South Dakota
GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 2, 2011

James B. Martin
Regional Administrator
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Dear Mr. Martin:

On March 24, 2011, EPA notified the Governor of South Dakota that EPA revised the sulfur dioxide National Ambient Air Quality Standard and initial area designations are due by June 3, 2011. EPA revised the primary sulfur dioxide standard by adding a 1-hour average concentration.

On January 18, 2011, Governor Daugaard submitted a letter to you designating the Secretary of the Department of Environment and Natural Resources as his designee for submitting designations and other matters which involves South Dakota's Air Quality Program. In that capacity, I recommend EPA designate all counties in South Dakota as attaining the 1-hour sulfur dioxide standard (see Attachment A) based on the attached supportive document. Attachment B provides the technical analysis for designating all of South Dakota's counties in attainment. Attachment C provides a copy of the Air Quality System AMP450 report showing the yearly 99th percentile concentrations for each site and includes the one year of data collected near the Big Stone Power Plant in Roberts County.

Thank you for the opportunity to propose designations for the revised primary sulfur dioxide standard and I look forward to your concurrence. If you have questions, please contact Brian Gustafson at 605-773-3151.

Sincerely,

Steven M. Pirner
Secretary

Attachments

cc: Monica Morales, EPA Region 8

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U.S. EPA Region 8
RA's Office

JUN 07 2011

Attachment A
South Dakota Area Designations
1-hour Sulfur Dioxide Standard

Designated Area	Designation Type	Classification Type
Aurora County	Attainment	
Beadle County	Attainment	
Bennett County	Attainment	
Bon Homme County	Attainment	
Brookings County	Attainment	
Brown County	Attainment	
Brule County	Attainment	
Buffalo County	Attainment	
Butte County	Attainment	
Campbell County	Attainment	
Charles County	Attainment	
Clark County	Attainment	
Clay County	Attainment	
Codington County	Attainment	
Corson County	Attainment	
Custer County	Attainment	
Davison County	Attainment	
Day County	Attainment	
Deuel County	Attainment	
Dewey County	Attainment	
Douglas County	Attainment	
Edmunds County	Attainment	
Fall River County	Attainment	
Faulk County	Attainment	
Grant County	Attainment	
Gregory County	Attainment	
Haakon County	Attainment	
Hamlin County	Attainment	
Hand County	Attainment	
Hanson County	Attainment	
Harding County	Attainment	
Hughes County	Attainment	
Hutchinson County	Attainment	
Hyde County	Attainment	
Jackson County	Attainment	
Jerauld County	Attainment	
Jones County	Attainment	
Kingsbury County	Attainment	
Lake County	Attainment	

Designated Area	Designation Type	Classification Type
Lawrence County	Attainment	
Lincoln County	Attainment	
Lyman County	Attainment	
Marshall County	Attainment	
McCook County	Attainment	
McPherson County	Attainment	
Meade County	Attainment	
Mellette County	Attainment	
Miner County	Attainment	
Minnehaha County	Attainment	
Moody County	Attainment	
Pennington County	Attainment	
Perkins County	Attainment	
Potter County	Attainment	
Roberts County	Attainment	
Sanborn County	Attainment	
Shannon County	Attainment	
Spink County	Attainment	
Stanley County	Attainment	
Sully County	Attainment	
Todd County	Attainment	
Tripp County	Attainment	
Turner County	Attainment	
Union County	Attainment	
Walworth County	Attainment	
Yankton County	Attainment	
Ziebach County	Attainment	

Attachment B
Determining Area Designations

1. Air Monitoring

Sulfur dioxide 1-hour concentrations in South Dakota are low statewide. The highest design value concentration was recorded at the SD School Site in Sioux Falls at 19% of the new 1-hour standard. The Badlands and Wind Cave sites have the lowest design value concentrations at 8% of the standard. The concentrations in South Dakota are low for several reasons. First, the state's population and sulfur dioxide emissions from area sources are low. Second, all but five sources with Title V air quality permits in the state emit sulfur dioxide emissions less than 100 tons per year. Finally, sulfur dioxide emissions from area sources will continue to decline because of the move to ultra low sulfur fuels that began in 2010.

Table B-1 displays the three year calculated design value concentration for each site. The design value concentration for the SD School, Wind Cave, and Badlands Sites used data from 2008 to 2010. Both Union County sites have only two years of data. Roberts County only has 13 months of data.

Table B-1 – Site Design Values Concentrations in South Dakota

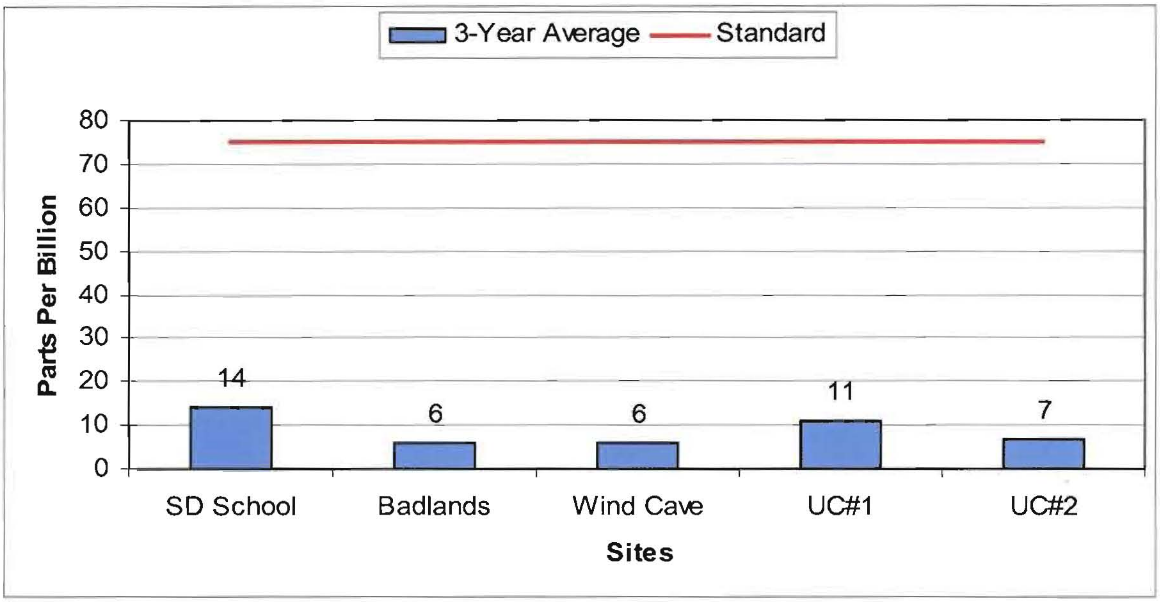
Site	County	99th Percentile	3-Year Average	Attainment
SD School	Minnehaha	2008 – 27 parts per billion 2009 – 10 parts per billion 2010 – 5 parts per billion	14 parts per billion	Yes
Badlands	Jackson	2008 – 5 parts per billion 2009 – 5 parts per billion 2010 – 9 parts per billion	6 parts per billion	Yes
Wind Cave	Custer	2008 – 3 parts per billion 2009 – 10 parts per billion 2010 – 5 parts per billion	6 parts per billion	Yes
UC #1	Union	2009 – 10 parts per billion 2010 – 12 parts per billion	11 parts per billion	[1]
UC #2	Union	2009 – 6 parts per billion 2010 – 9 parts per billion	7 parts per billion	[1]
Big Stone II	Roberts	2001 - 5 parts per billion 2002 - 14 parts per billion	10 parts per billion	[1]

[1] – Not comparable to the standard because there is less than 3 years of data.

The sulfur dioxide 1-hour concentrations collected in the state during the years of 2001 to 2002 and 2008 to 2010 demonstrate there were no 1-hour concentrations exceeding the new primary standard as calculated following the form of the standard. The highest three year average was recorded at the SD School Site with a three year average concentration level of 14 parts per billion.

Figure B-1 provides a graph comparison of the design values for each site compared to the 1-hour sulfur dioxide standard. Although the Big Stone II, Union County #1 and Union County #2 Sites do not have three years of data, the two year average of the 99th percentile is provided for comparison purposes.

Figure B-1 – Data Compared to the 1-hour Sulfur Dioxide Standard



The Badlands and Wind Cave sites represent rural areas consisting mainly of rangeland and forested areas in the western half of South Dakota while the Union County sites represent the farming area in the eastern half of South Dakota. The SD School Site represents South Dakota's largest populated area in the Sioux Falls Metropolitan Statistical Area (MSA). The Big Stone II site represents sulfur dioxide concentrations near South Dakota's largest emitting sulfur dioxide source. Based on the monitoring data which reflects the potential highest and lowest sulfur dioxide concentrations in the state, South Dakota is attaining the 1-hour sulfur dioxide National Ambient Air Quality Standard in every county in the state.

2. Air Modeling

EPA's Memorandum from Stephen D. Page to Regional Air Division Directors, I-X, dated March 24, 2011, indicates EPA may initially designate an area as attainment if it is clear it meets the new sulfur dioxide National Ambient Air Quality Standards (NAAQS). EPA further states it does not believe it would be appropriate to designate areas as attainment without appropriate refined dispersion modeling and where available, air quality monitoring data indicating no violations of the NAAQS. DENR agrees modeling may be used as a tool by states but disagrees it is the only tool to demonstrate attainment for the following reasons:

1. DENR recently used AERMOD to model the impacts of an existing coal-fired electric power plant using sulfur dioxide emissions being reported to EPA in accordance with the Acid Rain Program. A receptor was placed on two ambient air quality monitoring sites to compare hourly monitoring data to the hourly modeling data. This comparison assumed no other sulfur dioxide emitting sources were impacting the monitors. In realty, if the model was accurate, the modeling results would be less than the monitoring results. The comparison indicated AERMOD may over-predict the concentrations of sulfur dioxide greater than a factor of two (see Appendix D for analysis).

2. In accordance with 40 CFR Part 51, Appendix W, uncertainties and accuracy of the models are discussed. As noted in section 9.1.2, Studies of Model Accuracy, "(1) Models are more reliable for estimating longer time-averaged concentrations than for estimating short-term concentrations at specific locations; and (2) the models are reasonably reliable in estimating the magnitude of highest concentrations occurring sometime, somewhere within an area. For example, errors in highest estimated concentrations of ± 10 to 40 percent are found to be typical, *i.e.,* certainly well within the often quoted factor-of-two accuracy that has long been recognized for these models. However, estimates of concentrations that occur at a specific time and site are poorly correlated with actually observed concentrations and are much less reliable."
3. EPA did not provide states or the public an opportunity to comment on EPA's new policy of placing more confidence on a model for designations than ambient air quality monitoring. In the proposed rule, EPA stated it would use monitoring for designation purposes but in the final rule it required modeling for attainment designations. This flip flop was initiated by one city and three states suggesting the use of modeling for designations. If you turn this around, 47 states and the rest of the nation's cities agreed monitoring should be used for designations.
4. This flip flop is also contrary to EPA's previous decisions, court cases, and rule:
    a. On page 26382 of the Federal Register, Vol. 43, No. 118, June 19, 1972, EPA states in the preamble to the 1977 PSD rules, "...EPA intends that monitoring should generally focus on obtaining data necessary for required review against NAAQS. Although the increment consumption must of necessity be tracked through the use of modeling, EPA does not intend that there be no "real world" checks on the accuracy of modeling."
    b. In Alabama Power Co. v. Costle C.A.D.C. 1979, the U.S. Court of Appeals, District of Columbia Circuit states, "We discern from the statute a technology-forcing objective. Congress intended that monitoring would impose a certain discipline on the use of modeling techniques, which would be the principal device relied upon for the projection of the impact on air quality of emissions from a regulated source. This projects that the employment of modeling techniques be held to earth by a continual process of confirmation and reassessment, a process that enhances confidence in modeling, as a means for realistic projection of air quality."
    c. This is further emphasized by EPA's current rules under the Prevention of Significant Deterioration program. In accordance with 40 CFR §52.21(m)(2), if the Administrator believes it is necessary, the owner or operator shall conduct ambient air quality monitoring, "...to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area." Even after a PSD source has demonstrated it is can construct and operate and not cause a violation of the National Ambient Air Quality standard or PSD increment using modeling, EPA may require a source to conduct monitoring to ensure the modeling provided realistic results and no violations will occur.

Historically, both Congress and EPA intended for monitoring to be the real determination on if an area is attaining the National Ambient Air Quality Standards. If EPA wants to use modeling as the only tool to designate areas attaining or not attaining the 1-hour sulfur dioxide standard, the actual requirement to use modeling should have been proposed in the rule to allow everyone an opportunity to comment on this decision. DENR believes monitoring provides the reality check both Congress and EPA believe are necessary for states to demonstrate an area is attaining or not attaining the standard and should be used for the 1-hour sulfur dioxide standard.

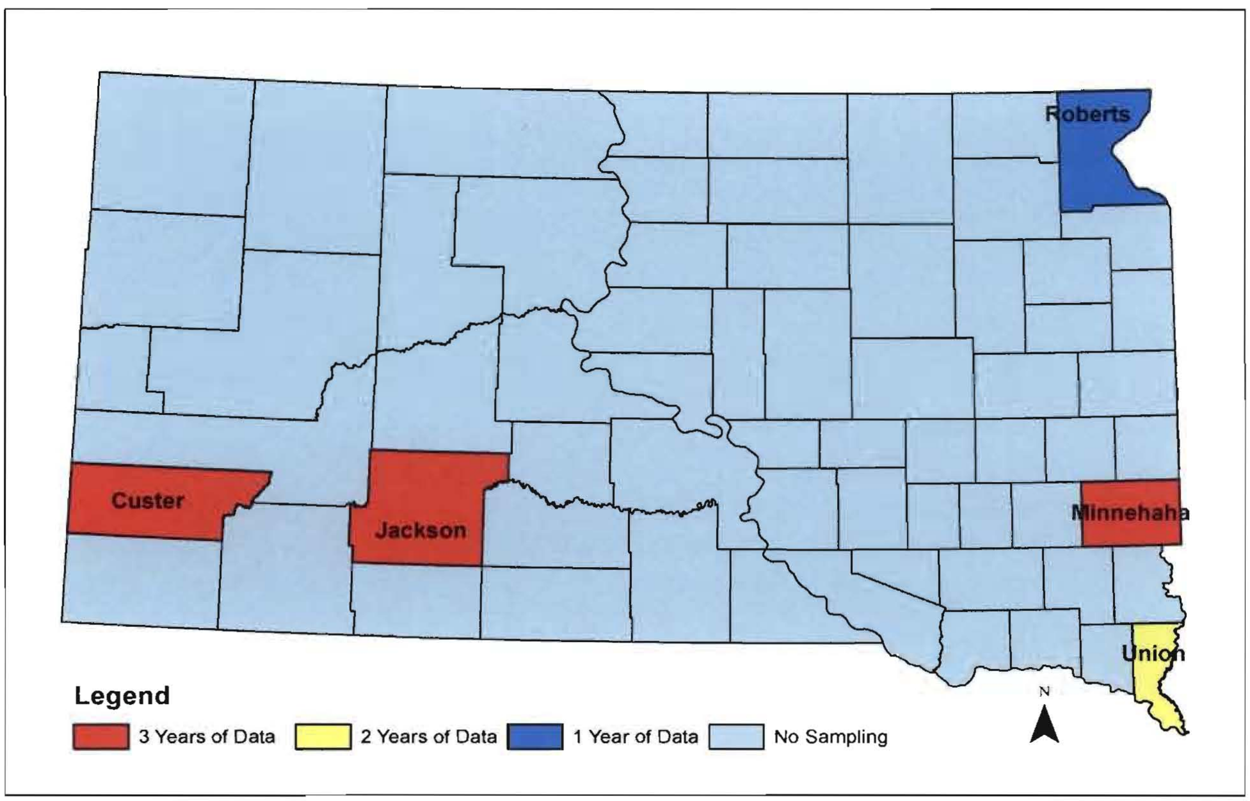
3. Sulfur Dioxide Monitoring Network in South Dakota

The first sampling effort in South Dakota to collect hourly sulfur dioxide data was near the Big Stone Power Plant. The monitoring location for sulfur dioxide was based on modeling indicating the area of highest concentrations near the facility and in South Dakota. A continuous 12-month period of air monitoring was completed in the years of 2001 and 2002 as part of a Prevention of Significant Deterioration permit application. Sulfur dioxide levels were low with a 99th percentile 1-hour average concentration level of 10 parts per billion.

DENR operates a network of air monitoring sites which began collecting hourly sulfur dioxide data in 2002. The first site was established at the Hilltop Site in Sioux Falls. The monitor was later moved to the SD School Site and continues today. In 2005, two more locations were added at the Badlands and Wind Cave National Parks. In 2009, two more locations were added in Union County.

The current sampling network includes sites in several counties around the state with goals of high concentration, population, source impact, background and regional transport. See Figure B-2 for a map of the state showing the counties with sulfur dioxide air monitoring data.

Figure B-2 – South Dakota Counties with Sulfur Dioxide Data



4. South Dakota's Population and Sulfur Dioxide Emissions

If EPA still wishes to use a policy of using modeling for designation purposes, the final rule on page 35551 states, "...we believe that for a short-term 1-hour standard it is more technically appropriate, efficient, and effective to use modeling as the principle means of assessing compliance for medium to larger source, and to rely more on monitoring for groups of small sources and sources not as conductive to modeling."

Sulfur dioxide emissions from Title V major sources throughout South Dakota are low to medium with one source that could be considered large. Table B-2 provides a list of the top 10 major sources emitting sulfur dioxide in calendar year 2009 and represents 75% of the state's total emissions from permitted sources.

Table B-2 – Top 10 Sulfur Dioxide Emitters in South Dakota (tons per year)

#	County	Facility	Tons/Year
1	Grant	Otter Tail Power Company – Big Stone I	11,651
2	Pennington	Black Hills Corporation – Ben French	823
3	Pennington	GCC Dacotah	285
4	Brookings	South Dakota State University	183
5	Sioux Falls	John Morrell & Company	170
6	Brookings	Valero Renewable Fuels Company	85
7	Spink	Redfield Energy	42
8	Turner	Great Plains Ethanol	21
9	Minnehaha	Sioux Falls Water Reclamation Facility	13
10	Codington	Glacial Lakes Energy	11
		Top 10 Total =	**13,284**
		Total for Entire State	**17,826**

South Dakota has counties with low population and no large sources of sulfur dioxide emissions as can be seen in Table B-2. The sulfur dioxide concentrations in these areas would be similar to the concentrations South Dakota is experiencing at its Badlands, Wind Cave, and Union County monitoring sites depending on what rural area one is located. DENR believes these sites meet EPA's requirement that monitoring should be used for designation purposes, not modeling.

South Dakota has other counties with low population and several sources of sulfur dioxide that would not be considered large sources of sulfur dioxide emissions (see Attachment E). These counties would have concentrations somewhere in between the concentrations at the rural sites and SD School Site. DENR believes these sites meet EPA's requirement that monitoring should be used for designation purposes, not modeling.

The largest city in South Dakota is Sioux Falls with a population of less than 153,888. The largest of the three MSAs in the state includes the city of Sioux Falls and includes the counties of Minnehaha, Lincoln, McCook, and Turner. The combined 2010 Census population for the Sioux Falls MSA is 228,261. Table B-3 provides a list of the top 10 most populated counties in the state and the largest city within the county. The largest populated area in South Dakota has sources of sulfur dioxide emissions that would not be considered large sources of sulfur dioxide. DENR believes even this site meets EPA's requirement that monitoring should be used for designation purposes, not modeling.

Table B-3 – Ten Highest Population Counties in South Dakota

Number	County	Population	Largest City	Population
1	Minnehaha	169,468	Sioux Falls	153,888
2	Pennington	100,948	Rapid City	67,956
3	Lincoln	44,828	Sioux Falls	153,888
4	Brown	36,531	Aberdeen	26,091
5	Brookings	31,965	Brookings	22,056
6	Codington	27,227	Watertown	21,482
7	Meade	25,434	Sturgis	6,627
8	Lawrence	24,097	Spearfish	10,494
9	Yankton	22,438	Yankton	14,454
10	Davison	19,504	Mitchell	15,254

Grant County has the highest emission total for sulfur dioxide in South Dakota and the emissions are generated by the Big Stone I Power Plant. DENR does not believe modeling is necessary even at this site since modeling was used to determine the location of highest concentrations and an ambient air monitor was located at the modeling site in Roberts County and recorded concentrations just over 13% of the 1-hour sulfur dioxide standard. In addition, sulfur dioxide emissions will be lowered from Big Stone I once the control equipment required by the Regional Haze Program is installed. Therefore, even Grant County should be designated attainment based on monitoring results.

Attachment C
Air Quality System Report AMP450

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY -
AIR QUALITY SYSTEM
QUICK LOOK REPORT (AMP450)

May. 11, 2011

Sulfur dioxide (42401) South Dakota Parts per billion (008)

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	OBS	COMP QTRS	1ST MAX 1-HR	2ND MAX 1-HR	99TH PCTL 1-HR	1ST MAX 24-HR	2ND MAX 24-HR	Days >24HR STD	ARITH MEAN	CERT	EDT
46-033-0132	3	0973	Not in a city	Custer	WIND CAVE NATIONAL PARK, SOUTH DAKOTA	2008	060	8678	4	4.0	4.0	3.0	1.4	1.3	0	.23	N	0
46-033-0132	3	0973	Not in a city	Custer	WIND CAVE NATIONAL PARK, SOUTH DAKOTA	2009	060	6487	3	32.0	20.0	10.0	5.7	3.0	0	.53*		0
46-033-0132	3	0973	Not in a city	Custer	WIND CAVE NATIONAL PARK, SOUTH DAKOTA	2010	060	8640	4	16.0	10.0	5.0	2.8	2.6	0	.12		0
46-071-0001	3	0973	Not in a city	Jackson	BADLANDS PO BOX 6 HEADQUARTER S	2008	060	8616	4	7.0	6.0	5.0	6.0	5.0	0	1.28	N	0
46-071-0001	3	0973	Not in a city	Jackson	BADLANDS PO BOX 6 HEADQUARTER S	2009	060	8645	4	7.0	6.0	5.0	3.2	2.9	0	.84		0
46-071-0001	3	0973	Not in a city	Jackson	BADLANDS PO BOX 6 HEADQUARTER S	2010	060	8307	4	17.0	11.0	9.0	3.7	3.3	0	1.04		0
46-099-0008	3	0973	Sioux Falls	Minnehaha	2001 E 8th St	2008	060	8095	3	31.0	30.0	27.0	10.0	8.9	0	.89	Y	0
46-099-0008	3	0973	Sioux Falls	Minnehaha	2001 E 8th St	2009	060	8184	4	18.0	14.0	10.0	2.8	2.3	0	.20		0
46-099-0008	3	0973	Sioux Falls	Minnehaha	2001 E 8th St	2010	060	8678	4	6.0	6.0	5.0	1.9	1.7	0	.25		0
46-109-4003	3	0973	Not in a city	Roberts	482ND AVE	2001	060	1390	0	5.0	5.0	5.0	.7	.7	0	.04*	N	0
46-109-4003	3	0973	Not in a city	Roberts	482ND AVE	2002	060	6935	3	28.0	20.0	14.0	5.3	4.0	0	.19*	N	0
46-127-0001	3	0973	Not in a city	Union	31986 475th Ave	2009	560	8589	4	10.5	10.0	9.6	4.3	3.5	0	.22		0

Note: The * indicates that the mean does not satisfy summary criteria.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
QUICK LOOK REPORT (AMP450)

May. 11, 2011

Sulfur dioxide (42401) South Dakota Parts per billion (008)

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	OBS	COMP QTRS	1ST MAX 1-HR	2ND MAX 1-HR	99TH PCTL 1-HR	1ST MAX 24-HR	2ND MAX 24-HR	Days >24HR STD	ARITH MEAN	CERT	EDT
46-127-0001	3	0973	Not in a city	Union	31986 475th Ave	2010	560	8640	4	30.3	26.0	11.5	8.2	4.2	0	.40		0
46-127-0002	3	0973	Not in a city	Union	31307 473rd Ave	2009	560	8657	4	9.0	9.0	6.0	3.3	1.3	0	.16		0
46-127-0002	3	0973	Not in a city	Union	31307 473rd Ave	2010	560	8628	4	26.2	15.9	8.6	3.8	3.5	0	.32		0

Note: The * indicates that the mean does not satisfy summary criteria.

Attachment D
AERMOD Modeling Accuracy

This analysis was taken from DENR's section 4.4.1 – Modeling Accuracy of the Statement of Basis for Hyperion Energy Center's extension request for it Prevention of Significant Deterioration air quality permit #28.0701-PSD.

4.4.1 Model Accuracy

The modeling analysis indicates Hyperion will not cause or contribute to a violation of the new 1-hour sulfur dioxide National Ambient Air Quality Standard; but the analysis does show the modeled concentration plus the background monitoring concentration is within 2 percent of the new 1-hour sulfur dioxide National Ambient Air Quality Standard. Therefore, DENR considered several factors involving how realistic the models predict the concentration and what facility or facilities is contributing to the modeling concentration.

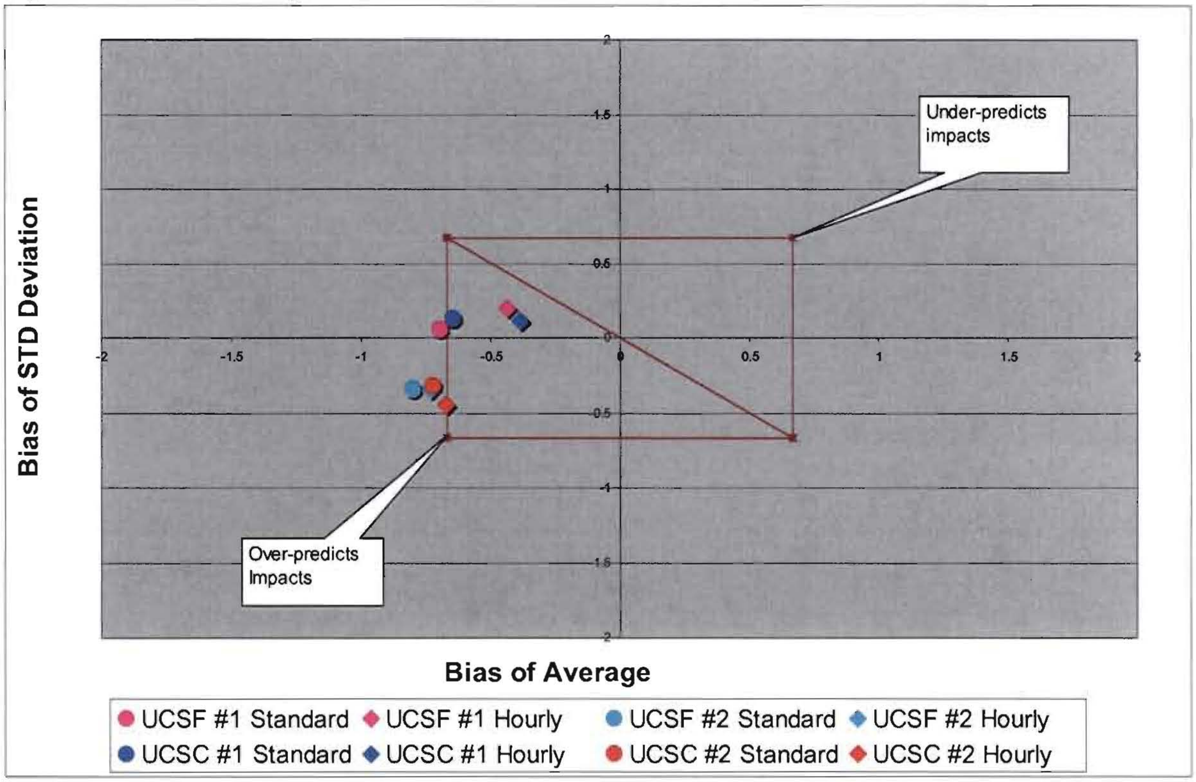
The high modeled sulfur dioxide concentrations are located in the southeast corner of the modeling domain. The facility contributing to the high modeled concentration for sulfur dioxide (greater than 90% contribution) is the MidAmerican George Neal facilities in Iowa. During these periods when MidAmerican George Neal is the majority contributor, Hyperion's contribution is less than 1%.

In accordance with 40 CFR Part 51, Appendix W, uncertainties and accuracy of the models are discussed. As noted in section 9.1.2, Studies of Model Accuracy, "(1) Models are more reliable for estimating longer time-averaged concentrations than for estimating short-term concentrations at specific locations; and (2) the models are reasonably reliable in estimating the magnitude of highest concentrations occurring sometime, somewhere within an area. For example, errors in highest estimated concentrations of ± 10 to 40 percent are found to be typical, *i.e.,* certainly well within the often quoted factor-of-two accuracy that has long been recognized for these models. However, estimates of concentrations that occur at a specific time and site, are poorly correlated with actually observed concentrations and are much less reliable."

To determine if the AERMOD is correctly quantifying the sulfur dioxide concentration, DENR conducted a screening test to determine if AERMOD would meet a minimum operational performance for the 1-hour sulfur dioxide National Ambient Air Quality Standard. DENR used the fractional bias procedure identified in EPA's Protocol for Determining the Best Performing Model (EPA – 454/R-92-025). DENR modeled MidAmerican George Neal facilities actual emissions from March 31, 2009 through March 31, 2010, at two receptor points in South Dakota using the two meteorological data sets for Union County. The two receptor points used were the location of the two sulfur dioxide monitoring stations currently being operated by DENR in Union County. The modeled results were then compared to the monitored results using the screening approach specified in EPA's protocol. Since the new 1-hour sulfur dioxide National Ambient Air Quality standard represents a new form of a standard, DENR compared both the highest 25 hourly readings and the highest 25 readings representing the form of the standard (e.g., highest 25 daily 1-hour values).

Figure 4-1 shows a graphical representation of the screening test. As identified in the protocol "Models that plot close to the center (0,0) are relatively free from bias, while models that plot further away from the center tend to over or under-predict. Values equal to -0.67 are equivalent to over-predictions by a factor of two while values equal to +0.67 are equivalent to under-predictions by a factor of two. As the graph indicates, AERMOD over-predicts the concentrations of sulfur dioxide with five of the eight scenarios indicating the model would over-predict the concentrations greater than a factor of two.

Figure 4-1 – Screening Test



Based on the analysis, the model is over-predicting the impact MidAmerican George Neal will have on the sulfur dioxide concentrations in the modeling domain. If it is over-predicting MidAmerican George Neal it is also likely over-predicting all of the sources in the area including Hyperion. Since the approved models are inherently conservative, DENR believes actual monitoring data will be lower then what is being predicted by the models.

Attachment E
South Dakota's Sulfur Dioxide Emissions
From National Emission Inventory

Table E-1 contains sulfur dioxide emissions data from the National Emission Inventory (NEI) for 2002 and 2009. The 2002 NEI was included because the inventory included a calculation of emission from area and fugitive sources of sulfur dioxide. Union County is shown as the fourth highest county with sulfur dioxide emissions even though there are no existing Title V sources in the county that emits sulfur dioxide emissions in that quantity. DENR investigated this further and found the sulfur dioxide emissions in the 2002 NEI inventory are the result of coal burning. There is no coal burning facility in Union County. Therefore, the information for Union County is inaccurate. The 2009 emissions are from Title V sources only.

Table E-1 – Sulfur Dioxide Emissions in 2002 and 2009

County	2002 NEI Emissions (tons)	2009 Title V Source Emissions (tons)
Grant	11,918.8	11,652.0
Minnehaha	3,320.1	182.4
Pennington	2,738.6	1,118.1
Union	1,531.7	0.0
Brookings	1,237.7	267.5
Codington	904.6	11.5
Brown	680.6	2.9
Yankton	603.2	0.2
Davison	431.2	1.1
Lincoln	295.3	0.9
Beadle	290.8	0.3
Lake	263.1	2.4
Hutchinson	202.7	0.0
Lawrence	179.5	2.3
Spink	160.2	41.7
Roberts	158.1	0.1
Bon Homme	143.2	0.1
Marshall	140.4	0.0
Meade	135.7	0.0
Kingsbury	134.7	0.2
Day	131.9	0.0
Charles Mix	128.5	0.0
Moody	111.2	0.0
McCook	108.6	0.0
Clay	107.3	1.0
Turner	99.7	23.4
Clark	98.1	1.0
Edmunds	91.7	8.9

County	2002 NEI Emissions (tons)	2009 Title V Source Emissions (tons)
Fall River	90.6	0.0
Tripp	90.3	0.0
Hamlin	87.9	0.0
Hand	87.3	0.0
Deuel	85.2	2.5
Custer	83.1	0.0
Perkins	80.4	0.0
Sanborn	76.1	0.0
Hughes	74.7	0.0
Lyman	72.8	0.0
Potter	72.7	0.0
Miner	68.7	0.0
Butte	68.2	2.3
Walworth	66.4	0.5
Gregory	65.8	0.0
Brule	63.9	0.0
Faulk	63.4	0.0
Douglas	59.2	0.0
McPherson	56.1	0.0
Haakon	55.2	0.0
Hanson	54.8	0.0
Sully	52.5	0.0
Aurora	51.0	0.0
Corson	50.1	0.0
Jackson	44.7	0.0
Campbell	44.0	0.0
Todd	41.6	0.0
Jones	36.2	0.0
Bennett	35.5	0.0
Jerauld	33.6	0.0
Hyde	32.6	0.1
Dewey	30.8	0.0
Shannon	29.9	0.0
Stanley	22.8	0.0
Mellette	15.7	0.0
Ziebach	13.7	0.0
Harding	11.1	0.0
Buffalo	9.1	0.0
Statewide Total	**28,425**	**13,323**