July 27, 2006, letter from Mike McCall, Chairman and CEO of TXU Wholesale, to Derek Seal, General Counsel, Texas Commission on Environmental Quality (TCEQ). From this letter, I understand that: 1) the emissions being addressed are nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and mercury (Hg); 2) that TXU intends to "...offset these key emissions from its new coal fueled units by 100% as they become operational;" and, 3) that the nine existing units that will be retrofit with emission controls are the following: Big Brown Station #1 & 2, Monticello Station # 1, 2, & 3, Martin Lake Station #1, 2, & 3, and Sandow Station #4.

Overall, I am encouraged by the approach that TXU is proposing. However, I have three concerns with the implementation of this approach. I also am commenting on the Best Available Control Technology (BACT) determinations for these projects. Finally, I am raising a topic of considerable concern regarding notification and coordination between TCEQ and the federal land management agencies on permit actions.

**Federal Enforceability:** First, it is critical that the emission reductions that TXU has proposed in its initiative be made both State and federally enforceable. Mr. McCall's letter specifically asks for TCEQ's "...assistance in developing the binding contract that codifies the TXU program and makes it legally enforceable." At this time, however, permits for the new units have been proposed before the accompanying emissions reduction portion of the overall TXU initiative is secured. It is critical that both the permits for the new units as well as revised permits for the existing units clearly specify the agreement and reductions being employed, and that these requirements are made fully enforceable by these permits.

For clarity, the documentation also should explain how the emission reductions from existing units and new emissions from the proposed units are being treated under the system wide cap, as this is likely different from a traditional case of "netting" under the Prevention of Significant Deterioration (PSD) permit program. PSD netting can only occur between units that are part of a single stationary source. Thus, several of the new units would not be eligible to "net out" of PSD review in the sense described in the federal regulations at 40 CFR 51.166(b)(3), since the proposal does not contemplate reductions at their facilities. Since all the units are undergoing PSD major source review, notwithstanding the planned reductions and establishment of a TXU system-wide cap, I do not see a problem with the approach. Rather, I am asking that the record clearly explain the agreements that TCEQ and TXU have established, how the permitting actions characterize PSD applicability requirements, and that the reductions taken as part of this initiative to set a system-wide cap are not available for future PSD netting at any individual facility.

**Regional Haze Plan Implications:** My second concern regarding the TXU initiative involves implementation of the Regional Haze Rule across the central states' region. This growth in coal-fired electric generation capacity in Texas is a departure from information Texas has supplied to date for studies that the Central States Regional Air Planning Association (CENRAP) has conducted. The CENRAP studies will form the basis for member states' Regional Haze State Implementation Plans, which are due to EPA by December, 2007. I am concerned about how Texas and its neighboring states will address the potentially significant discrepancies between

the electric utility generation predictions used up to now in the CENRAP studies and the much higher dependence on coal generation that the proposed permits indicate. The New Source Review section of the federal visibility regulations of 40 CFR Subpart P says: "In conducting [PSD permitting] reviews the State must ensure that the source's emissions will be consistent with making reasonable progress toward the national visibility goal referred to in §51.300(a)." (40 CFR 51.307(o).) As the Regional Haze plans, including the definition of reasonable progress goals, are currently under development, I suggest that TCEQ representatives address this concern through inter-state consultations with affected states and tribes, CENRAP, EPA, and the federal land management agencies. This should be done soon, as it is important to be timely for the affected states' regulatory development processes.

Cumulative Class I Analysis: My third concern with the TXU initiative is the total absence of any Class I air quality analyses. In his November 15, 2006, comment letter on these same projects, Norman Wagoner, Forest Supervisor of the Ouachita National Forest, asked for a "cumulative impact analysis for all of the proposed power plants in East and Central Texas (TXU's and other applicants) and their effect on Caney Creek Wilderness." I also request such an analysis, and ask that it include the Wichita Mountains Wilderness as well. While I understand that TXU intends to achieve reductions across its system that should accommodate the projected new units, in many instances the emission offsets may be geographically distant from the new units, and the resulting impacts to visibility and other AQRV's should be properly analyzed. Since this is a coordinated initiative, it is reasonable to analyze all the new units, together with the proposed enforceable reductions, in one modeling exercise to demonstrate that the Class I Areas' natural resources are protected. For this unique analysis, it is important that the company work with TCEQ, EPA Region 6, and the federal land management agencies, to develop a modeling protocol in advance. At a minimum, this analysis should address the TXU facilities, including the eight proposed units listed in Table 1 of the enclosure and the additional units listed in Table 2. I understand that there are as many as nine additional electric generating units belonging to other companies either proposed or recently permitted across Texas. Ideally these could be incorporated into such an analysis as well.

Best Available Control Technology (BACT) Determination: I have also generally reviewed the BACT provisions of the proposed permits. The control technologies proposed by TXU for use at the eight new Powder River Basin (PRB) coal-fired boilers listed in Table 1 of the enclosure include: low-NO<sub>x</sub> burners, over-fired air, and selective catalytic reduction for controlling NO<sub>x</sub>; dry flue gas desulfurization for control of SO<sub>2</sub>; and a fabric filter baghouse for control of particulate matter (PM, with limits expressed as PM less than 10 microns in size, or PM<sub>10</sub>). While I agree that these control technologies are appropriate for BACT for these applications, the proposed emission limits do not reflect optimum performance of these controls for PRB-coal fired boilers. Examples of recent BACT determinations for PRB-coal fired units are detailed below.

For NO<sub>x</sub> BACT, the recent Desert Rock permit set a NO<sub>x</sub> limit of 0.06 lb/MMBtu on a 24-hour basis, while the proposed TXU permits include the following NO<sub>x</sub> emission limits: 0.20 lb/MMBtu on a 1-hour basis, 0.07 lb/MMBtu on a 30-day basis, and 0.05 lb/MMBtu on an annual basis. If the TXU units are to be expected to meet the standard of the Desert Rock

permit, then emission limit averaged on a 30-day basis should be less than what Desert Rock will meet on a 24-hour basis.

For SO<sub>2</sub> BACT, the WYGEN 2 permit, issued in summer 2005, and the WYGEN 3 application that is currently under review, both include a 24-hr limit of 0.12 lb/MMBtu. The 30-day limit proposed for the TXU projects is also 0.12 lb/MMBtu, with a 3-hour limit of 0.03 lb/MMBtu and an annual limit of 0.10 lb/MMBtu. If the TXU units are to be expected to meet the standard of the WYGEN2 and WYGEN3 projects, then emission limit averaged on a 30-day basis should be less than what the WYGEN units will meet on a 24-hour basis.

For PM<sub>10</sub>, emissions are distinguished between filterable and total (including both filterable and condensable PM<sub>10</sub>). The Desert Rock permit sets a 24-hour PM<sub>10</sub>-filterable limit of 0.010 lb/MMBtu on a 24-hour basis. The proposed TXU units will be required to meet 0.015 lb/MMBtu, both on a 1-hour and annual basis. If the TXU units are to be expected to meet the standard of the Desert Rock permit, then the annual emission limit should be should be less than what Desert Rock will meet on a 24-hour basis.

Federal Land Manager Notification and Involvement: The final issue that I will address in this letter concerns the lack of notification to the federal land management agencies about these projects.

The federal regulations regarding state New Source Review permitting programs say that for a state's rules to be approvable,

"... the State plan must, in any review under §51.166 with respect to visibility protection and analyses, provide for:

- "(1) Written notification of all affected Federal Land Managers of any proposed new major stationary source or major modification that may affect visibility in any Federal Class I area. Such notification must be made in writing and include a copy of all information relevant to the permit application within 30 days of receipt of and at least 60 days prior to public hearing by the State on the application for permit to construct. Such notification must include an analysis of the anticipated impacts on visibility in any Federal Class I area,
- "(2) Where the State requires or receives advance notification (e.g. early consultation with the source prior to submission of the application or notification of intent to monitor under § 51.166) of a permit application of a source that may affect visibility the State must notify all affected Federal Land Managers within 30 days of such advance notification, and
- "(3) Consideration of any analysis performed by the Federal Land Manager, provided within 30 days of the notification and analysis required by paragraph (a)(1) of this section, that such proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the State finds that such an analysis does not demonstrate to the satisfaction of the State that an adverse impact will result in the Federal Class I area, the State must, in the notice of public hearing, either explain its

decision or give notice as to where the explanation can be obtained.” [40 CFR 51.307(a)(1) thru (3)]

In both the current TXU proposals for eight units listed in Table 1 of the enclosure, plus at least the TXU Oak Creek units identified in Table 2 of the enclosure, the required notification to the Fish and Wildlife Service under both paragraphs (1) and (2) above did not occur. (The Sandow Station #5 unit appears to have begun its process at a similar time to the Oak Creek units, but I cannot determine whether an application was submitted or TCEQ has acted upon it. Note that the lack of required notification also occurred for the approximately nine other electric generation units for other companies' projects that I mentioned above.) And, while I am submitting these comments at this time, since the public hearings for the eight units currently under consideration have already occurred, these comments can neither be incorporated into TCEQ's draft decision nor discussed in TCEQ's written notice of public hearing, as specified by paragraph (3). I do, however, expect that these comments will nonetheless be addressed as your permitting process moves forward.

TCEQ's February 1999 *Air Quality Modeling Guidelines*, available on your website at <http://www.tceq.state.tx.us/assets/public/permitting/air/Guidance/NewSourceReview/rq25.pdf>, states:

“...a Class I analysis is required for PSD sources that locate within 100 km of a Class I area whose emissions exceed applicable significance levels; this analysis could be required if the sources will be located more than 100 km away, if there is a concern that the emissions could adversely affect the Class I area.” (page 33.)

However, each of the modeling reports included with the TXU projects simply say that no Class I analysis is required since the facility is more than 100 km from any Class I area. Similarly, the preliminary analysis summaries and technical briefing sheets prepared by your office for each of these only cite the distance from the nearest Class I areas, and then state that no analysis was required. Thus, while your written guidance indicates that Class I analyses may be needed beyond 100 km from a Class I area, TCEQ is allowing applicants to interpret the 100 km discussion as a bright line, and in fact is endorsing this position in its permit decisions. This is further evidenced by TCEQ's failure to properly notify the federal land management agencies of permit actions that may impact our Class I Areas.

While most of the proposed facilities that this comment letter is addressing are distant enough from the Wichita Mountains Wilderness and other FWS managed Class I areas to individually be of less concern to my office, the aggregate of the TXU initiative is potentially quite concerning, especially considering the current uncertainty over the enforceability of the reductions envisioned for the overall TXU initiative. The Federal regulations charge the Federal Land Manager with

“...an affirmative responsibility to protect the air quality related values (including visibility) of any such [Class I] lands and to consider, in consultation with the Administrator [of EPA], whether a proposed source or modification would have an adverse impact on such values.” [40 CFR 51.166(p)(2)]

TCEQ's application of an effective "100 km bright line outoff" for involvement of the federal land management agencies in Texas' New Source Review permitting process inappropriately restricts our ability to carry out that charge.

As expressed by the Ouachita National Forest Supervisor, Mr. Wagoner, in his letter, I believe that it is important that we all work together cooperatively ensure that our respective needs are met through the permitting process. I hope that we will develop an agreement that will provide for timely and reasonable federal land management agency involvement in your permitting process, including the appropriate Fish and Wildlife Service, Forest Service, and National Park Service offices.

If you have any questions regarding these comments please contact me at: 303-914-3808, or Meredith\_Bond@fws.gov. I look forward to working with you and your staff towards improved communications on Class I Area issues.

Sincerely,



Meredith A. Bond, PE  
Deputy Chief

Enclosure

cc:

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Enclosure

Table 1: TXU Projects Currently Available for Public Comment:

Site Name Permit #'s	County	Dist/Dir from Class I areas*	Emissions	Capacity	TCEQ rec'd application	TCEQ deemed application technically complete	Class I analysis provided?
Valley Station #4 78763; PSD-TX-1068	Fannin	300 km SE WIMO 278 km WSW Caney Creek	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO
Morgan Creek Station #7 78761; PSD-TX-1066	Mitchell	406 km SW WIMO 401 km ESE SACR	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO
Tradinghouse Station #3&4 78762; PSD-TX-1067	McClellan	462 km SSE WIMO	7577 tpy SO <sub>2</sub> 3896 tpy NO <sub>x</sub>	1716 MW PRB Coal	4/20/06	10/13/06	NO
Lake Creek Station #3 78751; PSD-TX-1070	McClellan	486 km SSE WIMO	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO
Monticello Station #4 78744; PSD-TX-1069	Titus	170 km SSW Caney Creek	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO
Martin Lake Station #4 78750; PSD-TX-1071	Rusk	260 km SSW Caney Creek	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO
Big Brown Station #3 78759; PSD-TX-1065	Freestone	345 km SW Caney Creek	3789 tpy SO <sub>2</sub> 1957 tpy NO <sub>x</sub>	858 MW PRB Coal	4/20/06	10/13/06	NO

\* WIMO = Wichita Mountains Wilderness Area, managed by U.S. Fish and Wildlife Service;  
 Caney Creek = Caney Creek Wilderness Area managed by USDA Forest Service;  
 SACR = Salt Creek Wilderness, managed by U.S. Fish and Wildlife Service

Table 2: Additional TXU Projects, of which FWS Branch of Air Quality was not notified:

Site Name Permit #'s	County	Dist/Dir from Class I areas*	Emissions	Capacity Fuel	TCEQ rec'd application	TCEQ deemed application technically complete	Class I analysis provided?
Oak Grove Station #1&2 76474; PSD-TX-1056	Robertson	435 km SSE WIMO	15079 tpy SO <sub>2</sub> 6320 tpy NO <sub>x</sub>	1600 MW Lignite	7/27/05	2/17/06	NO
Sandow Station #5 Unknown	Milam	(unknown - estimated 450 ±50km SSE WIMO)	Unknown - estimate ~40% of Oak Grove, above	600 MW Lignite	Unknown	Unknown	Unknown

# Attachment 3

# Analysis of potential impacts to Class I areas from proposed TXU generating facilities in Texas

Expert Witness report by  
Mark C. Green, PhD  
February 9, 2007

An analysis was done regarding the potential for impacts to atmospheric visibility at Federal Class I areas with visibility protection from the following proposed facilities:

Big Brown Unit 3  
Lake Creek Unit 3  
Martin Lake Unit 4  
Monticello Unit 4  
Morgan Creek Unit 7  
Tradinghouse Units 3 and 4  
Valley Unit 4

## **Methodology**

The National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory (ARL) HYSPLIT 4 modeling system (Draxler, et al., 2006) was used to calculate transport and dispersion from the proposed sources to selected Class I areas in the region. Calculations were made for:

Caney Creek Wilderness, Arkansas  
Upper Buffalo Wilderness, Arkansas  
Wichita Mountains Wilderness, Oklahoma  
Breton Island Wilderness, Louisiana  
Big Bend National Park, Texas

Cumulative impacts from the seven facilities were computed. Also computed were estimated impacts from only the Monticello Unit number 4 to see if impacts from a single facility could be significant.

HYSPLIT was run in the puff mode for the year 2004. The EDAS 40km meteorological fields were used (<http://www.arl.noaa.gov/ss/transport/archives.html>). The EDAS fields are derived from the National Center for Environmental Prediction (NCEP) Eta model and are available to the public by from ARL's web site. Height of emissions was assumed to be 300 m above ground level (AGL) to represent a typical effective plume height accounting for stack height and plume rise. As sulfur dioxide emissions from each unit are projected to be nearly identical, a unit emission rate was assigned and estimated ground level concentrations multiplied by the estimated annual average SO<sub>2</sub> emission rate of 392.4 kg per hour per generating facility. Deposition and conversion of sulfur dioxide to particulate sulfur were not computed in the

modeling. Assumptions of reasonable total fraction of conversion of SO<sub>2</sub> emissions to particulate sulfur at the receptors were made instead.

EPA recommended values for relative humidity growth factor f(RH) and natural background visibility were used (USEPA, 2003).

Concentrations for averaging periods of 6 hours were calculated.

## Results

### 1. Cumulative impacts

Table 1 gives the EPA recommended natural background light extinction levels (USEPA, 2003) and estimated maximum impacts at Class I areas based upon 50% conversion of SO<sub>2</sub> emitted from the plants to particulate sulfur. Light extinction efficiency was assumed to be 3 times the sulfate concentration as ammonium sulfate times the relative humidity growth factor (USEPA, 2003).

**Table 1. Natural background light extinction and estimated maximum impacts to light extinction from proposed facilities at regional Class I areas. Light extinction in inverse megameters (Mm<sup>-1</sup>).**

Class I area	Natural background Light extinction (Mm <sup>-1</sup> )	Estimated maximum 6 hour light extinction impact (Mm <sup>-1</sup> )	Impact % of natural background
Big Bend	15.48	2.72	18%
Caney Creek	21.14	20.83	99%
Upper Buffalo	21.04	10.84	52%
Wichita Mountains	20.66	14.58	71%
Breton Island	21.57	7.66	36%

Changes of 10% in light extinction (1 deciview or dV) are estimated to be perceptible. Thus at all the Class I areas listed the cumulative impacts from the proposed facilities would be expected to be perceptible above natural background for one or more six hour periods per year. Table 2 shows the number of 6 hour periods and days per year the estimated impacts to light extinction (again assuming 50% conversion) would be >1 dV above natural background.

**Table 2. Number of 6 hours periods per year and number of days per year with >1 dV impact to visibility (based on 2004 modeling year). Number of days includes days with one or more 6 hour periods with >1 dV visibility impairment from proposed facilities.**

Class I area	Number of 6 hour periods > 1 dV impairment	Number of days per year with 1 or more 6 hours periods with >1 dV impairment
Big Bend	10	9
Caney Creek	119	80
Upper Buffalo	81	61
Wichita Mountains	92	67
Breton Island	24	18

The number of days with perceptible visibility impairment compared to natural background conditions ranges from 9 days per year at Big Bend National Park to 80 days per year at Caney Creek Wilderness Area.

Discussion: The results assuming 50% conversion of SO<sub>2</sub> to particulate sulfur is higher than what would be expected on average, but less than what might be expected for a maximum. Conversion in clouds can be tens of percent per hour but would more typically be on the order of one percent per hour during daytime otherwise. Conversion rates at night in the absence of clouds are thought to be much less than one percent per hour. However, a study by the Tennessee Valley Authority in 1998 (<http://www.tva.gov/environment/air/ontheair/cumberland.htm>) showed 50% conversion of plume SO<sub>2</sub> to particulate sulfur after 7.5 hours travel time. At a typical wind speed of 15 km/hour, transport from proposed facilities to the nearby Class I area of Caney Creek would take roughly 20 hours. Table 3 shows how the number of six hour periods with visibility impairment would vary with different rates of SO<sub>2</sub> to particulate sulfur conversion.

It should be noted that more distant areas such as Big Bend would be expected to have higher conversion rates than nearby areas due to the longer transport times.

**Table 3. Number of 6 hour periods with visibility impairment >1 dv by percent of SO<sub>2</sub> to particulate sulfur conversion. Visibility impairment is in relation to natural background.**

Class I area	50%	30%	20%	15%	10%
Big Bend	10	1	0	0	0
Caney Creek	119	65	38	28	20
Upper Buffalo	81	33	10	4	1
Wichita Mountains	92	47	15	5	3
Breton Island	24	2	1	1	0

Table 3 shows that even at a low conversion of 10% of SO<sub>2</sub> to particulate sulfur, Caney Creek would experience perceptible visibility impairment compared to natural background 20 six hour periods per year. At a moderate rate of conversion of SO<sub>2</sub> to particulate sulfur of 20%, three

Class I areas would have impaired visibility from the proposed facilities 10 or more six hour periods per year.

Conclusions: Even not accounting for visibility impacts from primary particulate matter emitted from the proposed facilities and any secondary nitrate formed, perceptible visibility impairment is likely for a large number of days per year at Caney Creek Wilderness, Upper Buffalo Wilderness, and Wichita Mountains Wilderness. Impairment would be much less frequent, but still possible at Breton Island Wilderness and Big Bend National Park. The impairment was assessed in comparison to natural background visibility, but would also occur at visibility levels significantly hazier than natural background.

## 2. *Impacts from a single facility*

Also considered is the potential for visibility impairment from a single one of the proposed facilities. Modeling was performed for the Monticello Unit 4. It is within about 180 km from Caney Creek Wilderness. The same modeling methodology as described above for the cumulative analysis was used except only emissions from Monticello Unit 4 were included.

Results: The analysis indicated potential for perceptible visibility impairment compared to natural background conditions for 11 days at Caney Creek Wilderness, 11 days at Upper Buffalo Wilderness, and one day at Breton Island Wilderness. At Caney Creek and Upper Buffalo SO<sub>2</sub> to sulfate conversion rates of as little as 16% and 19%, respectively would be needed for 1 dV reduction in visibility from the proposed Monticello Unit 4. Primary particulate emissions from the proposed facility would contribute additionally to visibility impairment.

## 3. *Reasonableness of HYSPLIT concentration calculations*

Dispersion factors obtained by HYSPLIT for the Monticello unit 4 analysis were compared to dispersion functions derived by atmospheric tracer measurements for the Project MOHAVE (Pitchford et al, 2000; Green, 1999) and BRAVO visibility studies (Pitchford et al. 2004). The dispersion factor of a tracer or plume reaching a receptor point is given by a quantity termed influence function (IF). The influence function is the concentration due to the source divided by the emission rate. Tracer studies have shown that maximum influence function decreases with distance at about a linear rate when plotted on a log-log scale.

The maximum 6-hour average influence function given by HYSPLIT at Caney Creek (180 km from Monticello unit 4) was  $6.05 \times 10^{-9}$  seconds per cubic meter ( $\text{sm}^{-3}$ ). For the BRAVO study the 6 hour tracer sampling sites were located at greater distances from the tracer release locations. A maximum IF of  $5.6 \times 10^{-9} \text{ sm}^{-3}$  was measured at a distance of 364 km from the tracer release location. This is similar to the IF predicted by HYSPLIT at 180 km which should have a higher IF due to being closer to the source. This suggests that the HYSPLIT model is giving reasonable amounts of dispersion and is not overestimating potential concentrations. For the Project MOHAVE study, 24 hour average IF's were calculated. At 180 km from the tracer release location, the maximum IF for the summer study was  $4.5 \times 10^{-9} \text{ sm}^{-3}$ . For a 6 hour average, the maximum IF would be expected to be significantly higher, at least as high as the maximum value obtained by HYSPLIT at Caney Creek from Monticello Unit 4.

In summary the tracer studies support the reasonableness of the HYSPLIT dispersion modeling results.

### **Summary of Technical Analysis**

The HYSPLIT transport and dispersion modeling results, combined with reasonable assumption of sulfur dioxide to particulate sulfur conversion factors showed that perceptible impacts to visibility from the proposed TXU power plants would occur on many days per year at Class I areas in nearby states. These impacts would be most noticeable in relation to natural background conditions but would also occur at visibility levels closer to current conditions. Impacts at Caney Creek Wilderness and Upper Buffalo Wilderness are also predicted for the single source of Monticello Unit 4. The analysis did not include effects of primary particulate emissions and nitrate due to the facilities. These impacts would be in addition to the particulate sulfur effects assessed here.

Comparison of HYSPLIT dispersion factors to those obtained by tracer studies showed that the HYSPLIT factors are reasonable.

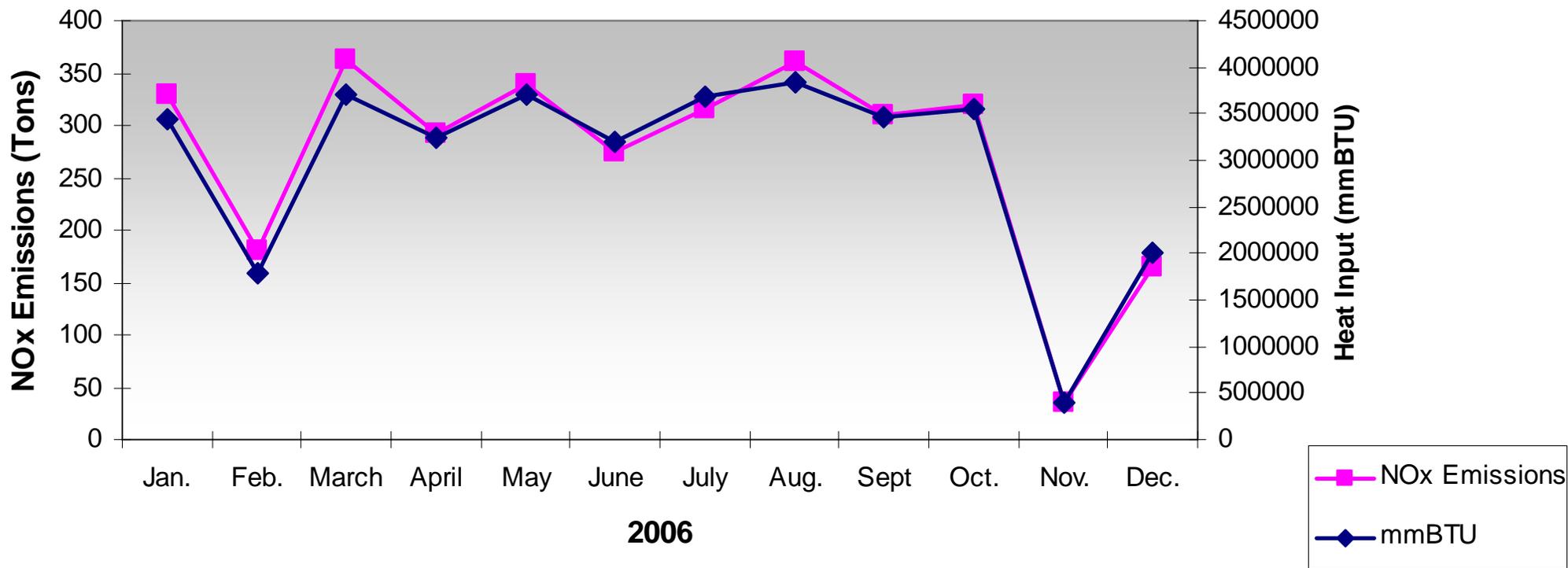
The dismissal of potential impacts because the distances to Class I areas is greater than 100 km is contradicted by the analysis.

### **References:**

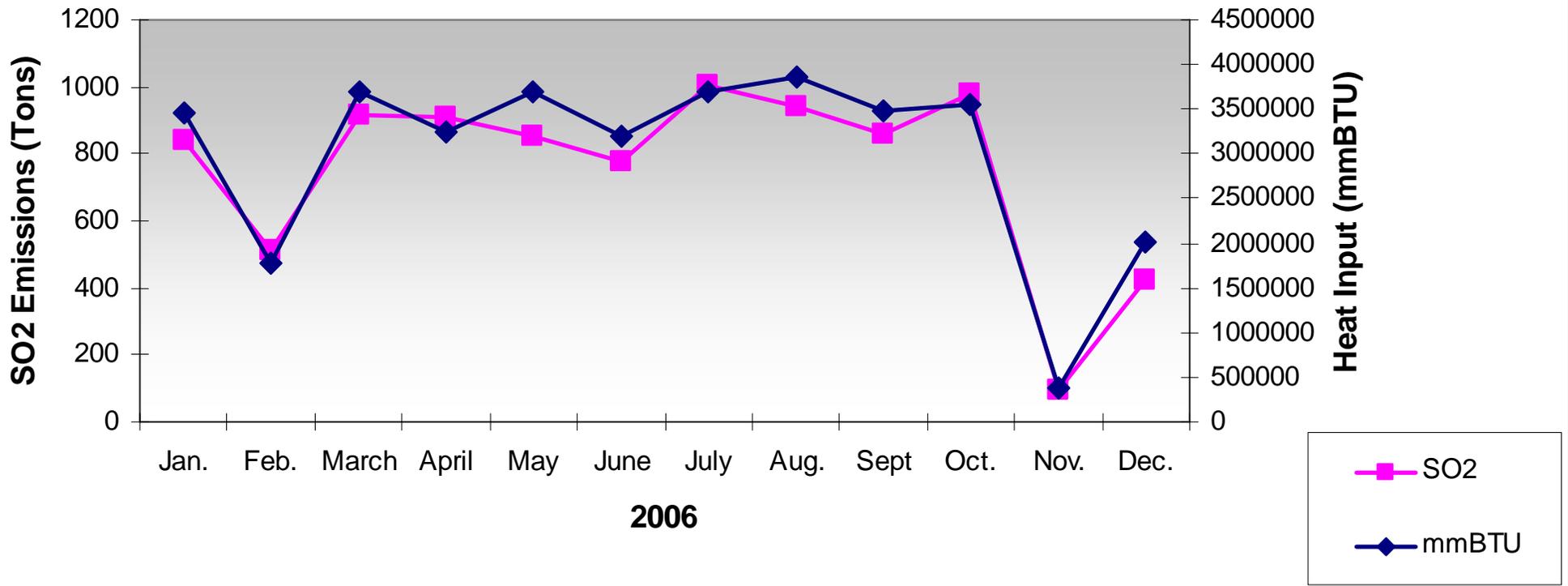
- Draxler, R., Stunder, B., Rolph, G., Taylor, A., 2006. HYSPLIT 4 User's Guide. Available at [http://www.arl.noaa.gov/data/web/models/hysplit4/win95/user\\_guide.pdf](http://www.arl.noaa.gov/data/web/models/hysplit4/win95/user_guide.pdf) Accessed January 2007.
- Green, M.C., 1999: The Project MOHAVE Tracer Study: Study design, data quality, and overview of results. *Atmos. Environ.*, **33**, 1955-1968.
- Pitchford, M., M. Green, H. Kuhns, and R. Farber, 2000: Characterization of regional transport and dispersion using Project MOHAVE Tracer Data. *J. of Air & Waste Mgmt. Asso.*, **50**, 733-745.
- Pitchford, M., Tombach, I., Barna, M., Gebhart, K., Green, M., Knipping, E., Kumar, N., Malm, W., Pun, B., Schichtel, B., Seigneur, C., 2004. Big Bend Regional Aerosol and Visibility Observational Study. Final Report, September 2004. <http://vista.cira.colostate.edu/improve/>.
- USEPA, 2003. Guidance for estimating natural background visibility conditions under the regional haze rule. EPA report EPA-454/B-03-005. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, September 2003. Obtained at: [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_envcurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf)

# Attachment 4

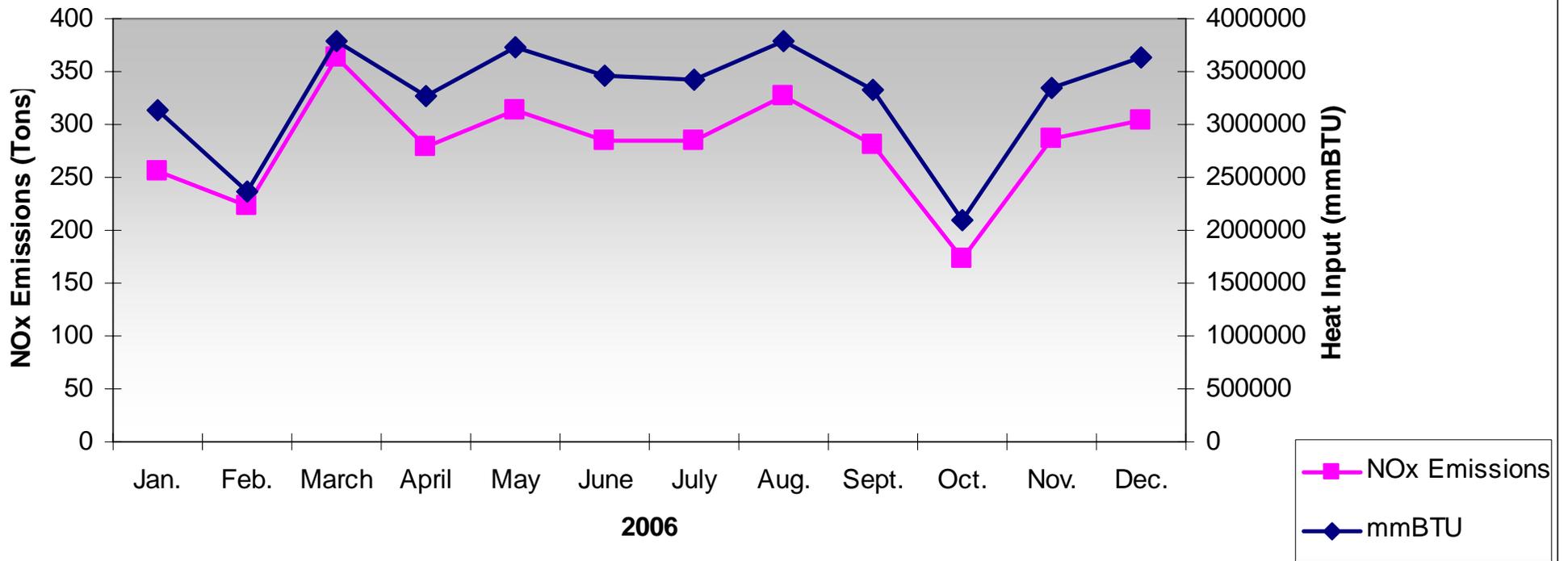
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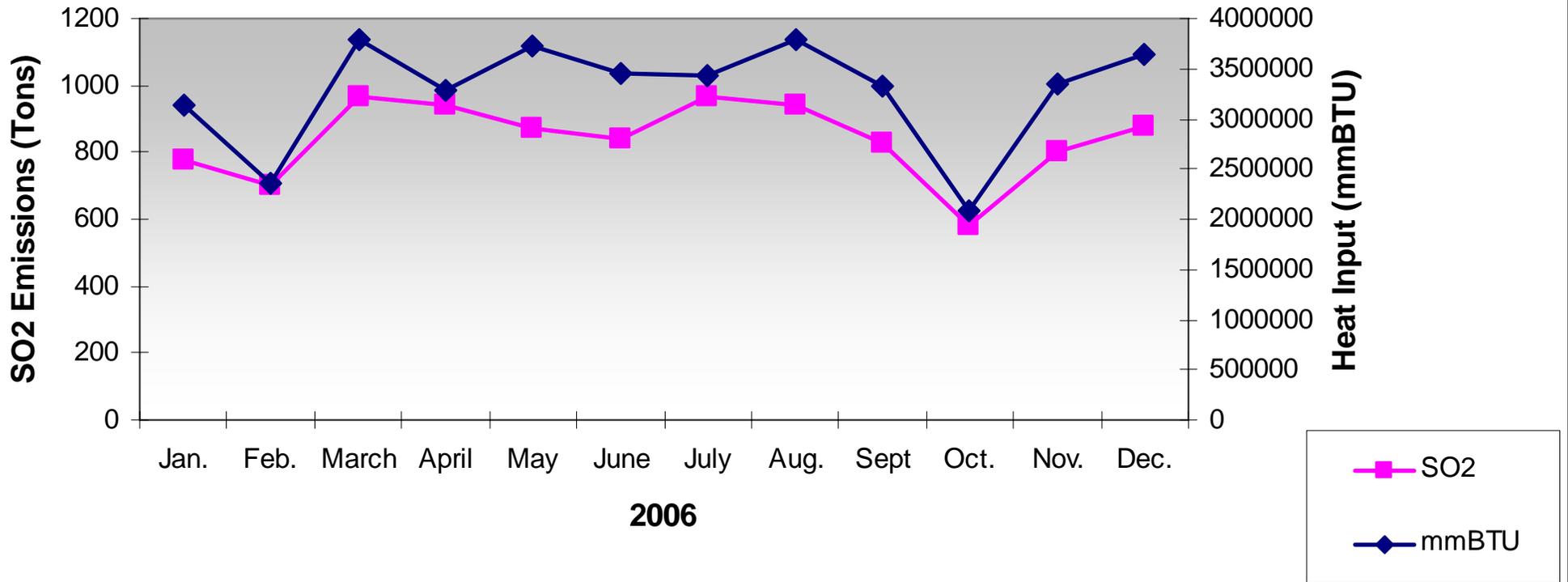
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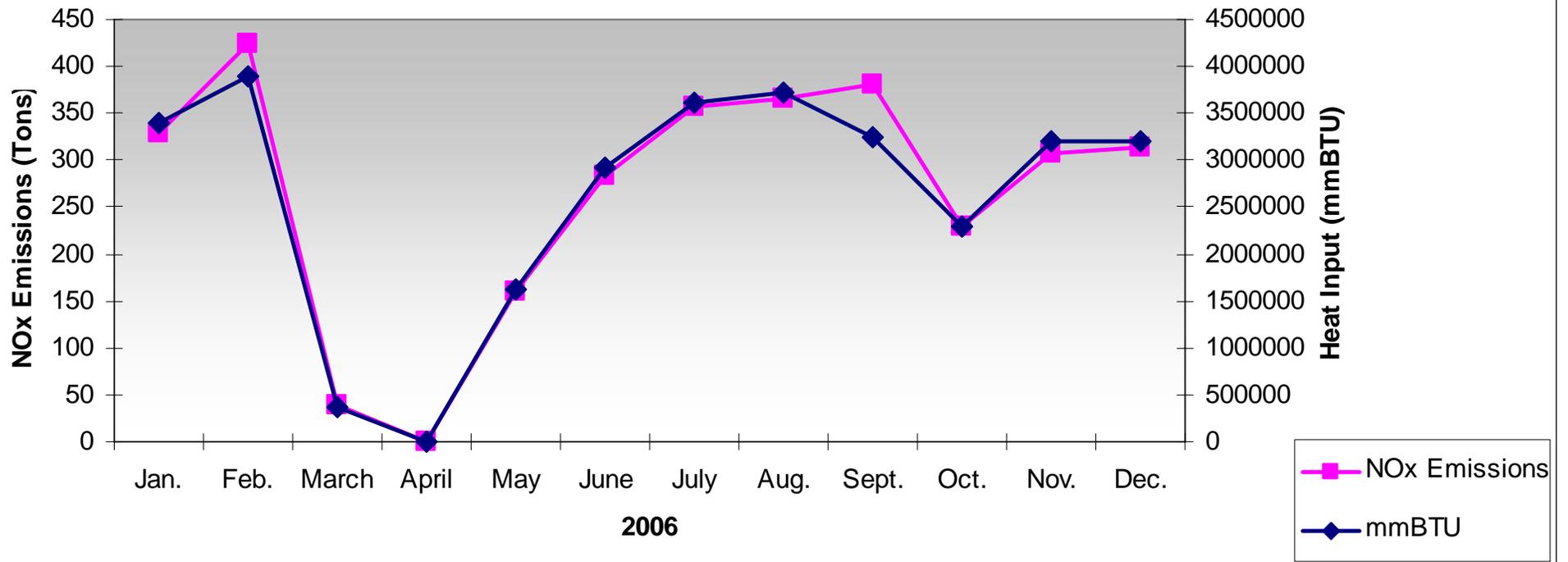
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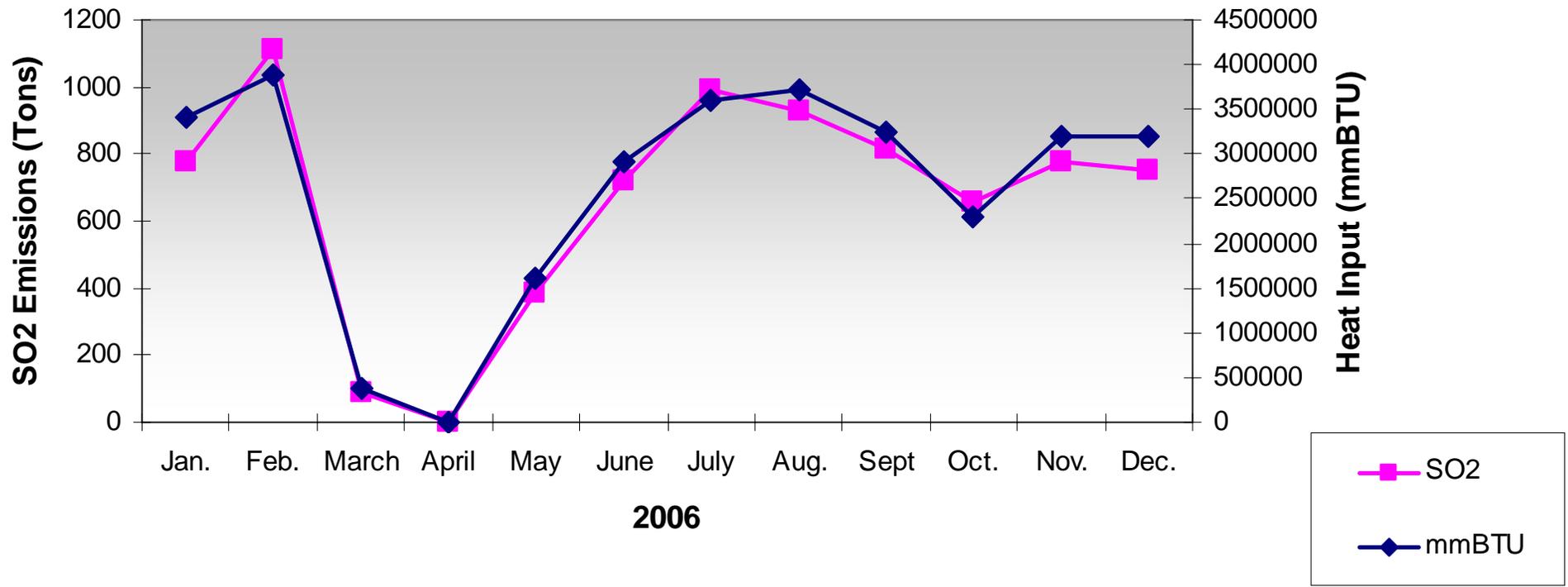
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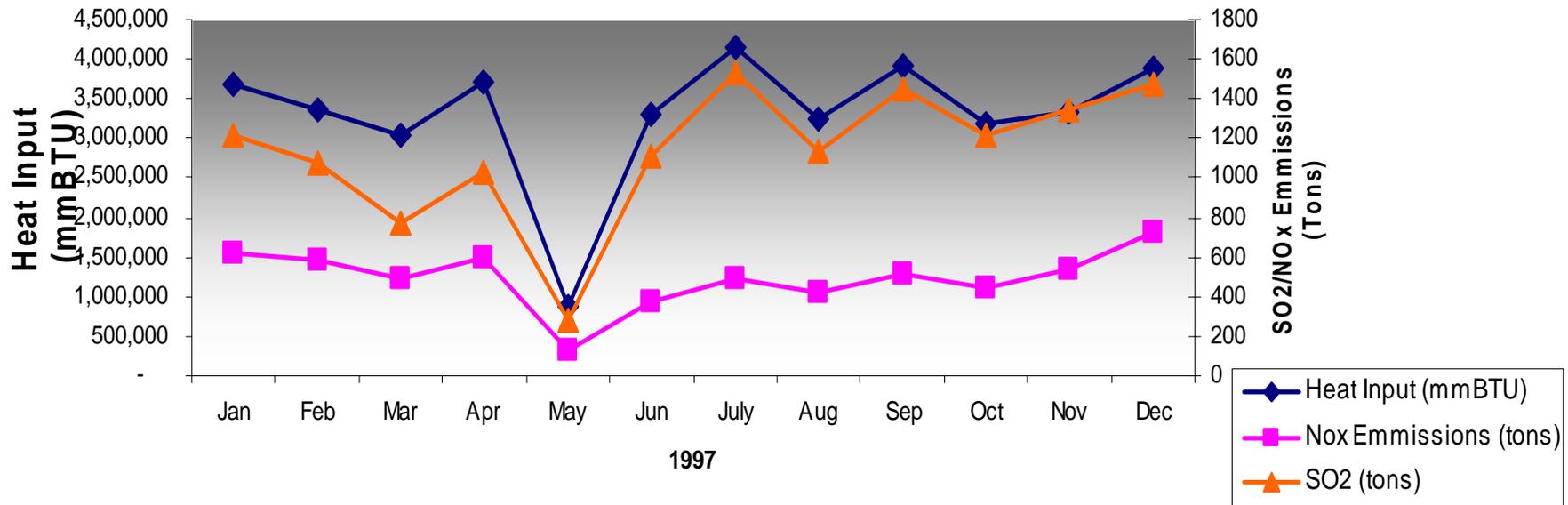
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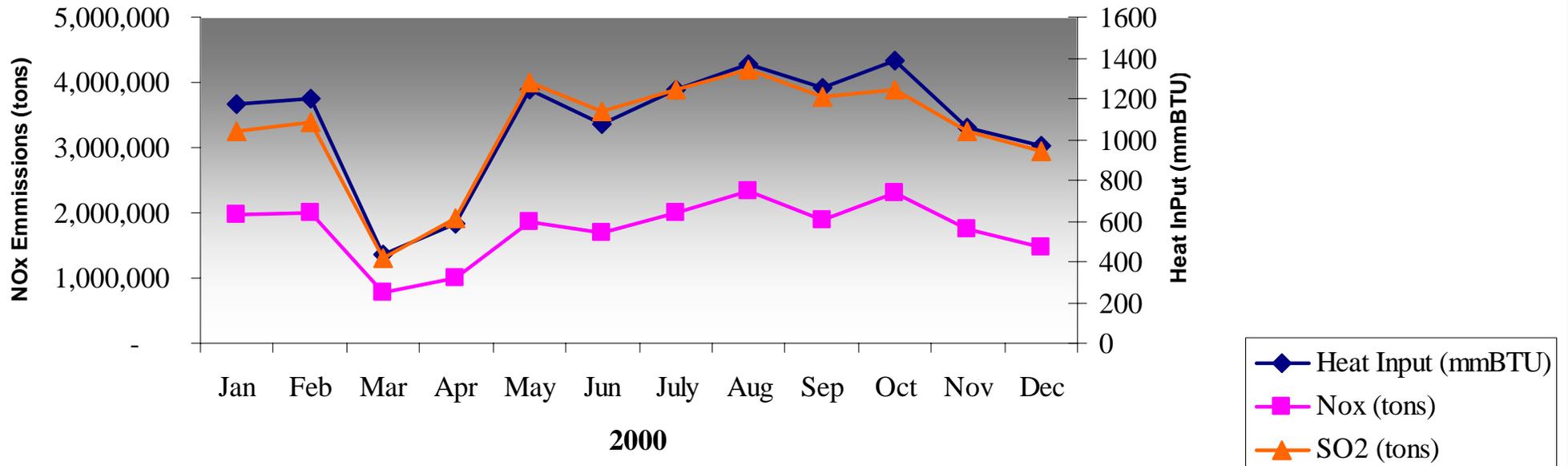
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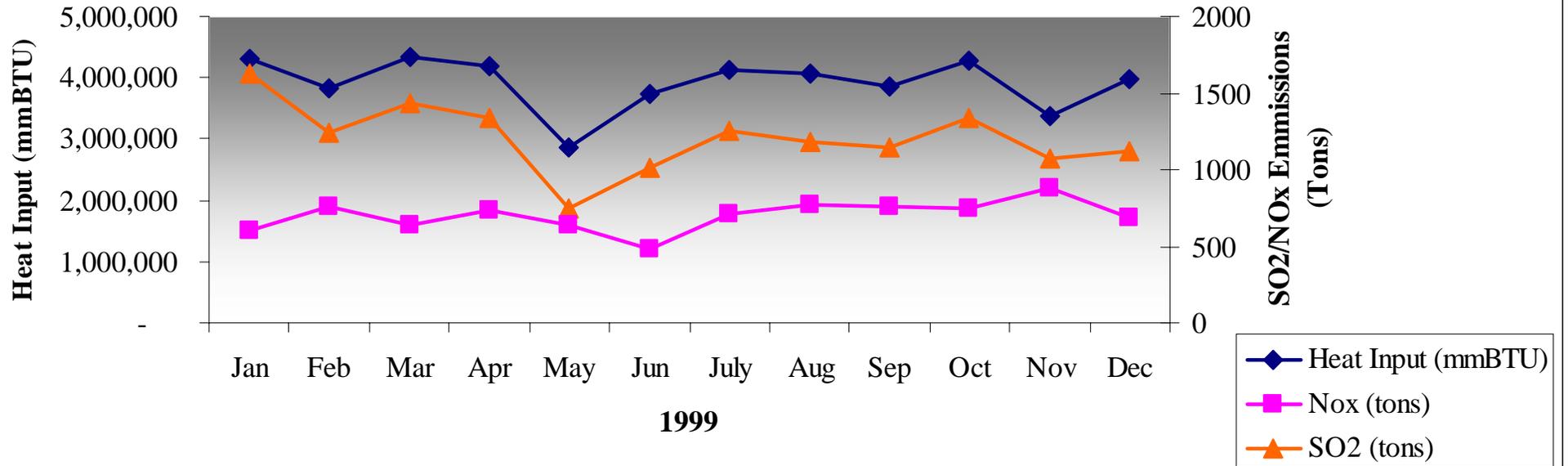
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Unit 2, Welsh Power Plant**



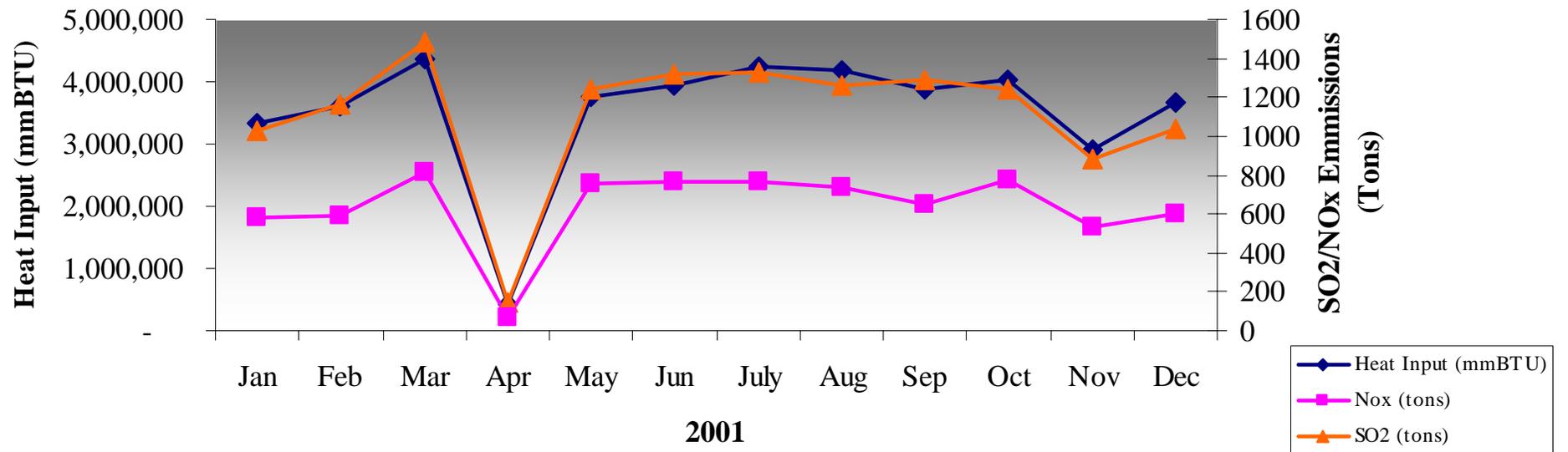
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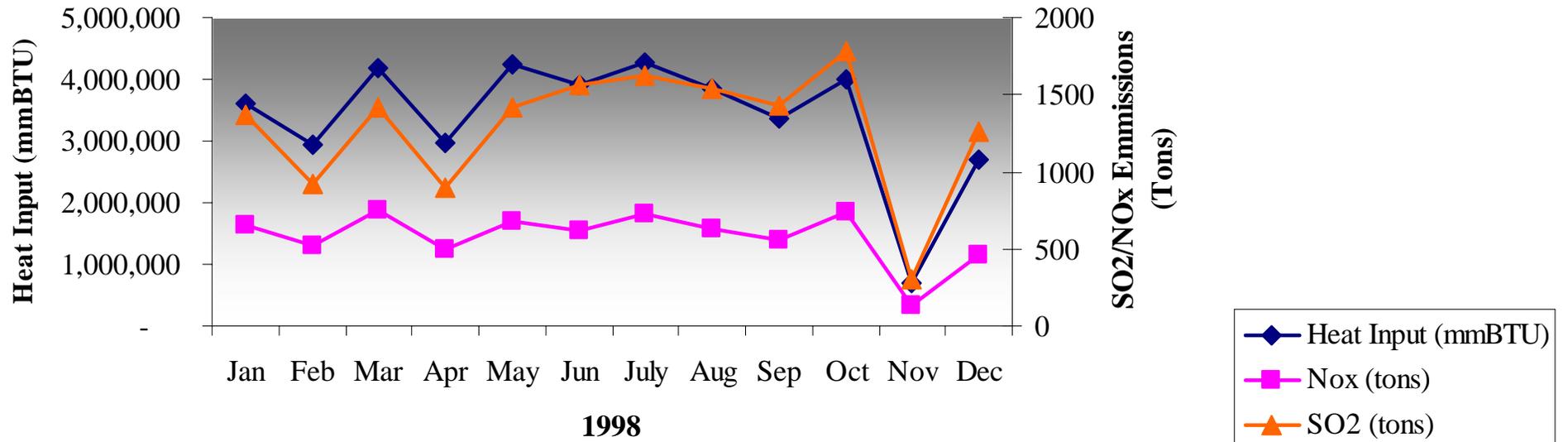
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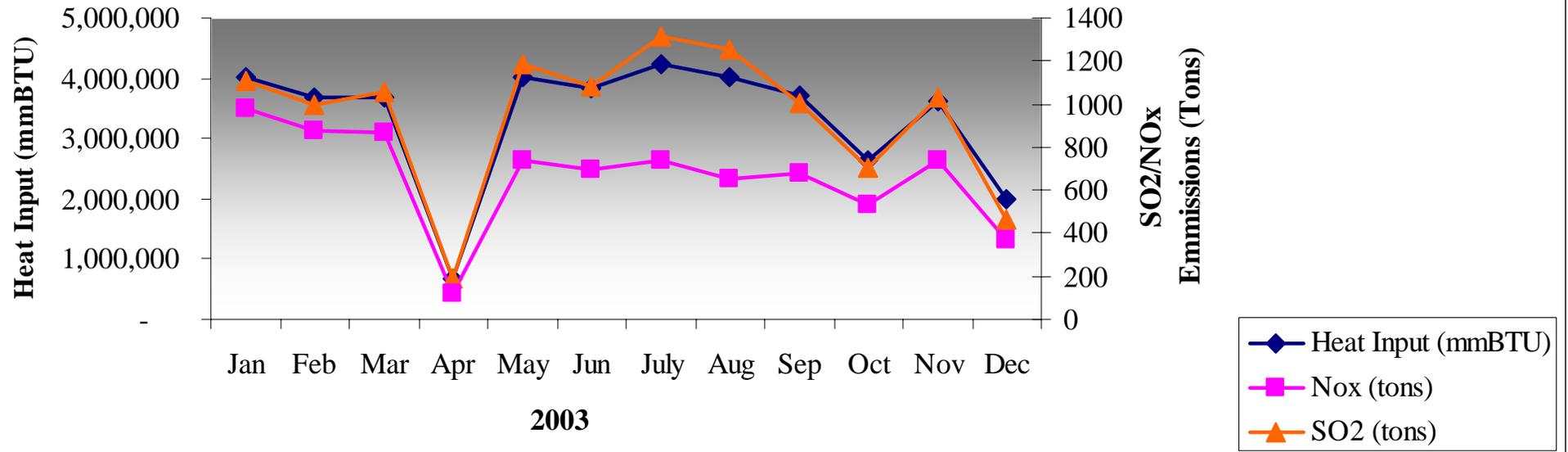
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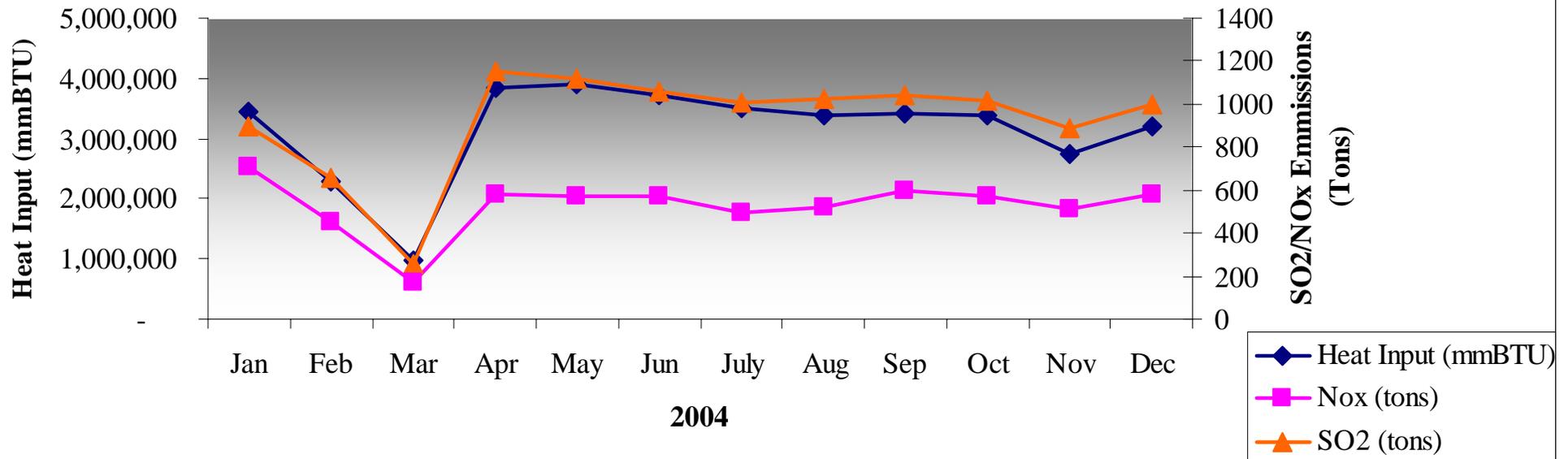
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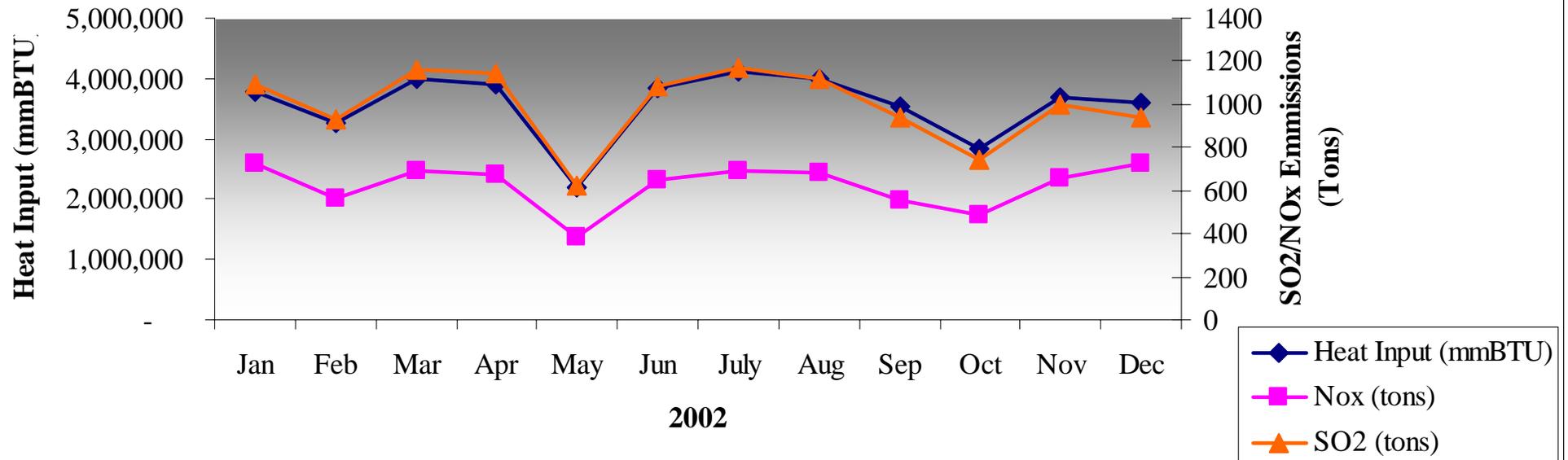
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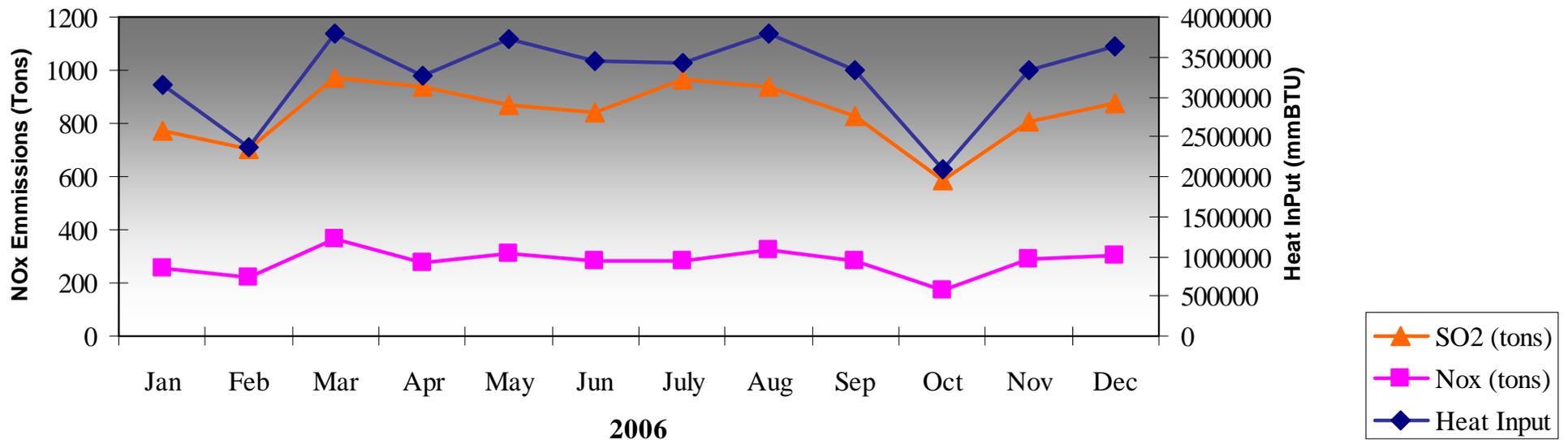
**2004 Monthly SO<sub>2</sub>, NO<sub>x</sub> & Heat Input Tracking  
Unit 2 Welsh Power Plant**



**2002 Monthly SO<sub>2</sub>, NO<sub>x</sub> & Heat Input Tracking  
Unit 2, Welsh Power plant**



**2006 Monthly SO<sub>2</sub>, NO<sub>x</sub> & Heat Input Tracking  
Unit 2, Welsh Power Plant**



**2005 Monthly SO<sub>2</sub>, NO<sub>x</sub> & Heat Input Tracking  
Unit 2, Welsh Power Plant**

