



Brian Schweitzer, Governor
Richard H. Opper, Director

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

May 27, 2011

James B. Martin
Regional Administrator
United States Environmental Protection Agency
Region VIII, 8P-AR
1595 Wynkoop St.
Denver, CO 80202-1129

RE: Montana State-Wide Sulfur Dioxide (SO₂) NAAQS Designations

Dear Mr. Martin:

The U.S. Environmental Protection Agency (EPA) promulgated a revision to the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO₂) on June 22, 2010 (75 FR 35520). Pursuant to 42 USC §7407, Congress directs governors to submit a list of areas designated as nonattainment, attainment, or unclassifiable with respect to new or revised NAAQS. Such lists of designated areas are due no later than one year following the promulgation of a new or revised standard, or June 3, 2011.

On behalf of Governor Brian Schweitzer, I hereby designate all 56 counties in the State of Montana attainment or unclassifiable for the revised SO₂ NAAQS. The information provided in the enclosed Technical Support Document provides additional specificity regarding area designations and outlines Montana's rationale for these designations. If you have any questions regarding this action, please contact M. Eric Merchant, the Department's Air Quality Policy and Planning Supervisor, by telephone at (406) 444-1457 or by email at emerchant@mt.gov.

Sincerely,

Richard H. Opper
Director

Enclosure

c/enc: Governor Brian Schweitzer

c: David Klemp, Chief, Air Resources Management Bureau
M. Eric Merchant, Air Resources Management Bureau

TECHNICAL SUPPORT DOCUMENT
Montana Designations
June 2, 2010, Revised National Ambient Air Quality Standards for Sulfur Dioxide

I. EXECUTIVE SUMMARY

On June 2, 2010, the U.S. Environmental Protection Agency (EPA) revised the national ambient air quality standards (NAAQS) for sulfur dioxide (SO₂), adding a short-term 1-hour primary (health-based) standard of 75 parts per billion (ppb) expressed as the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations. The primary 24-hour and annual SO₂ NAAQS have been repealed under the revised rule, except as applicable for existing SO₂ nonattainment areas in the state (Laurel, East Helena). The 3-hour secondary (welfare-based) NAAQS of 500 ppb has been retained. The revisions were published in the Federal Register (FR) on June 22, 2010, at 75 FR 35520.

Pursuant to 42 USC §7407, *et seq.*, Montana is obligated to submit to EPA an initial list of geographic areas that attain the standard or that do not attain the standard or that are otherwise unclassifiable based on available information. The following evaluation substantiates Montana's area designations.

Designations for Counties Not Containing Significant SO₂ Point Sources

Based on available information, Montana determined that an initial designation of attainment is appropriate for the 42 Montana counties without significant SO₂ point sources located within their respective boundaries. As stated by EPA in the preamble to the revised SO₂ NAAQS, SO₂ emissions originate chiefly from industrial sources. In addition, available monitoring information supports the conclusion that the ambient air in those counties contains concentrations of SO₂ far below the revised SO₂ NAAQS.

Those counties to be designated attainment are as follows: Beaverhead, Blaine, Carbon, Carter, Chouteau, Daniels, Deer Lodge, Fergus, Garfield, Glacier, Golden Valley, Granite, Hill, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, McCone, Madison, Meagher, Mineral, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Roosevelt, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, and Wibaux Counties.

Designations for Counties Containing Significant SO₂ Point Sources

Montana determined that an initial designation of attainment or unclassifiable is appropriate for the 13 Montana counties, excluding Yellowstone County, containing one or more significant SO₂ point sources. That designation is supported by the following facts:

- SO₂ emissions in Montana are primarily emitted from major sources.
- Montana's major SO₂ sources are generally well controlled and monitored with respect to SO₂.

- Available ambient monitoring information in these counties indicates ambient concentrations of SO₂ that are far below the revised NAAQS.
- Ongoing and future implementation of national SO₂ emissions limiting programs will further limit impacts from significant SO₂ point sources.

Those counties to be designated attainment or unclassifiable are as follows: Big Horn, Broadwater, Cascade, Custer, Dawson, Fallon, Flathead, Gallatin, Jefferson, Missoula, Richland, Rosebud, and Sanders Counties.

Designation for Yellowstone County

With respect to Yellowstone County, the 2008-2010 average value monitored in the Billings/Laurel area is 84 ppb, an “apparent” violation of the revised SO₂ NAAQS. This information taken alone and without context could lead one to believe that an initial designation of nonattainment for Yellowstone County may be appropriate. However, the purpose and intent of a nonattainment designation is to initiate a process to incorporate necessary enforceable, permanent, and quantifiable emissions reductions into the affected state implementation plan (SIP) to ensure that the area will achieve NAAQS attainment and thereby adequately protect public health in a timely manner. If the enforceable, permanent, and quantifiable emissions reductions necessary to attain NAAQS compliance are already mandated under the existing SIP, then a nonattainment designation is not appropriate.

The most significant change in Yellowstone County (Billings/Laurel area) SO₂ emissions during the 2008-2010 timeframe was a near 1700-ton increase at ExxonMobil during the latter part of calendar year 2010. This emissions increase was a direct result of ExxonMobil performance under an SO₂ additive testing schedule pursuant to an EPA consent decree. This emissions increase also corresponds directly to a majority of the documented NAAQS exceedences (9 of 18) for the 2008-2010 time-period. Absent implementation of the particular provisions of the consent decree responsible for the increased SO₂ emissions and resulting NAAQS exceedences, the consent decree and the existing SIP would have protected the NAAQS. This is clearly demonstrated by the sharp decline in SO₂ emissions and the resulting ambient SO₂ concentrations after the additive testing schedule was completed (January 2011). One may reasonably presume that the federal Clean Air Act (CAA) does not expect states to revise SIPs when requirements in a consent decree interfere with attainment of the NAAQS (42 USC §7410(a)(3)(C)). Additionally, the CAA does not expect states to revise SIPs when federal requirements would have the same outcome. Performance under the consent decree has demonstrated that additional and significant SO₂ reductions from the ExxonMobil facility will be realized upon full implementation thereby complementing Montana’s existing SIP. Therefore, Montana need not regulate over the top of EPA’s consent decree with ExxonMobil. As a result of this consent decree-mandated one-time emissions scenario, Montana firmly believes that consideration of 2010 monitoring data for initial designation purposes is inappropriate. At a minimum, Montana believes that EPA should initially designate Yellowstone County as unclassifiable until such time as representative data is available for comparison to the NAAQS. In lieu of using 2010 data Montana would suggest using either 2009, 2011, and 2012 data or 2011 through 2013 data to determine a design value for comparison to the NAAQS.

Further, Montana recognizes the ongoing and near-future implementation of many existing federal SO₂ emissions limiting programs impacting SO₂ point source emissions in the Billings/Laurel area of Yellowstone County. The perceived and logical intent of ongoing and near-future implementation of federal SO₂ emissions limiting programs would be to reduce industrial SO₂ emissions nationwide and in the Billings/Laurel area to levels corresponding to compliance with the 2010 revised SO₂ NAAQS. Implementation of regulatory programs including the Utility MACT, Regional Haze/BART, flare provisions from the FIP and EPA's flare initiatives, and ExxonMobil-specific consent decree requirements, will significantly reduce Billings/Laurel area SO₂ emissions and associated ambient concentrations. These reductions in SO₂ emissions provide further assurance that the Billings/Laurel area will achieve compliance with the new 1-hour SO₂ NAAQS before the required compliance date in August of 2017.

Therefore, because 2010 Billings/Laurel area industrial SO₂ emissions and associated ambient impacts are not representative of future conditions in the area and because the SIP already contains provisions necessary to achieve attainment of the revised SO₂ NAAQS in the Billings/Laurel area in a timely manner, revisions to the existing SIP are not necessary. Montana strongly concludes that an initial designation of unclassifiable is appropriate for Yellowstone County.

II. MONTANA DESIGNATIONS (excluding Yellowstone County)

Montana believes it is appropriate to divide the SO₂ NAAQS designation discussion between Yellowstone County and the rest of Montana (55 additional counties). This section addresses Montana's designation for areas/counties located within Montana and outside of Yellowstone County.

A. General Information

As stated in the preamble to the NAAQS revision, "Anthropogenic SO₂ emissions originate chiefly from point sources, with fossil fuel combustion at electric utilities (<66%) and other industrial facilities (<29%) accounting for the majority of total emissions."

In 2010, there were 16 permitted industrial point sources with significant actual and/or allowable SO₂ emissions located within 13 different Montana counties, while 42 counties in Montana contained no significant sources of SO₂. For the purpose of this discussion Montana defines significant emissions as 100 tons of SO₂ emissions per year. The list in Table 1 includes the facility names as well as the location by county. This list includes facilities whose current allowable permit emissions are above the major source threshold, regardless of their current actual emissions. The single largest source of SO₂ emissions in Montana is the PPL Montana, LLC – Colstrip (PPL – Colstrip) facility located in Rosebud County. Figure 1 illustrates the geographic location of significant sources of SO₂ state-wide.

**TABLE 1 MONTANA'S SIGNIFICANT SOURCES OF SO₂ BY COUNTY
(excluding Yellowstone County)**

Source	County
Columbia Falls Aluminum Company, LLC	Flathead
Thompson River Power, LLC	Sanders
Smurfit Stone Container Corporation	Missoula
Montana Refining Company	Cascade
Malmstrom Air Force Base	Cascade
Ash Grove Cement Company	Jefferson
Graymont Western U.S., Inc.	Broadwater
Holcim (US), Inc.	Gallatin
Rocky Mountain Power, LLC	Big Horn
PPL Montana, LLC – Colstrip	Rosebud
Colstrip Energy Limited Partnership	Rosebud
Montana-Dakota Utilities Company – Miles City	Custer
Bear Paw Energy, LLC – Baker	Fallon
Montana-Dakota Utilities Company – Glendive	Dawson
Montana-Dakota Utilities Company – Lewis and Clark	Richland
Sidney Sugars Inc.	Richland

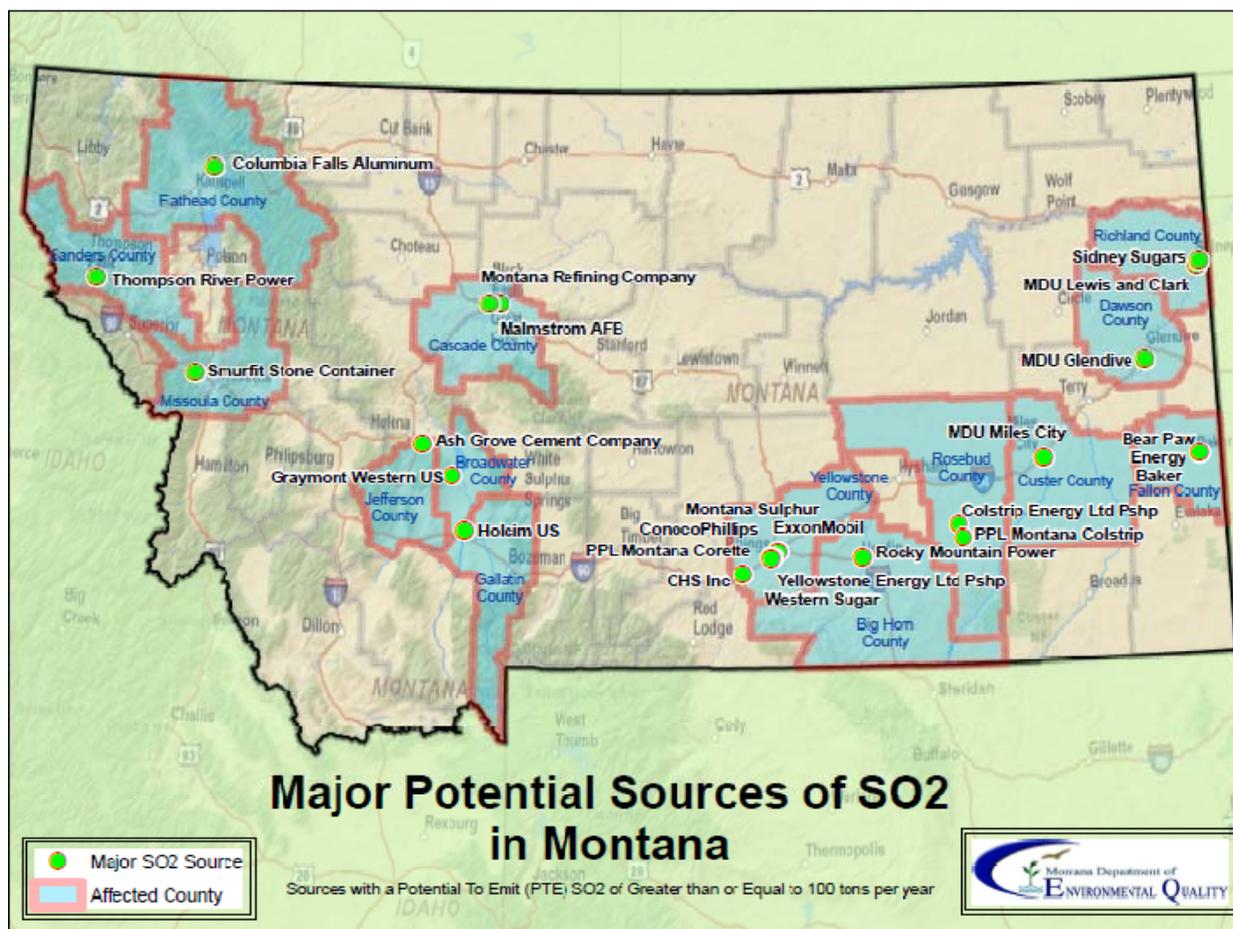


FIGURE 1 MONTANA'S MAJOR SO₂ POINT SOURCES BY LOCATION

Of the 16 point sources listed in Table 1, 10 are required to have either SO₂ Continuous Emissions Monitors (CEMS) or Compliance Assurance Monitoring (CAM) Plans on large SO₂ emitting units. In addition, those large units are generally well-controlled by enforceable limits and conditions.

Based on changes in operation and/or updated emission factors, the following facilities likely will not remain as listed major sources of SO₂: Smurfit-Stone Container Corporation and the Montana-Dakota Utilities Company – Glendive and Miles City facilities. The Smurfit-Stone Container Corporation is currently shutdown and is anticipated to be sold and the facility scrapped. The Montana-Dakota Utilities Company – Glendive and Miles City facilities have permitted allowable SO₂ emissions above 100 tons per year because of outdated emission factors associated with sulfur in diesel fuel that is used in the turbines associated with those facilities. With the current EPA ultra-low sulfur diesel fuel requirements, it is anticipated that the potential SO₂ emissions for those two facilities would fall far below 100 tons per year.

This area also contains one of the current SO₂ nonattainment areas – East Helena, designated as nonattainment for both the previous primary and secondary SO₂ NAAQS. The East Helena SIP for the primary SO₂ NAAQS was approved by EPA on January 27, 1995. The source of the SO₂ emissions, the ASARCO primary lead smelter, associated

with the nonattainment designation ceased operation in 2001. ASARCO's air quality permit was revoked on January 5, 2010, after years of inactivity, emitting unit removal, and site remediation.

B. Monitoring Data

Outside of Yellowstone County, Montana currently conducts ambient SO₂ monitoring at two separate locations. The first is located at Montana's NCore station in Lewis and Clark County. Montana's NCore station is designated a national background monitoring site with no significant industrial sources of pollution located nearby. Montana also currently operates an SO₂ monitoring site in Richland County near the town of Sidney. The Richland County site was established in 2010 with the primary intent to evaluate impacts from the oil and gas industry (oil and gas field/well development). Because these sites are relatively new, limited data is available at this time; however, preliminary results indicate that ambient SO₂ concentrations in the affected area are far below the level of the revised SO₂ NAAQS.

As previously mentioned, the largest single source of SO₂ emissions currently operating in Montana is the PPL – Colstrip coal-fired electrical generating station located in Rosebud County. Historic monitoring data from Rosebud County and the surrounding affected area indicates that SO₂ emissions from this facility, and the nearby Colstrip Energy Limited Partnership coal-fired electrical generating station, do not result in ambient impacts exceeding the revised SO₂ NAAQS. Montana did not collect the subject ambient data; rather this data was collected by the affected industry in accordance with facility permit requirements and/or via monitoring conducted on Indian Lands outside of Montana's jurisdiction. The industrial data collected in Rosebud County was evaluated in accordance with Montana's applicable Quality Assurance Project Plan (QAPP). Figure 2 provides ambient monitoring results from monitoring activities conducted in Rosebud County by the former Montana Power Company, currently PPL – Colstrip (monitoring stations MPC #1, #2, and #3), and monitoring conducted on the Northern Cheyenne Indian Reservation (monitoring stations Morningstar, Garfield Peak, and Badger Peak). These monitoring results indicate that Rosebud County is complying with the revised SO₂ NAAQS.

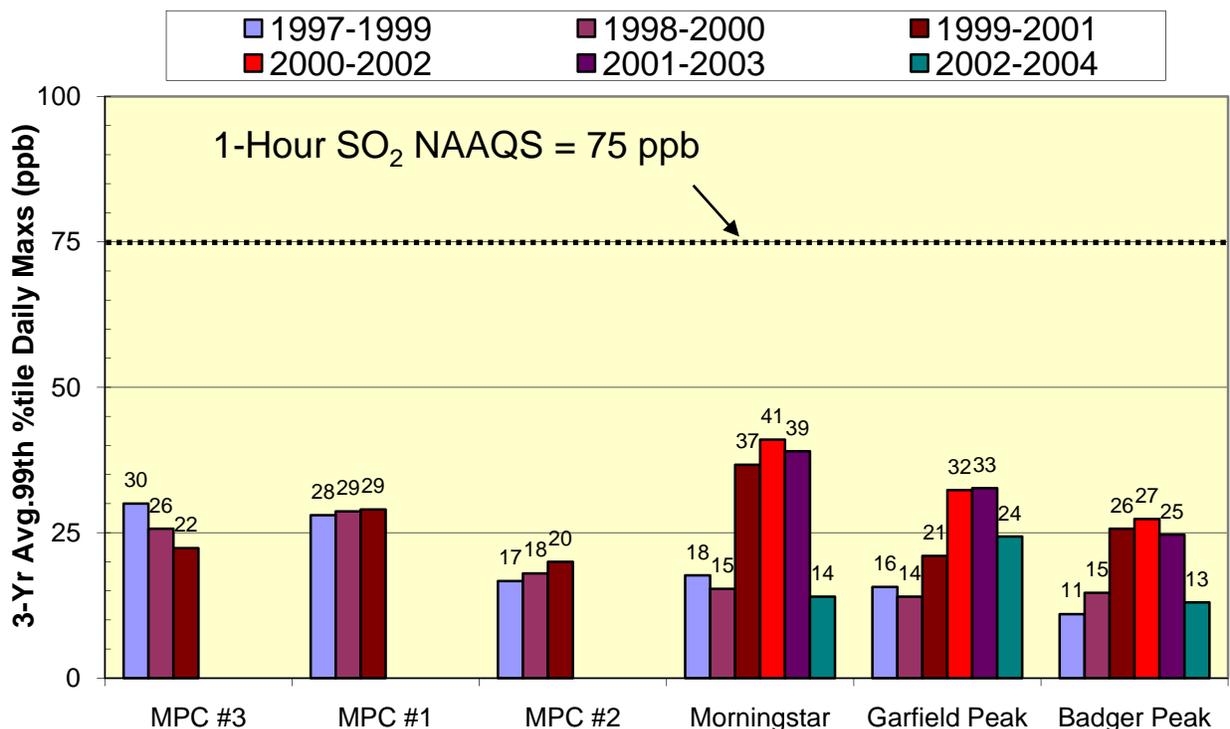


FIGURE 2 NAAQS REVIEW OF ROSEBUD COUNTY 1-HR SO₂ DATA

Historic and ongoing ambient monitoring activities being conducted within Montana outside Yellowstone County indicate that the affected areas are complying with the revised SO₂ NAAQS.

C. Regulatory Analysis

Although Montana believes the affected areas are currently complying with the revised SO₂ NAAQS, Montana wishes to acknowledge the additional SO₂ reductions anticipated as a result of ongoing and pending federal regulations. As stated in the preamble to the revised SO₂ NAAQS, "EPA ... notes that it anticipates several forthcoming national and regional rules, such as the pending Industrial Boilers MACT standard under CAA section 112(d), that are likely to require significant reductions in SO₂ emissions over the next several years. A limited qualitative assessment based on the results of preliminary modeling of some sample facilities indicates that well controlled sources should meet the new SO₂ NAAQS."

Those regulatory actions include the Industrial Boiler Maximum Achievable Control Technology (MACT); the proposed Utility MACT; the final Portland Cement MACT; the anticipated Best Available Retrofit Technology (BART) determinations associated with the Regional Haze Rule; the finalization of 40 CFR 60, Subpart Ja; and EPA's flare initiative.

i. Utility MACT Implementation

The proposed Utility MACT was announced and made publicly available by EPA on March 16, 2011. The proposed rule was promulgated as 40 CFR 63, Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-fired Electric Utility Steam Generating Units (or "Utility MACT"). The rule is expected to be issued in final form by November as required by a court settlement agreement, unless that deadline is extended by the courts. The proposed rule contains several emission limit options by category. In the coal-fired units, the following categories exist. For non-mercury (non-Hg) metals, a facility may take a total PM limit, a total non-Hg HAP metal limit, or individual limits on listed non-Hg HAP metals. For acid gases, the options include taking a hydrochloric acid limit or an SO₂ limit. Mercury limits apply for all types of units subject to the Utility MACT. Some options can only be used in conjunction with specific pollution control configurations.

The PPL - Colstrip, Montana-Dakota Utilities – Lewis and Clark (MDU – Lewis and Clark), Colstrip Energy Limited Partnerships (CELP) and Rocky Mountain Power (RMP) facilities would all be subject to the new Utility MACT as coal-fired utilities. If MDU - Lewis and Clark and PPL - Colstrip Units 1 & 2 chose to demonstrate compliance with HCl using the SO₂ surrogate limit, those units would be limited to 0.2 pounds of SO₂ per million British thermal units (lb/MMBtu) of heat input, which would be less than half of the actual current emissions rates according to the 2009 SO₂ emissions reporting from EPA's Acid Rain Database. Similarly, the 0.2 lb/MMBtu SO₂ limit, if chosen, would result in a significant reduction from the CELP facility as well (CELP's current SO₂ limitation is 1.2 lb/MMBtu). As previously discussed, any PM control added to those facilities to address the PM surrogate limit (if chosen for compliance) would likely provide some co-benefit control with respect to SO₂.

The effect on PPL – Colstrip Units 3 & 4 and RMP would be less significant and may require no additional control from those facilities to meet the Utility MACT requirements.

ii. Boiler MACT Implementation

EPA's MACT standard for Industrial, Commercial and Institutional Boilers at major sources (the "Boiler MACT") was finalized and published as 40 CFR 63, Subpart DDDDD in the *Federal Register* on March 21, 2011. However, on May 18, 2011, EPA published an indefinite delay of the implementation of the major source Boiler MACT rules. The Boiler MACT, as finalized, would require emission limits for various categories of large and small boilers. The rule also would require various energy audits and tune-ups of the boilers regardless of size and fuel. The energy audits and tune-ups are designed to lower fuel consumption; thereby lowering emissions. Montana Refining Company has units (primarily natural gas or refinery fuel gas-fired units) that appear to meet the applicability requirements of the rule. As such, energy audits and tune-ups would be requirements of the rule for those units. The reduction in SO₂ is not quantifiable at this early date, but improvements in efficiency and tune-up would be likely to lead to lower emissions. However, even without the stay, the Boiler MACT provisions are not likely to lead to large reductions in SO₂ emissions from major sources.

EPA's MACT standard for Industrial, Commercial and Institutional Boilers at area sources was also finalized and published as 40 CFR 63, Subpart JJJJJ in the *Federal Register* on March 21, 2011 (and is not subject to the stay issued by EPA on the major source Boiler MACT rules). Boilers at Thompson River Power, Sidney Sugars, and Malmstrom Air Force Base appear to be subject to the mercury (Hg) and carbon monoxide (CO, as a surrogate for non-dioxin organic hazardous air pollutant) limits in this standard. At this time it is unclear what steps those facilities may take to meet the Hg emission limits listed in the area source rule. All of the coal-fired boilers at the above-mentioned facilities are currently controlled using scrubbers. If scrubber upgrades are considered for Hg control, SO₂ emissions may also be reduced through that process, although significant reductions would not be expected.

iii. Portland Cement MACT

EPA's MACT standard for Portland Cement Manufacturing Industry was finalized on September 9, 2010. The Ash Grove Cement Company is a major source of HAP emissions and would be subject to a hydrochloric acid (HCl) emission limitation in addition to a particulate matter (PM) limit on its cement kiln pursuant to the updated MACT. Holcim (US) Inc. is an area source, but both area and major sources would also be subject to the PM limitations. The kilns at both facilities are currently controlled by electrostatic precipitators (ESPs); however, it is unknown by Montana what types of upgrades may be necessary to meet the PM limitations. As previously mentioned, upgrades in PM control often have an SO₂ co-benefit control. In addition, the HCl limit would prompt changes that would reduce SO₂ emissions from Ash Grove.

iv. Regional Haze / BART Implementation

Under EPA's Regional Haze Program, states, including Montana, are required to develop a program to assure reasonable progress toward meeting the national goal of protecting (and preventing) visibility impairment in mandatory Class I areas. Two portions of this program could impact industrial facilities in Montana. One program is Best Available Retrofit Technology (BART). BART requirements of the regional haze rule apply to facilities built between 1962 and 1977 that have the potential to emit more than 250 tons per year of visibility-impairing pollution. Those facilities fall into 26 categories, including utility and industrial boilers, and large industrial plants such as pulp mills, refineries, and smelters. The regional haze regulations also allow states to develop coordinated strategies and implement programs to make "reasonable progress" toward the goal of "no manmade impairment" in national parks and wilderness areas by reducing emissions that contribute to haze. Currently EPA is directly administering these programs in Montana.

According to EPA guidance, SO₂ is a pollutant that may contribute to visibility impairment. To date, EPA has not proposed any findings as to what controls or emission reductions may be required in Montana to comply with these two programs. It is believed that EPA plans to make such (draft) determinations sometime this calendar year. According to EPA, the following facilities may be subject to the visibility aspect of the Regional Haze Program:

- PPL – Colstrip Units 1&2
- Columbia Falls Aluminum Company
- Ash Grove Cement Company
- Holcim (US) Inc.
- Smurfit-Stone Container Corporation (currently shutdown)

Additional facilities may be subject to the “reasonable progress” portion of the Regional Haze Rule. EPA is currently analyzing applicability and potential emission reduction strategies. To the extent any reductions may be required, those reductions would impact ambient air quality in Montana. It is anticipated that those reductions would reduce the SO₂ ambient air quality levels in the area. However, EPA has not provided any information regarding their decisions on emission control strategies associated with BART and Reasonable Progress or on the timeframe of those decisions for affected sources in Montana.

v. 40 CFR 60, Subpart Ja and EPA’s Flare Initiative

In addition to the anticipated final rule for 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries, EPA is initiating efforts to limit emissions from flares nationwide. It appears that the requirements will be promulgated as part of the Consolidated Federal Air Rule (40 CFR, Part 65). Both efforts are anticipated to have significant effects on SO₂ emissions from flaring, in this case from Montana Refining Company and potentially the Bear Paw Energy Baker flare.

The CAA does not expect states to revise SIPs (develop “Maintenance” SIPs) when federal requirements would have the same outcome. As stated, ongoing implementation of the national and local SO₂ limiting programs identified above will continue to result in significant SO₂ reductions from the affected SO₂ Sources. Therefore, Montana need not regulate over the top of EPA’s ongoing and pending SO₂ limiting programs.

D. Montana (excluding Yellowstone County) Conclusion

Pursuant to 42 USC §7407, Montana is required to submit to EPA a list of all areas (or portions thereof) in the state, designating as nonattainment, attainment, or otherwise unclassifiable based on available information.

Based on available information, Montana determined that an initial designation of attainment is appropriate for the 42 Montana counties without significant SO₂ point sources located within their respective boundaries. As stated by EPA in the preamble to the revised SO₂ NAAQS, SO₂ emissions originate chiefly from industrial sources. In addition, monitoring information supports the conclusion that the ambient air in those counties is far below the revised SO₂ NAAQS. Those counties to be designated attainment are as follows: Beaverhead, Blaine, Carbon, Carter, Chouteau, Daniels, Deer Lodge, Fergus, Garfield, Glacier, Golden Valley, Granite, Hill, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, McCone, Madison, Meagher, Mineral, Musselshell, Park, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Roosevelt, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, and Wibaux Counties.

Based on available information, Montana determined that an initial designation of attainment or unclassifiable is appropriate for the 13 Montana counties, excluding Yellowstone County, that contain one or more significant SO₂ point sources. That designation is supported by the following facts:

- SO₂ emissions in Montana are primarily emitted from major sources.
- Montana's major SO₂ sources are generally well controlled and monitored with respect to SO₂.
- Available ambient monitoring data in these counties indicates levels of SO₂ that are far below the revised NAAQS.
- Ongoing and future implementation of national SO₂ emissions limiting programs will further limit impacts from significant SO₂ point sources state-wide.

Those counties to be designated attainment or unclassifiable are as follows: Big Horn, Broadwater, Cascade, Custer, Dawson, Fallon, Flathead, Gallatin, Jefferson, Missoula, Richland, Rosebud, and Sanders Counties.

III. YELLOWSTONE COUNTY DESIGNATION

A. Sources / History

In 1973, the first ambient SO₂ monitor was located in the Billings/Laurel area in response to both NAAQS and Montana ambient air quality standards (MAAQS) and known large industrial emitters of SO₂ in the area. In 1976, EPA determined the SIP in the Billings/Laurel area was inadequate. In 1978, EPA designated the area surrounding the Cenex Harvest States, Inc. (CHS) refinery in Laurel as nonattainment based on monitored violations of the NAAQS. In 1979, Montana submitted and EPA approved a SIP to address the violations and control ongoing emissions. Following modeled violations of the SO₂ standard, EPA "called" the SIP in 1993. Extensive work between Montana and the affected industries led to SIP submittals in 1996, 1998, and 2000. EPA eventually approved the SIP with a few notable exceptions. To that end, EPA adopted its own Federal Implementation Plan (FIP) in 2008 that adds additional SO₂ control requirements to the SIP. However, that FIP is not fully implemented or finalized due to ongoing litigation.

Seven industrial point sources that are significant emitters of SO₂ are located in the Billings/Laurel area and have been extensively involved in efforts with Montana to reduce SO₂ emissions. These facilities are listed in Table 2 by city.

TABLE 2 YELLOWSTONE COUNTY, MONTANA SIGNIFICANT SOURCES OF SO₂ BY LOCATION

Source	City
Cenex Harvest States, Inc. (CHS)	Laurel
PPL Montana, LLC – J.E. Corette (PPL – Corette)	Billings
ConocoPhillips Company (ConocoPhillips)	Billings
Montana Sulphur & Chemical Company (MSCC)	Billings
ExxonMobil Refining & Supply Company (ExxonMobil)	Billings
Yellowstone Energy Limited Partnership (YELP)	Billings
The Western Sugar Company (Western Sugar)	Billings

The CHS petroleum refinery is located in Laurel and the following sources are located in Billings: MSCC sulfur recovery plant; ExxonMobil petroleum refinery; ConocoPhillips petroleum refinery; PPL - Corette coal-fired electrical generating station; the Western Sugar sugarbeet processing plant; and YELP petroleum coke-fired electrical/steam co-generation facility.

The affected facilities in the Billings/Laurel area have made substantial progress in reducing SO₂ emissions and additional reductions are expected in the future based on efforts made to comply with forthcoming regulatory requirements (see discussion in Section III.D) and completion of pollution control projects, some required by consent decree. Figure 3 illustrates the reductions realized in actual SO₂ emissions in the Billings/Laurel area from 1983 to 2009. In that timeframe, total emissions from the seven Billings/Laurel sources were reduced from approximately 35,000 tons per year to approximately 7,600 tons per year in 2009.

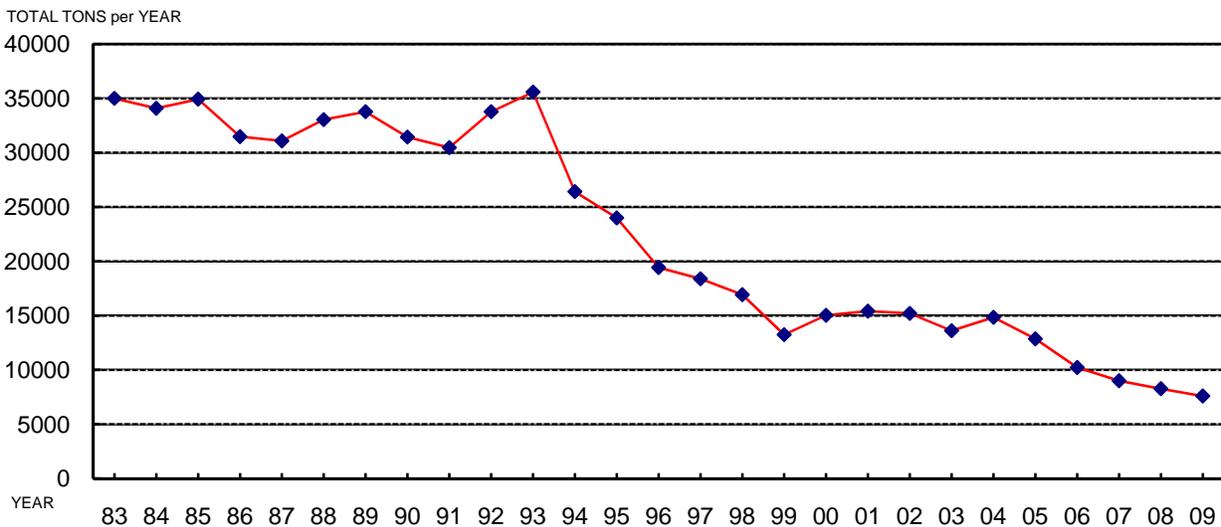


FIGURE 3 HISTORICAL SO₂ EMISSIONS FROM THE BILLINGS/LAUREL INDUSTRIES

Tables 3 and 4 provide the estimated total combined emissions and source-specific estimated emissions, respectively, from the seven major facilities in the Billings/Laurel area for calendar years 2008, 2009, and 2010.

TABLE 3 BILLINGS/LAUREL AREA COMBINED INDUSTRIAL SO₂ EMISSIONS

Emissions Year	Total SO₂ Emissions (tons/year)
2008	8118
2009	7595
2010	8254
Total Emissions 2008-2010	23,967 tons

TABLE 4 BILLINGS/LAUREL AREA INDUSTRIAL SO₂ EMISSIONS 2008-2010

Source	2008	2009	2010	Total Emissions
PPL Montana - Corette	2929	2788	2271	7988
ExxonMobil	1765	696	2389	4850
YELP	1590	2062	1816	5468
MSCC	1320	1559	1383	4262
CHS	268	231	225	724
Western Sugar	138	133	98	369
ConocoPhillips	108	127	73	308

B. Monitoring Data

Montana and a consortium of industries known as the Billings/Laurel Air Quality Technical Committee (BLAQTC) have conducted SO₂ monitoring in the Billings/Laurel area for over 30 years. Over that period of time, SO₂ has been monitored at 31 locations in the Billings/Laurel area. Currently, Montana and the local public health agency, RiverStone Health (RiverStone), operate a single monitoring site and BLAQTC operates four others. Figure 4 provides a graphical representation of recent SO₂ averages monitored at the BLAQTC sites (Laurel Farm, Lockwood Park, Brickyard Lane, Johnson Lane, and Pine Hills), as well as the state of Montana SO₂ monitoring site (Coburn Rd) as compared to the revised SO₂ NAAQS.

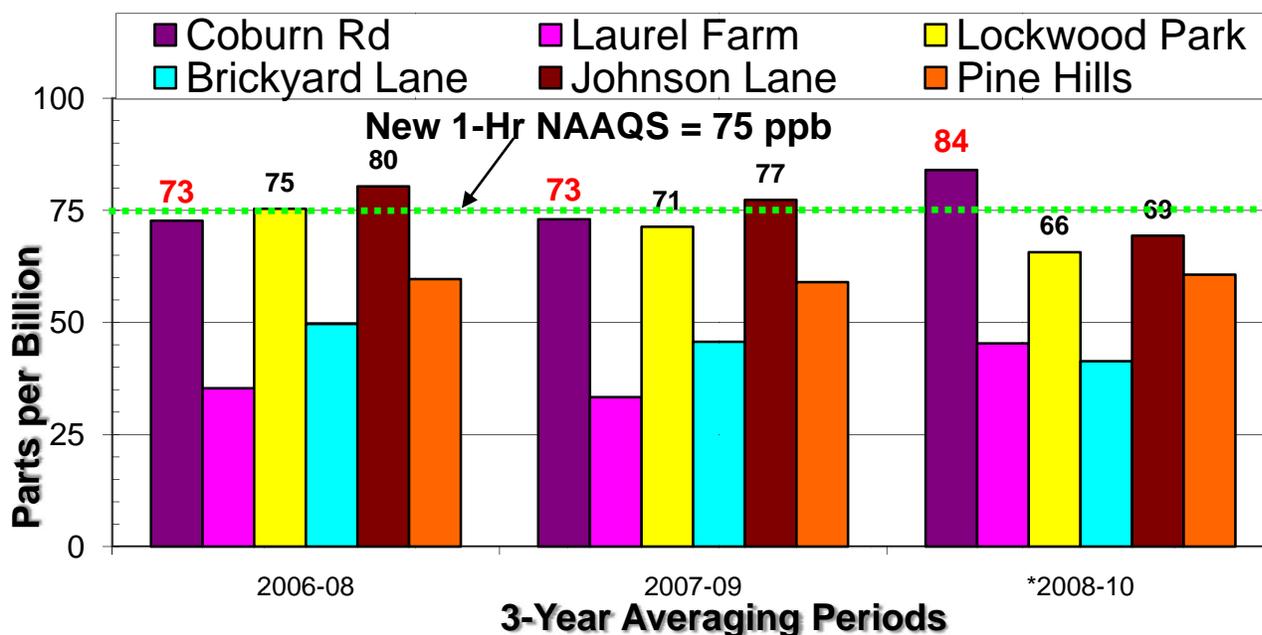


FIGURE 4 2006-2010 SO₂ NAAQS AVERAGE VALUES FOR BLAQTC AND COBURN ROAD SLAMS MONITORING STATIONS

As provided in Figure 4, the average values for the BLAQTC sites have either been below the NAAQS or trending downward for the time period shown. Further, the most recent average value (2008-2010) for all BLAQTC sites shows SO₂ NAAQS compliance. All BLAQTC monitoring activities are conducted in accordance with the requirements of 40 CFR, Part 58, and these monitoring activities are subject to Montana’s Quality Assurance Project Plan (QAPP). The remainder of this analysis focuses on ambient data obtained from Montana’s State and Local Air Monitoring Station (SLAMS) located at Coburn Road in Billings.

Table 5 provides the most recent SO₂ average values monitored at the Coburn Road SLAMS site located in Billings.

TABLE 5 2006-2010 COBURN ROAD SLAMS SO₂ NAAQS DESIGN VALUES

Years	Design Value
2005 - 2007	68
2006 - 2008	73
2007 - 2009	73
2008 - 2010	84

It should be noted that prior to consideration of 2010 ambient data, the Coburn Road SLAMS site had demonstrated area compliance with the revised SO₂ NAAQS. However, the 2008-2010 average value of 84 ppb is higher than the new 1-hour SO₂ NAAQS. Table 6 provides the annual 99th percentile values used to calculate the Coburn Road SLAMS average value for 2008-2010.

TABLE 6 COBURN ROAD SLAMS 1-HOUR DAILY MAXIMUM SO₂ VALUES 2008-2010
 (* = 99th percentile value)

2008		2009		2010	
Date - Hour	ppb	Date - Hour	ppb	Date - Hour	ppb
8/24 - Hr 1	119	9/22 - Hr 9	107	7/8 - Hr 6	111
10/28 - Hr 8	112	2/5 - Hr 2	83	12/24 - Hr 9	101
10/27 - Hr 1	95	9/25 - Hr 9	83	7/9 - Hr 6	92
6/14 - Hr 6	89*	1/20 - Hr 5	72*	2/10 - Hr 4	91*
10/1 - Hr 8	77	8/12 - Hr 7	69	10/22 - Hr 9	89

Despite the relative consistency in overall emissions (see Table 3), calendar year 2010 included 9 of the 18 monitored NAAQS exceedences over the 2008-2010 time period, 8 of which occurred in the latter half of 2010 alone. A summary of monitored NAAQS exceedences by quarter over the 2008-2010 time period is provided in Table 7.

TABLE 7 COBURN ROAD SLAMS MONITORED NAAQS EXCEEDANCES 2008-2010

Calendar Year	Calendar Quarter	Number of Exceedences (> 75 ppb)
2008	1	0
	2	1
	3	2
	4	3
2008 Total Exceedences →		6
2009	1	1
	2	0
	3	2
	4	0
2009 Total Exceedences →		3
2010	1	1
	2	0
	3	4
	4	4
2010 Total Exceedences →		9
2008-2010 Total Exceedences →		18

Montana operates an ambient air monitoring quality assurance and quality control (QA/QC) program for many reasons, among them to ensure the ambient air monitoring data supports and fulfills the operational, informational, and regulatory needs of the state. As part of this objective, Montana established the Ambient Air Monitoring Program Quality Management Plan (QMP). The QMP guides ambient air monitoring data collection activities. Montana has developed and maintains an EPA-approved QAPP and associated Standard Operating Procedures (SOP) to gather, review, and

evaluate ambient monitoring data in a consistent and defensible manner, including the ambient SO₂ monitoring conducted in the Billings/Laurel area.

Within the 2008-2010 monitoring time period, there were several data inconsistencies that coincided with some of the high monitored values recorded. On October 1, 2008 (hour 08: 2008 5th maximum 1-hour SO₂ concentration of 77 ppb), the monitoring program review of the strip chart indicated interruption of the strip chart drive. The interruptions occurred during site visits but were not listed in the station log. On August 24, 2008 (hour 08: 2008 1st maximum 1-hour SO₂ concentration of 199 ppb), and October 27, 2008 (hour 01: 2008 3rd maximum 1-hour SO₂ concentration of 95 ppb), extreme wind directions were recorded: 119 degree 1-hour average wind direction, 21 degree 1-hour average standard deviation of the horizontal wind direction, and 0.8 meter per second 1-hour average wind speed and 127 degree 1-hour average wind direction, 29 degree 1-hour average standard deviation of the horizontal wind direction, and 0.9 meter per second 1-hour average wind speed, respectively. The final inconsistency is that quarterly multipoint calibrations were not completed as required in the QAPP. Fourth quarter 2008 and second quarter 2009 multipoint calibrations were not completed due to calibration flow rate verifying standard malfunctions, and the fourth quarter 2009 multipoint calibration was not completed due to unknown reasons.

C. Emissions Data Versus Monitoring Data

Based on the distribution of exceedences within the monitoring data from 2010, Montana conducted an evaluation of SO₂ emissions changes at each of the major industrial sources of SO₂ in the Billings/Laurel area. The most significant finding was that ExxonMobil increased SO₂ emissions by approximately 1700 tons in calendar year 2010 as compared to calendar year 2009 with nearly an 800 ton increase during the 3rd and 4th quarter of 2010. Table 8 provides a comparison of annual emissions and emissions changes at each of the seven facilities over the 2009-2010 time period.

TABLE 8 COMPARISON OF 2009 TO 2010 SO₂ EMISSIONS CHANGES BY SOURCE

Source	2009 Emissions (tons SO ₂ /year)	2010 Emissions (tons SO ₂ /year)	Difference (tons SO ₂ /year)
ExxonMobil	696	2,388	+ 1692
ConocoPhillips	127	73	- 54
CHS	231	225	- 6
MSCC	1559	1,383	- 176
PPL Corette	2788	2,271	- 517
YELP	2062	1,816	- 246
Western Sugar	133	98	- 35
Total Emissions	7,596	8,254	

As provided in Table 8, the only significant SO₂ source in the Billings/Laurel area with increased SO₂ emissions in 2010 was ExxonMobil; therefore, for the purposes of this discussion, a closer evaluation of ExxonMobil emissions is warranted. Table 9 provides a breakdown of 2010 ExxonMobil SO₂ emissions by emitting unit and by calendar quarter.

TABLE 9 2010 EXXONMOBIL SO₂ EMISSIONS BY EMITTING UNIT AND BY CALENDAR QUARTER

Unit	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total SO ₂ Emissions (ton/yr)
Coker CO Boiler ¹	3	36	476	50	568
FCCU ¹	141	557	535	572	1805
Fuel Gas ¹	0	0	0	1	1
ALKY Oil ²	---	---	---	---	6
Flare ²	---	---	---	---	8
Total Emissions	144	593	1012	622	2388
¹ SO ₂ Emissions reported from Continuous Emissions Monitoring Systems (CEMS).					
² SO ₂ Emissions estimated using mass balance calculations.					

The approximate 1700 ton SO₂ emissions increase at ExxonMobil in 2010, as compared to 2009 emissions, corresponds directly to increased monitored NAAQS violations at the Coburn Road SLAMS in the same year. It is important to note that the primary cause of the 2010 ExxonMobil SO₂ emissions increase (certain provisions within EPA consent decree) will be eliminated beginning in January of 2011, as described below.

As identified in Table 9, the primary SO₂ emissions increase at ExxonMobil during 2010 occurred at the fluid catalytic cracking unit (FCCU). Increased FCCU SO₂ emissions in the 2nd, 3rd and 4th quarters of 2010 are primarily the result of requirements contained in a consent decree entered into on December 13, 2005 (with subsequent revisions), between ExxonMobil, EPA, and Montana. Per consent decree requirements, ExxonMobil has been obligated to test a variety of SO₂ reduction catalyst additives since October 2006. In order to identify the additive achieving the highest reduction in SO₂ emissions, the testing required intermittent use of additives ending in September of 2010 (higher SO₂ values are seen as the additives are eliminated from the process or “decayed”). Beginning on January 15, 2011, the consent decree required the additive achieving the highest SO₂ reductions to be consistently used to achieve SO₂ emission rates. Since ExxonMobil has been using this additive, there has been a sharp decline in SO₂ emissions as well as the ambient SO₂ concentration in the Billings/Laurel airshed. This additive and the associated FCCU SO₂ limitations are subject to approval by the EPA and Montana in 2012 and will be incorporated into ExxonMobil’s air quality permit. Therefore, ExxonMobil’s SO₂ emissions will decrease in 2011 to a level significantly less than that emitted in 2010, far less than emissions during 2nd, 3rd and 4th quarter of 2010, and these emissions reductions will be permanent and enforceable. Enforceable emission limits pursuant to the consent decree will be required to reduce SO₂ emissions on a short-term and long-term basis. Therefore, the full effect of the ExxonMobil consent decree on SO₂ emissions and associated ambient air quality impacts is yet to be realized.

As previously mentioned, reported 2011 ExxonMobil emissions data through mid-May 2011 and associated monitored values at the Coburn Road SLAMS through February of 2011 provide early indication that SO₂ emissions from the ExxonMobil FCCU, and associated ambient impacts, are indeed decreasing as a result of ongoing consent decree implementation. Table 10 provides a draft summary of ExxonMobil emissions

during calendar year 2011, through mid-May. The additive achieving the highest reduction in SO₂ emissions from the FCCU was introduced to the FCCU on January 15, 2011; however, as expected, the additive will take some time after introduction to become fully-effective and thus for ExxonMobil to realize significant SO₂ reductions from the FCCU. Based on the additive performance during consent decree-required testing and 2011 performance to date it is anticipated that 2nd quarter SO₂ emissions from the FCCU will be similar to 1st quarter 2010 FCCU SO₂ emissions levels (see Table 9).

TABLE 10 2011 EXXONMOBIL FCCU SO₂ EMISSIONS BY CALENDAR QUARTER

Unit	1 st Quarter	2 nd Quarter
FCCU	473 ¹	63 ²
¹ Reported FCCU SO ₂ emissions data from January through March 2011. SO ₂ additive initiated January 15, 2011. ² Draft emissions data for April through mid-May 2011. Information provided to the Department during a telephone conversation between Department and ExxonMobil staff on May 20, 2011.		

Table 11 provides the 1st through 10th high monitored 1-hr SO₂ values through February 2011 at the Coburn Road SLAMS, as they correspond to decreased SO₂ emissions from the ExxonMobil FCCU (see Table 10). Table 12 shows the corresponding decrease in the annual 99th percentile value with consideration of 2011 monitoring data through February 2011.

TABLE 11 2011 COBURN ROAD SLAMS 1ST THROUGH 10TH HIGH MONITORED VALUES (through February)

	1 st high	2 nd high	3 rd high	4 th high	5 th high	6 th high	7 th high	8 th high	9 th high	10 th high
ppb	64	58	43	32	32	31	31	28	27	26
Date/hr	2-22/10	1-16/1	1-18/1	1-13/10	2-2/14	1-12/1	2-4/9	2-26/8	1-4/7	2-14/9

TABLE 12 2009-2011 COBURN ROAD SLAMS ANNUAL 99TH PERCENTILE VALUES

Year	Annual # Days w/Valid Data	Annual 99 th Percentile Value
2009 ¹	364	72
2010 ¹	307	91
2011 ²	59 (through February 2011)	64
¹ With greater than 300 valid monitoring days 99 th percentile is 4 th high monitored concentration (40 CFR 50, Appendix T, Table 1) ² With 1-100 valid monitoring days 99 th percentile is 1 st high monitored concentration (40 CFR 50, Appendix T, Table 1)		

Based on pending full implementation of the consent decree-required SO₂ additive and associated reduction in ExxonMobil FCCU SO₂ emissions it is reasonable to assume that ambient impacts and thus the 2009-2011 SO₂ design value will be reduced to a level below and in compliance with the revised SO₂ NAAQS of 75 ppb. This information alone validates the idea that, at a minimum, EPA should consider 2011 data prior to making any final decisions regarding initial designations for the area.

In summary, this information leads Montana to strongly conclude that SO₂ emissions during calendar year 2010 and associated ambient concentrations in the Billings/Laurel area are not representative of future conditions already mandated by the CAA and Montana's existing SIP through a consent decree. One may reasonably presume that the CAA does not expect states to revise SIPs when federal requirements in the consent decree interfere with attainment of the NAAQS (42 USC §7410(a)(3)(C)). That being stated, Montana firmly believes that an initial designation with consideration for 2010 monitoring data is inappropriate. Further, there is CAA precedent for program implementation using representative information. When determining the applicability of the New Source Review Program, proposed emissions increases are compared with "baseline actual emissions." "Baseline actual emissions" is defined under 40 CFR 52.21(b)(48)(iii) with the inclusion of the following sentence, "The Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation."

As a result of this consent decree-mandated one-time emissions scenario (2010), Montana firmly believes that consideration of 2010 monitoring data for initial designation purposes is inappropriate. At a minimum, EPA should initially designate Yellowstone County as unclassifiable until such time as representative data is available for comparison to the NAAQS. In lieu of using 2010 monitoring data Montana would suggest using either 2009, 2011, and 2012 data or 2011 through 2013 data to determine a design value for comparison to the NAAQS.

D. Regulatory Analysis

As discussed previously with respect to the ExxonMobil consent decree, future SO₂ emissions at several of the significant sources in the Billings/Laurel area will be significantly impacted and reduced by the implementation of ongoing and/or newly promulgated federal SO₂ limiting programs. As stated by EPA in the preamble to the June 2, 2010, SO₂ standard revision, "EPA ... notes that it anticipates several forthcoming national and regional rules, such as the pending Industrial Boilers MACT standard under CAA section 112(d), that are likely to require significant reductions in SO₂ emissions over the next several years. A limited qualitative assessment based on the results of preliminary modeling of some sample facilities indicates that well controlled sources should meet the new SO₂ NAAQS."

i. EPA Refinery Initiative and Associated Consent Decrees

Between 2002 and 2005, the Billings refineries and their respective parent companies each entered into a Consent Decree (CD) with US District Court, EPA, and the State of Montana. CD requirements and projects have largely been completed at ConocoPhillips and CHS; however, as each refinery is on its own time schedule, ExxonMobil's CD involves changes at the refinery that are still being implemented. The individual requirements within each CD are lengthy and complex, and in the interest of brevity are not discussed here in any detail. The following list includes CD requirements for ExxonMobil that remain in process (as of 2008-2010 relative to the observed ambient data):

- a. SO₂ Reduction Additives in Fluidized Catalytic Cracker Unit – The refinery has been obligated to test a variety of SO₂ reduction additives since October 2006. To identify the additive that achieves the highest reduction in SO₂ emissions, the

testing required intermittent use of additives through January 2011. Beginning in January 2011, the additive is being, and will be, consistently used to achieve SO₂ emission rates to be approved by EPA and DEQ in 2012. Enforceable limits will be required to reduce SO₂ emissions on a short-term and long-term basis. The full ambient air quality effect of those limits is yet to be realized.

- b. Treatment of Sour Water Stripper Overhead Gas – SO₂ emissions from the combustion of Sour Water Stripper Overhead Gas in the FCCU CO boiler were reduced using hydrogen peroxide treatment effective October 2009 as required by 40 CFR 60, Subpart J. The treatment currently reduces SO₂ emissions from the refinery in a manner that was not fully realized during the 2008-2010 period.
 - c. Enhanced Flare Gas Recovery – As discussed in the FIP section (III.D.iii), additional capacity was added to the Flare Gas Recovery System effective in September 2010. This system will reduce the flaring of sour gas, ultimately reducing short-term intermittent SO₂ emissions and longer-term continuous SO₂ emissions, again in a manner that was not fully developed during the 2008-2010 period.
 - d. Elimination of Routine and Continuous Flaring of Sour Gas – Refinery modifications and procedural changes effective in September 2010 reduced the flaring of sour gas, which will reduce short-term intermittent SO₂ emissions and longer-term continuous SO₂ emissions. Effective September 2010, the refinery flares must meet H₂S standards mandated by 40 CFR 60, Subpart J to reduce SO₂ emissions. As with other flare controls, both short-term intermittent SO₂ emissions and longer-term continuous SO₂ emissions will be reduced.
- ii. Utility MACT Implementation

The proposed Utility MACT was announced and made publicly available by EPA on March 16, 2011. The proposed rule was promulgated as 40 CFR 63, Subpart UUUUU. The rule is expected to be issued in final form by November as required by a court settlement agreement, unless that deadline is extended by the courts. As previously discussed, the proposed rule contains several emission limit options by category. In the coal-fired units section, the following categories exist. For non-Hg metals, a facility may take a total PM limit, a total non-Hg HAP metal limit, or individual limits on listed non-Hg HAP metals. For acid gases, the options include taking a hydrochloric acid limit or an SO₂ limit. Mercury limits apply for all types of units subject to the Utility MACT. Some options can only be used in conjunction with specific pollution control configurations.

The PPL - Corette and YELP facilities (YELP, it appears because of its “capability” to burn cat-slurry oil and the potential categorization of petroleum coke as a “solid oil-derived fuel”) will both be subject to the new Utility MACT. PPL - Corette would be categorized as an existing coal-fired unit designed for coal greater than or equal to 8,300 British thermal units per pound (Btu/lb). If PPL - Corette chose to demonstrate compliance with acid gases using the SO₂ surrogate limit, it would be limited to 0.2 lb SO₂/MMBtu of heat input, which is lower than current emissions by more than half. The 2009 SO₂ emissions from the PPL - Corette facility, based on EPA’s Acid Rain Database, averaged approximately 0.455 lb/MMBtu. In addition, the proposed PM limit is much lower (approximately 85% lower) than current PM emissions (0.030

lb/MMBtu compared with 0.206 lb/MMBtu from a February 10, 2011, stack test). The strategy to meet the SO₂ limitation would have a significant impact on SO₂ emissions from PPL - Corette, and any PM control added would probably provide some co-benefit control with respect to SO₂.

YELP would likely be categorized as an existing solid oil-derived fuel unit, under the current proposal. However, EPA is requesting comments on including petroleum-coke-fired units within the Utility MACT. If petroleum coke-fired units become a category with different limitations, YELP would most likely be subject to those requirements (as opposed to the solid oil-derived unit limitations) because petroleum coke is a more specific fuel description for the YELP boiler. If YELP chose to demonstrate compliance with the hydrochloric acid gas limit using the SO₂ surrogate limit (assuming the solid oil-derived fuel unit classification), it would be limited to 0.4 lb/MMBtu of heat input, which is lower than permitted emissions by approximately half. The pound per hour YELP permit limitation equates to approximately 0.777 lb/MMBtu on a rolling 30-day average. The PM limitation for that fuel category would not require additional control at YELP; however, the strategy to meet the SO₂ limitation would have a significant impact on SO₂ emissions from YELP.

iii. Existing FIP Implementation

In 1998, the Montana Board of Environmental Review approved a plan to control SO₂ emissions in the Billings and Laurel area. The plan was submitted to EPA as a modification to the State Implementation Plan (SIP). EPA eventually approved the plan with a few notable exceptions. To that end, EPA adopted its own Federal Implementation Plan (FIP) that adds additional SO₂ control requirements to the SIP. Although the SIP portion of the plan is fully implemented, resulting in substantial SO₂ reductions, the FIP is not. As a result, the Billings area has yet to see the full impact of the FIP.

In general, the FIP primarily applies to flaring events at the refineries (CHS, ExxonMobil, and ConocoPhillips) and MSCC. Such flaring events arise from startup, shutdown, and malfunction periods. The FIP requires the development of Flare Monitoring Plans, which have been developed and submitted to EPA by the involved facilities. EPA has yet to approve those plans. As flaring is almost exclusively a short-term intermittent activity that is in response to an upset condition, the full impact of the FIP will likely reduce short-term (1-hour and shorter) emission rates, which would ultimately be reflected in 1-hour monitoring values corresponding to the ambient standard, even further.

In addition to the flaring discussed above, the FIP imposes substantially lower emission limits on the MSCC facility than are allowed under the 1998 SIP. In response to the 1998 SIP, MSCC installed SuperClaus™ tail gas recovery processing, which operates at high efficiency and with a high online factor, but which still requires periods of downtime for repairs and maintenance. In order to meet the additional requirements of the FIP, and to increase overall processing reliability, MSCC recently (in 2008) installed additional duplicate/redundant SuperClaus™ facilities aimed at allowing either unit to carry on tail gas processing tasks while the other is out of service. This helps to reduce the need to revert to Claus-only processing during times of SuperClaus™ maintenance, and to eliminate the increase in emissions that normally accompanies such periods. This in turn helps to assure

that MSCC is able to meet the more stringent FIP requirements on its main stack, which accounts for almost all of the SO₂ emissions from the facility.

In Lockwood, MSCC and ExxonMobil have worked together to bring about a functional enhanced flare recovery system serving the refinery flare system and using the MSCC facilities for gas treating. This project became operational in 2010. While not directly arising from the 2008 FIP, it now serves to reduce flare emissions. For example, in the last quarter of 2010, the operation of this equipment allowed early termination of flaring resulting from a reported malfunction (on 11/30/2010) that affected both facilities. The FIP limitations relating to startup-shutdown-malfunction flaring emissions continue to be studied for development of additional means to feasibly limit these sporadic short-term emissions from flares; for example, at MSCC, during necessary startup/shutdown or malfunction events. The full effect of the FIP on these events is not yet developed; however, it is clear that the FIP restrictions on flaring serve as a further incentive to reduce short-term and annual emissions from flares, as compared to the 2008-2010 period.

iv. Regional Haze / BART Implementation

Under EPA's Regional Haze Program, states, including Montana, are required to develop a program to assure reasonable progress toward meeting the national goal of protecting (and preventing) visibility impairment in mandatory Class I areas. Two portions of this program could impact industrial facilities in the Billings and Laurel areas. One program is BART. BART requirements of the regional haze rule apply to facilities built between 1962 and 1977 that have the potential to emit more than 250 tons a year of visibility-impairing pollution. Those facilities fall into 26 categories, including utility and industrial boilers, and large industrial plants such as pulp mills, refineries, and smelters. The regional haze regulations also allow states to develop coordinated strategies and implement programs to make "reasonable progress" toward the goal of "no manmade impairment" in national parks and wilderness areas by reducing emissions that contribute to haze. Currently EPA is directly administering these programs in Montana.

Various analyses by the seven major Billings/Laurel area facilities have been supplied to EPA as part of their investigation into the applicability and extent of BART or Reasonable Progress requirements. According to EPA guidance, SO₂ is a pollutant that may contribute to visibility impairment. To date, EPA has not proposed any findings as to what controls or emission reductions may be required to comply with these two programs at affected sources in Montana. It is believed that EPA plans to make such (draft) determinations sometime this calendar year. According to EPA, the following facilities may be subject to the visibility program indicated:

- MSCC - BART
- ExxonMobil - BART
- YELP - Reasonable Progress
- ConocoPhillips - BART
- CHS - BART
- PPL – Corette - BART

EPA is currently analyzing applicability and potential emission reduction strategies. To the extent any reductions may be required, those reductions would impact ambient air quality in Billings and Laurel. It is anticipated that those reductions would reduce the SO₂ ambient air quality levels in the area. However, EPA has not provided any information regarding their decisions on emission control strategies associated with BART and Reasonable Progress or on the timeframe of those decisions.

v. Boiler Maximum Achievable Control Technology (MACT) Implementation

As previously discussed, EPA's Boiler MACT for major sources was finalized and published as 40 CFR 63, Subpart DDDDD in the Federal Register on March 21, 2011. However, as previously mentioned, on May 18, 2011, EPA published an indefinite delay of the implementation of the major source Boiler MACT rules. The Boiler MACT, as finalized, would require emission limits for various categories of large and small boilers. The rule would also require various energy audits and tune-ups of the boilers regardless of size and fuel. The energy audits and tune-ups are designed to lower fuel consumption, thereby lowering emissions. In the Billings and Laurel area, MSCC, PPL - Corette, ExxonMobil, CHS, and ConocoPhillips have units that will be impacted by the newly promulgated Boiler MACT for major sources. MSCC, PPL, ExxonMobil, and ConocoPhillips have gas-fired (either natural gas or refinery fuel gas-fired) boilers that appear to meet the applicability requirements of the rule. As such, energy audits and tune-ups would be requirements of the rule for those units. The reduction in SO₂ is not quantifiable at this early date, but improvements in efficiency and tune-up would be likely to lead to lower emissions. However, even without the stay, the Boiler MACT provisions are not likely to lead to large reductions in SO₂ emissions from major sources.

EPA's Boiler MACT standard for area sources was finalized and published as 40 CFR 63, Subpart JJJJJ in the Federal Register on March 21, 2011 (and is not subject to the stay issued by EPA on the major source Boiler MACT rules). The three coal-fired boilers at Western Sugar appear to be subject to the Hg and CO (as a surrogate for non-dioxin organic hazardous air pollutant) limits in this standard. At this time it is unclear what steps Western Sugar may take to meet the Hg emission limits listed in the area source rule. The three coal-fired boilers at Western Sugar are currently controlled using wet scrubbers. If scrubber upgrades are considered for Hg control, SO₂ emissions may also be reduced through that process, although significant reductions would not be expected.

vi. New Source Performance Standards (NSPS) - 40 CFR 60, Subpart Ja

Pursuant to a consent decree entered into in 2005, EPA revised Petroleum Refinery NSPS (40 CFR 60, Subpart J). Because of the extensive changes in the regulations and changes in definitions for that revision, EPA determined it was appropriate to develop a new set of regulations that apply to new refineries and modified or reconstructed refineries. 40 CFR 60, Subpart Ja is that new set of regulations that includes new standards and requirements for new, modified, reconstructed fluid catalytic cracking units (FCCUs), new fluid coking units, new process heaters, and new flares. These standards include emissions limits for reductions of SO₂ and other pollutants.

Subpart Ja will have an impact on SO₂ emissions from process heaters, etc., although with the current universe of sources, it is unlikely to have a major impact unless affected units are reconstructed. The major impact on SO₂ emissions is anticipated to be from flare minimization requirements that are anticipated from EPA in response to the reconsideration requests and subsequent stay of certain flare provisions. The flare provisions under Subpart Ja remain under review at EPA, but are anticipated to be released by the end of 2011. The flare provisions would be specifically intended to reduce short-term SO₂ emissions from flares. This could, of course, reduce 1-hour ambient concentrations in a manner not reflected in the 2008-2010 time period.

vii. EPA Flare Initiative

Independent of other efforts to reduce flare emissions in Billings and Laurel under Consent Decrees and/or NSPS requirements, EPA is initiating efforts to limit emissions from flares nationwide. It appears that the requirements will be promulgated as part of the Consolidated Federal Air Rule (40 CFR, Part 65). The requirements are expected to be proposed by the end of 2011. The initiative will further limit emissions from flares in the future and, therefore, potential impacts to the 1-hour SO₂ standard as discussed above with respect to flare minimization under 40 CFR 60, Subpart Ja.

Based on the preceding analysis, Montana believes that implementation of the Utility MACT, BART, flare provisions (and some FIP provisions) currently tied up in the reconsideration/stay of Subpart Ja, and the accomplishment of consent decree provisions for ExxonMobil will provide significant SO₂ reductions and long-term SO₂ NAAQS compliance without additional control plan measures. The Clean Air Act does not expect states to revise SIPs when federal requirements would have the same outcome. As stated, ongoing implementation of the national and local SO₂ limiting programs identified previously will continue to result in significant SO₂ reductions from the affected Billings/Laurel area SO₂ sources. Therefore, Montana need not regulate over the top of EPA's SO₂ limiting programs, including the ExxonMobil consent decree set to be fully implemented in calendar year 2011.

E. Yellowstone County Conclusion

Pursuant to 42 USC §7407, Montana is required to submit to EPA a list of all areas (or portions thereof) in the state, designating as nonattainment, attainment, or otherwise unclassifiable based on available information.

The 2008-2010 design value monitored in the Billings/Laurel area is 84 ppb, an "apparent" violation of the revised SO₂ NAAQS. This information taken alone and without context could lead one to believe that an initial designation of nonattainment for Yellowstone County may be appropriate. However, the purpose and intent of a nonattainment designation is to initiate a process to incorporate necessary enforceable, permanent, and quantifiable emissions reductions into the affected SIP to ensure that the area will achieve NAAQS attainment and thereby adequately protect public health in a timely manner. If enforceable, permanent, and quantifiable emissions reductions necessary to attain NAAQS compliance are already mandated under the existing SIP, a nonattainment designation is inappropriate.

The most significant change in Yellowstone County (Billings/Laurel area) SO₂ emissions during the 2008-2010 timeframe was a near 1700 ton increase at ExxonMobil during the latter part of calendar year 2010. This emissions increase was a direct result of ExxonMobil performance under an SO₂ additive testing schedule pursuant to an EPA consent decree. This emissions increase also corresponds directly to a majority of the documented NAAQS exceedences (9 of 18) for the 2008-2010 time period. Absent implementation of the particular provisions of the consent decree responsible for the increased SO₂ emissions and resulting NAAQS exceedences, the consent decree and the existing SIP would have protected the NAAQS. One may reasonably presume that the CAA does not expect states to revise SIPs when federal requirements in a consent decree interfere with attainment of the NAAQS (42 USC §7410(a)(3)(C)). Additionally, the CAA does not expect states to revise SIPs when federal requirements would have the same outcome. Performance under the consent decree has demonstrated that additional and significant SO₂ reductions from the ExxonMobil facility will be realized upon full implementation, thereby complementing Montana's existing SIP. Therefore, Montana need not regulate over the top of EPA's consent decree with ExxonMobil.

As a result of this consent decree-mandated one-time emissions scenario (2010), Montana firmly believes that consideration of 2010 monitoring data for initial designation purposes is inappropriate. At a minimum, Montana believes that EPA should initially designate Yellowstone County as unclassifiable until such time as representative data is available for comparison to the NAAQS. In lieu of using 2010 data, Montana would suggest using either 2009, 2011, and 2012 data or 2011 through 2013 data to determine a design value for comparison to the NAAQS.

Further, Montana recognizes the ongoing and near-future implementation of many existing federal SO₂ emissions limiting programs impacting SO₂ point source emissions in the Billings/Laurel area of Yellowstone County. The perceived and logical intent of ongoing and near-future implementation of federal SO₂ emissions limiting programs would be to reduce industrial SO₂ emissions nationwide and in the Billings/Laurel area to levels corresponding to compliance with the 2010 revised SO₂ NAAQS. Implementation of regulatory programs including the Utility MACT, Regional Haze/BART, flare provisions from the FIP and EPA's flare initiatives, and ExxonMobil-specific consent decree requirements, will significantly reduce Billings/Laurel area SO₂ emissions and associated ambient concentrations. These reductions in SO₂ emissions provide further assurance that the Billings/Laurel area will achieve compliance with the new 1-hour SO₂ NAAQS before the required compliance date in August of 2017.

Therefore, because 2010 Billings/Laurel area industrial SO₂ emissions and associated ambient impacts are not representative of future conditions in the area and because the SIP already contains provisions necessary to achieve attainment of the revised SO₂ NAAQS in the Billings/Laurel area in a timely manner, revisions to the existing SIP are not necessary. Montana strongly concludes that an initial designation of unclassifiable for Yellowstone County is appropriate.

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