



September 1, 2008

Regional Air Quality Council
1445 Market St., #260
Denver, CO 80202

Re: Concerns Over Proposed State Implementation Plan

Dear Members of the Regional Air Quality Council:

Rocky Mountain Clean Air Action and WildEarth Guardians are writing to express concerns over the August 18, 2008 proposed Ozone Action Plan and State Implementation Plan ("SIP") revision to reduce ozone air pollution in the Front Range Region of Colorado.¹

We applaud the Regional Air Quality Council's ("RAQCs") efforts to craft an ozone reduction plan for the Front Range region of Colorado and support many of the proposed SIP provisions. However, we are concerned that the choice of options for the SIP may be too limited and may fall short of meeting the requirements of the federal Clean Air Act. This in turn may lead to Environmental Protection Agency ("EPA") disapproval of the proposed SIP, which would be a disappointing result given the time, energy, and resources that have been expended developing this SIP. We are further concerned that the Governor's 2007 directive—that the immediate goal of the RAQC should be to reduce ozone levels to at least to 80 parts per billion—may be falling by the wayside.

We understand the comments below are extensive, but it is not our intent to overwhelm. It is our intent to provide detailed comments, recommendations, and information to ensure the RAQC can recommend a robust Ozone Action Plan and SIP revision to the Air Quality Control Commission ("AQCC") at its September 25, 2008 meeting. Indeed, since the fall of 2007, we have been engaged with the RAQC on this process and have presented numerous comments. We would like to remind the RAQC that last fall our organization, together with the Environmental Defense Fund and several local governments, presented *The Path Forward*, a detailed overview of recommendations for reducing ozone in the Front Range region.² We refer to these and other comments below and sincerely hope that as the proposed SIP is readied for presentation to the

¹ On September 15, 2008, Rocky Mountain Clean Air Action will be formally merging with WildEarth Guardians, a nonprofit organization dedicated to protecting and restoring wild places, wildlife, and wild rivers in the American West. As part of its Climate and Energy Program, WildEarth Guardians will continue Rocky Mountain Clean Air Action's active involvement in the development of the Front Range ozone nonattainment SIP and future air quality planning.

² For reference, we have attached *The Path Forward* to these comments.

AQCC, the RAQC takes once last close hard look to ensure it not only achieves legal requirements under the Clean Air Act and meets the Governor’s directive, but above all safeguards public health.

I. The Proposed SIP Fails to Fully Meet Clean Air Act RACT Requirements

Section 172(c) of the Clean Air Act requires that nonattainment SIPs “provide for the implementation of all reasonably available control measures as expeditiously as practicable.” 42 USC § 7502(c)(1). Reasonably available control measures include “such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology [RACT].” *Id.* Although we support much of the RACT provisions in the proposed SIP, unfortunately, the proposed SIP fails in key regards to provide for the implementation of RACT in the Front Range nonattainment area.

A. The Proposed SIP Fails to Require RACT for NOx Sources

Of greatest concern is that the proposed SIP does not require RACT for existing sources of NOx emissions. Section 183(f) explicitly requires that a nonattainment SIP require that RACT be required for major sources of NOx emissions and coupled with the requirements of section 172(c), clearly indicates that the proposed SIP must require RACT for major NOx sources.

This is a significant oversight. Not only has modeling for the proposed SIP indicated that NOx reductions achieve the greatest ozone reduction results, but there are a number of major sources of NOx (i.e., sources that emit 100 tons or more of NOx annually) that would be subject to RACT requirements. The sources listed below represent major sources of NOx emissions as of 2005. Since that time, there may be additional major sources of NOx that have been constructed and may similarly be subject to RACT requirements.

Major Sources of NOx in the Front Range Nonattainment Region.³

Source	County	Total Source NOx Emissions, Tons/Year
Xcel Energy, Cherokee Power Plant	Adams	10,204
Suncor Energy, Denver Refinery	Adams	755
BP America, Wattenberg Gas Plant	Adams	775
Colorado Interstate Gas Co., Watkins Gas Plant	Adams	1,062
Colorado Interstate Gas Co., Latigo Compressor Station	Arapahoe	640
Xcel Energy, Valmont Power Plant	Boulder	2,355
CEMEX Inc., Lyons cement plant	Boulder	2,479
Xcel Energy, Arapahoe Power Plant	Denver	2,921
Xcel Energy, Denver Steam Plant	Denver	171
Rocky Mountain Bottle Co.	Jefferson	335
Colorado—Golden Energy Corp.	Jefferson	1,785

³ Based on 2005 emission inventory data from the APCD.

Colorado State University, Facility Services	Larimer	109
Eastman Kodak	Weld	140
DCP Midstream, Spindle Gas Plant	Weld	371
Xcel Energy, Platteville Station	Weld	400
Kerr-McGee (Anadarko), Hudson Compressor	Weld	1,247
DCP Midstream, Roggen	Weld	210
Kerr-McGee (Anadarko), Fort Lupton Compressor	Weld	326
DCP Midstream, Mewbourn	Weld	205
DCP Midstream, Greeley	Weld	239
DCP Midstream, Lucerne	Weld	253
Thermo Power and Electric	Weld	450
Kerr-McGee (Anadarko) Frederick Compressor	Weld	385
DCP Midstream, Marla	Weld	225
Thermo Cogen	Weld	353
DCP Midstream, Enterprise	Weld	215
EnCana Gathering Services	Weld	128
DCP Midstream, Platteville	Weld	236
Rocky Mountain Energy Center	Weld	361
Spindle Hill Energy	Weld	223

Although staff have committed to evaluating NOx control strategies in the near future, we are worried that no specific commitment has been made by staff to consider any specific NOx control strategy, no timeline has been proposed, and no deadlines have been proffered. What's more, no commitment to adopt any NOx control strategy has actually been made. We are gravely concerned that not only may we be putting for tomorrow what we should be doing today, but that the SIP will fail to be approved by the EPA in the process. It is critical that the RAQC ensure the proposed SIP implements RACT for existing sources of NOx.⁴

We are also concerned that it is unclear whether the proposed SIP would require new sources of NOx emissions to utilize RACT. The RAQC should ensure that any SIP revision requires the implementation of RACT for new NOx sources in the Front Range nonattainment area.

B. The Proposed SIP does not Ensure Existing RACT Determinations Continue to Represent RACT

We are concerned that the proposed SIP appears to maintain all RACT determinations made for existing major sources in the old 1-hour ozone nonattainment area. Because the area is now in violation of the 8-hour ozone NAAQS, the proposed SIP must require that prior RACT determinations for existing sources in the old 1-hour ozone nonattainment area be revisited to ensure compliance with section 172(c) of the Clean Air Act.

⁴ We are also aware that Xcel Energy has committed to retiring the Arapahoe coal-fired power plant located in Denver. We support this commitment. However, this commitment alone will not alleviate the need to address NOx emissions from other sources, including Xcel Energy's other coal-fired power plants, in the Front Range nonattainment area.

C. The Proposed RACT Requirements are Unenforceable

We are further concerned that the proposed RACT requirements are unenforceable, contrary to section 110(a)(2)(A) of the Clean Air Act.

Although the proposed SIP would require the implementation of RACT for existing sources, the proposed SIP does not specify what RACT emission limits will be required for each source subject to RACT. In other words, the proposed SIP will not adopt any specific emission limit for sources subject to RACT, but instead defer to the discretion of the Air Pollution Control Division (“APCD”) staff to establish RACT limits at a later date. To ensure the proposed SIP is consistent with the Clean Air Act and approvable by the EPA, the SIP must incorporate source-specific RACT emission limits for existing sources.

II. The Proposed SIP does not fully Meet Key Clean Air Act Section 110 Requirements

We are concerned that the proposed SIP does not fully comply with key requirements of section 110 of the Clean Air Act. Section 110 provides sets forth overarching requirements that must be incorporated and met as part of any SIP revision. Our concerns are as follows:

A. The Proposed SIP does not Maintain the NAAQS Beyond 2010 in Accordance with Section 110(a)(1)

As an initial matter, any proposed revision to the proposed SIP must provide for “implementation, maintenance, and enforcement” of the ozone NAAQS. 42 USC § 7410 (a)(1).

Unfortunately, the proposed SIP falls far short of ensuring the attainment *and* maintenance of the ozone NAAQS. We are particularly concerned that the proposed SIP is very similar to the 2006 Early Action Compact (“EAC”), which failed to prevent the region from violating the federal standards in 2007. The failure of the EAC is that it provided for only the bare minimum control requirements perceived necessary to meet the ozone NAAQS. Such tactic, however, even with a weight of evidence analysis, leaves little or no room for inventory or modeling error, and is not the foundation of what should be a long-lasting plan to provide healthful, clean air to the people who rise along the Front Range.

Similarly, the proposed SIP appears to fall short of looking sufficiently beyond the immediate goal of attainment of the 1997 8-hour ozone standard by 2010. To meet the federal requirements for sufficiency, the plan should include controls necessary to demonstrate maintenance of the Draft Ozone Plan well beyond 2010. As the RAQC is aware, the Rocky Mountain region, including the Front Range, is forecasted to have significant population growth in the first quarter of this century and beyond. It makes little sense with regards to both the protection public health and the use of taxpayer dollars for the RAQC to continue to incrementally revise the Colorado SIP as needed each 2 to 3 years in an attempt to re-demonstrate attainment as inventory and monitoring data changes. Indeed, as directed by the Governor, the SIP should contain provisions aimed at protecting public health to the greatest extent, including provisions designed to meet as expeditiously as possible the 2008 revised 8-hour standard. In short, what is needed is a bona-fide, long-term plan that considers the need for economic growth in the region, adequately and fully protects public health, and eliminates the need to repeat the SIP process in as little as two years from now.

B. The Proposed SIP Falls Short of Complying With Section 110(l)

In addition to failing to maintain the ozone NAAQS beyond 2010, the proposed SIP may fall short of complying with section 110(l) of the Clean Air Act. Section 110(l) prohibits approval of any SIP revision if it would interfere with the attainment of any NAAQS. *See* 42 U.S.C. § 7410(l). The EPA has explained, “Section 110(l) of the Clean Air Act states that a SIP revision cannot be approved if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress toward attainment of the NAAQS or any other applicable requirement of the Act.” 73 Fed. Reg. 45881.

Although it is likely that the proposed SIP will ostensibly comply with the old 8-hour ozone NAAQS of 85 parts per billion, the old NAAQS has been officially superseded by the new 8-hour ozone NAAQS of 75 parts per billion and no longer constitutes the current standard. Indeed, the new 8-hour ozone NAAQS of 75 parts per billion officially replaced the older NAAQS on March 27, 2008 after the rule was published in the Federal Register. *See* 73 Fed. Reg. 16511. According to the Federal Register notice, the new ozone NAAQS became effective on May 27, 2008. *See* 73 Fed. Reg. 16436. Thus, it appears that the current test under section 110(l) of the Clean Air Act is whether the proposed SIP will comply with the current 8-hour ozone NAAQS of 75 parts per billion.

Unfortunately, the proposed SIP will not meet the current 8-hour ozone NAAQS of 75 parts per billion. As the draft August 5, 2008 Ozone Action Plan states, “This proposed Attainment SIP is not intended to address attainment of the 0.075 ppm 8-hour ozone standard.” Ozone Action Plan at v. Although the draft Ozone Action Plan asserts that the EPA “will address transition issues from the 1997 standards to the 2008 standards in a separate future rulemaking,” no rule can abdicate the state’s and the EPA’s duties to ensure compliance with the statutory requirements of the Clean Air Act. Put simply, the EPA cannot approve any SIP revision unless it will not interfere with attainment of any NAAQS. Because the proposed SIP will not attain the 8-hour ozone NAAQS of 75 parts per billion, it does not appear that the EPA will be able to approve the SIP. We therefore request the RAQC ensure that the proposed SIP complies with section 110(l) of the Clean Air Act and does not interfere with attainment of the 0.075 ppm 8-hour ozone NAAQS.

B. Section 110(a)(2) Transport Requirements

We are further concerned that the proposed SIP falls short of complying with section 110(a)(2)(D) of the Clean Air Act. Section 110(a)(2)(D)(i)(I) specifically requires that SIPs prohibit air pollution that contributes significantly to nonattainment or interferes with the maintenance of any NAAQS in downwind states. We have not yet seen an analysis that assures the proposed SIP measures will adequately protect air quality in downwind states.

This lack of an analysis of impacts to downwind states is especially of concern in light of APCD conclusions presented to the Air Quality Control Commission in February of 2007. At that time, the APCD asserted that since all areas in Colorado were meeting the NAAQS for ozone, then levels of pollutants would not significantly contribute to a NAAQS problem in

neighboring states.⁵ The APCD further asserted that because the Front Range region would “remain in attainment through 2007,” the region would not significantly contribute to nonattainment or interference with maintenance of any NAAQS in any downwind state in the future.⁶ The APCD also relied on modeling prepared for the Early Action Compact to further justify its assertions that the Colorado SIP complied with section 110(a)(2)(D)(i)(I) of the Clean Air Act.

Clearly the APCD’s previous assertions are no longer valid given that the Front Range region did indeed violate the 8-hour ozone NAAQS in 2007, and given that modeling prepared for the Early Action Compact has since been superseded by more recent modeling prepared for the proposed SIP. In light of this, the APCD’s 2007 conclusions that the Colorado SIP will comply with section 110(a)(2)(D)(i)(I) of the Clean air Act no longer appear defensible and warrant revisiting through this SIP revision.

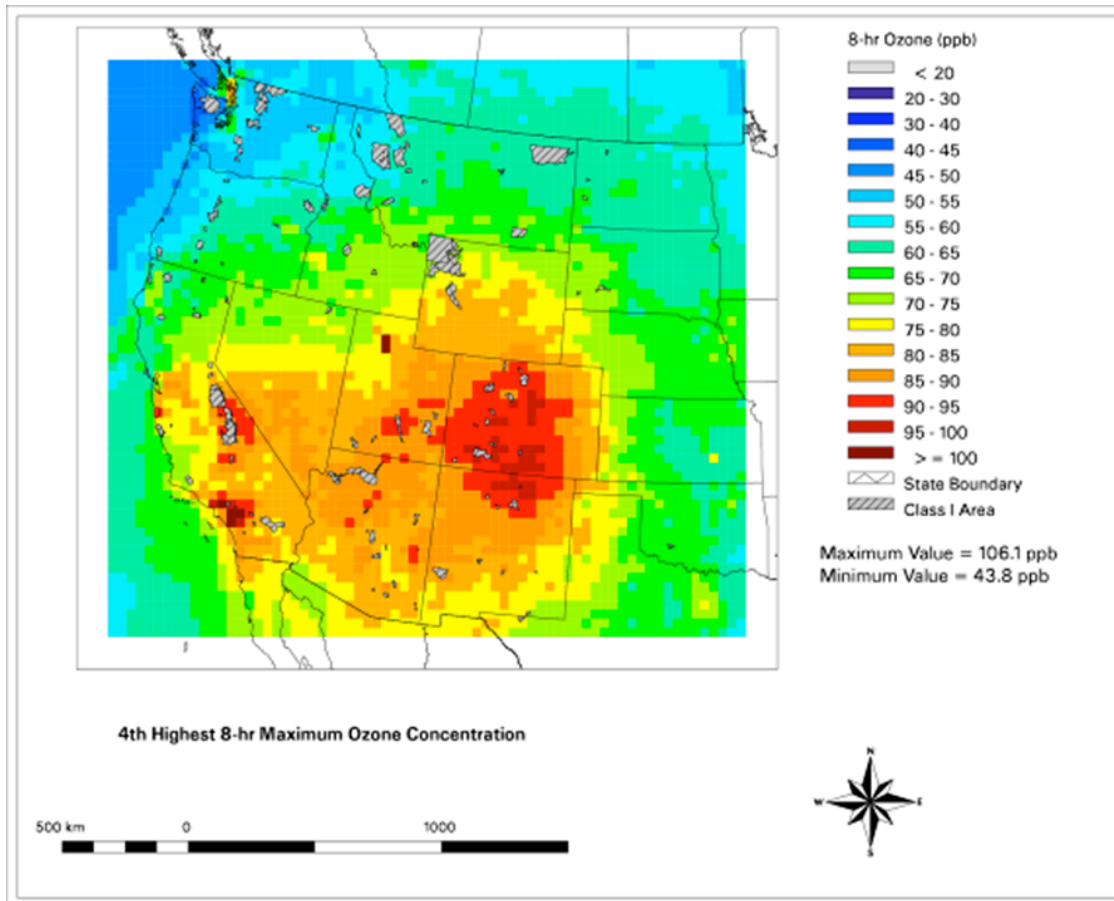
Although the need to address transport of ozone and ozone precursors to downwind states may be questioned, recent modeling suggests that transport is indeed a serious issue. Indeed, source apportionment results for the proposed SIP indicate that transport of ozone and ozone precursors from neighboring states and beyond can have a profound impact on air quality in the Front Range. Conversely, it is reasonable to assume that transport of ozone and ozone precursors from the Front Range can similarly impact neighboring states and beyond, possibly significantly contributing to nonattainment or interference with maintenance of the ozone NAAQS.

Furthermore, recent modeling prepared for the Western Regional Air Partnership and presented in a draft white paper highlighted the regional nature of ozone air pollution throughout the western United States.⁷ That modeling projected that broad regions of the west would exceed or violate the current ozone NAAQS by 2018 due to the regional nature of ozone air pollution. As the image below from that draft white paper shows, projected 2018 fourth maximum ozone concentrations throughout the western United States are expected to exceed the ozone NAAQS throughout the region. The draft white paper indicated that ozone reduction efforts among the western states may need to better characterize and quantify transport of ozone and ozone precursors to effectively reduce ozone within the region.

⁵ See APCD, “Technical Support Documentation for the State of Colorado State Implementation Plan to Meet the Requirements of Clean Air Act Section 110(a)(2)(D)(i) – Interstate Transport regarding 8-hour Ozone and PM-2.5 NAAQS.”

⁶ *Id.* at 2.

⁷ This modeling was presented in a draft white paper which was given to the RAQC by Rocky Mountain Clean Air Action at their July 24, 2008 meeting and is available online at <http://www.raqc.org/meeting/2008/July24/RMCAHandout2.pdf>.



**Projected 2018 fourth maximum ozone concentrations in the western United States.
Data prepared by ENVIRON for the WRAP.**

These findings underscore the need to ensure that the proposed SIP effectively meets the requirements of section 110(a)(2)(D)(i)(I) of the Clean Air Act and that the Front Range region’s contribution to ozone air pollution in downwind states is fully analyzed, assessed, and addressed. We request the RAQC ensure that the impacts of transport to downwind states are adequately analyzed, and that the proposed SIP takes into account such impacts in accordance with the Clean Air Act.

III. The Proposed SIP does not Require Reasonable Further Progress

Section 172(c)(2) of the Clean Air Act requires that nonattainment SIP revisions “require reasonable further progress.” Reasonable further progress is defined under the Clean Air Act as “such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date.” See 42 USC § 7501(1).

In other words, SIPs are to set forth the level of annual incremental emissions reductions required to ensure attainment of the NAAQS. Unfortunately, the proposed SIP does not set forth the actual level of annual incremental VOC and NO_x emission reductions required to attain the ozone NAAQS, nor does it explicitly require reasonable further progress. Although an analysis

of the required emissions reductions may be performed as part of either a weight of evidence analysis or a technical support document, the Clean Air Act is clear that the annual incremental reductions required to attain the NAAQS must be included in the SIP. The proposed SIP must be revised to both require reasonable further progress and to explicitly specify what level of annual incremental VOC and NOx emissions reductions will be necessary to attain the ozone NAAQS in the Front Range region.

IV. The Proposed SIP Does not Include a Comprehensive, Accurate, and Current Inventory of Actual Emissions

Section 172(c)(3) of the Clean Air Act requires that a SIP “include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in that area[.]” 42 USC § 7502(c)(3). As presented, the proposed SIP does not include the emissions inventory required by the Clean Air Act. Although the proposed SIP may be based on an emissions inventory, the actual SIP does not incorporate the emissions inventory to ensure compliance with section 172(c)(3). The proposed SIP must include the emissions inventory for the Front Range nonattainment region to ensure the effectiveness of the SIP and attainment and maintenance of the NAAQS.

V. The Proposed Condensate Tank Rules Need to be Strengthened to be Enforceable as a Practical Matter, Consistent with the Clean Air Act

Among other things, section 110(a)(2)(A) of the Clean Air Act requires that SIP provisions be enforceable. *See* 42 USC § 7410(a)(2)(A).⁸ While we support the proposed emissions reductions from condensate storage tanks, unfortunately, the proposed SIP provisions related to condensate storage tanks appear unenforceable and may need to be revised in key places. Below are specific comments by proposed section and recommendations for how they should be strengthened:

A. Section XII.C.2.B.(ii)

This section sets forth procedures for approving or disapproving specific VOC emissions factors for condensate tanks at exploration and production facilities, natural gas compressor stations, natural gas drip stations, and gas-condensate-glycol separators. This section provides that a specific emissions factor for condensate tank VOC emissions “shall be one for which the Division has no objection, and which is based on collection and analysis of a representative sample of condensate pursuant to a test method approved by the Division and EPA.” Unfortunately, this section does not explicitly identify what standards the Division will use to determine whether or not to object to a specific emissions factor and does not explain what a “representative sample” constitutes. Furthermore, although this section requires the Division to consult with and provide EPA 30 days in which to comment “on the test method,” the Division must also consult with and provide the public with an opportunity to comment in order to ensure the enforceability of this provision. Finally, this section may undermine permitting requirements set forth at AQCC Regulation No. 3. The Division or EPA cannot approve a specific emissions

⁸ Enforceability also relates to the ability of the public to enforce the SIP, as provided for by the Clean Air Act’s citizen suit provision set forth at section 304.

factor resulting in increased emissions at a source already permitted under Regulation No. 3 without adhering to proper permit modification, revision, or amendment provisions.

B. Section XII.D.1.A

This section allows operators to remove control devices on new and modified condensate tanks at exploration and production facilities if data from the first 90 days of operation show that annual VOC emissions will be less than two tons per year. This provision is unclearly written, as it does not explain how data from the first 90 days will be extrapolated to an entire year in order to project future VOC emissions. Indeed, the section states only that the owner or operator shall notify the APCD and include “an explanation of the methodology used” to determine that projected emissions would be below two tons per year. This language is too vague and fails to provide any level of enforceability with regards to the proposed section. Furthermore, this section poses problems in other regards. While projected emissions based on the first 90 days of operation may not exceed two tons per year, this does not necessarily mean that actual emissions would not exceed two tons per year. Thus, this section could allow a condensate tank that actually releases two tons per year of VOCs to avoid controlling emissions based on “projected” emissions.

C. Section XII.D.2.A

This section of the proposed SIP would maintain the systemwide approach to reducing emissions for existing condensate tanks until May 1, 2010. However, the systemwide approach to reducing emissions is unenforceable as a practical matter, a concern that we expressed in comments to the APCD on May 20, 2008. Indeed, the systemwide approach fails to specify which tanks would be required to reduce emissions, making it difficult, if not impossible, to verify compliance. Although operators would submit semi-annual reports documenting the systemwide level of VOC reductions achieved, these reports would be based on weekly, rather than daily, monitoring. This means that it would be impossible to verify whether operators met the required systemwide emissions reductions on a daily basis, a key omission if the goal is to ensure consistent VOC reductions throughout the summer ozone season. We would request that the proposed SIP be revised to ensure that the control threshold approach to reducing emissions be implemented in 2009, instead of continuing to rely on the systemwide approach.

D. Section XII.D.2.B

It is unclear how the proposed 98% control requirement will be enforced. Although operators will be required to maintain records related to condensate production, such data will not verify whether a control device was operated effectively and consistently. Furthermore, although operators will be required to monitor various parameters related to control device operation, such as an auto-igniter and electronic surveillance system monitoring, nothing in the proposed SIP indicates that a failure to install and properly operate an auto-igniter and electronic surveillance system would violate the 98% control requirement under this section. And although this section requires compliance with the 98% control requirement based on a “rolling twelve-month total,” nothing in the proposed SIP actually requires monthly monitoring of emissions that would ensure an accurate rolling twelve-month total is maintained.

E. Section XII.F.5.D

This section states that any loss of monitoring data required under this section “may” be treated by the APCD as if the data were not collected. This section implies that the APCD may also treat a loss of monitoring data as if data were collected. This section affords too much discretion to the APCD and is unenforceable. This section needs to simply state that records shall be retained for at least three years.

F. Section XII.F.7

This section specifies reporting requirements for condensate tanks subject to the control threshold approach of reducing emissions. Unfortunately, this section does not require that emissions data be reported to the APCD, meaning that control threshold emission reduction requirements are unenforceable. Furthermore, this section only requires that reports be submitted “annually.” Annual reporting fails to ensure that emissions reductions will in fact be achieved during the summer ozone season and fails to ensure that violations that occur during the summer ozone season can be remedied as soon as possible to ensure consistent and effective VOC emission reductions. We would request that the proposed SIP at the least require weekly reporting of emissions, although monthly reporting may be appropriate.

VI. The Proposed Pneumatic Device Rules Need to be Strengthened to be Enforceable and Consistent with the Clean Air Act

While we support the proposed emissions reductions from pneumatic devices, unfortunately, the proposed SIP provisions appear to be similarly unenforceable and may need to be revised in key places. Below are specific comments by proposed section and recommendations for how they should be strengthened:

Section XIII.I.3.A

For this section to be enforceable, the proposed SIP must require that owners and operators of all high-bleed pneumatic devices document all replaced high-bleed pneumatics, maintain records of such replacements, and submit these records to the Division at least by the end of 2009, if not by the end of June 2009. Although we understand such records could be voluminous, to ensure this section is enforceable, the APCD and the public must understand the extent to which operators are complying with this section, necessitating that recordkeeping and reporting required be developed in association.

Section XIII.I.3.B

This section states that high-bleed pneumatics can be used if warranted by safety purposes, but does not explain how such warranties will be made, who will make such warranties, and under what conditions such warranties will be deemed valid by the APCD. The section should clearly specify the standards the Division will use to determine whether the use of high-bleed pneumatics is warranted. Additionally, this section should set a deadline by which operators of existing high-bleed pneumatics must seek APCD approval for the use of high-bleed pneumatics if needed for safety purposes. We would recommend that operators of existing

pneumatics seek approval for the use of high-bleed pneumatics by May 1, 2009, if necessary, and that operators of new pneumatics seek approval for the use of high-bleed pneumatics, if necessary, before such pneumatics are put into service. Furthermore, for this section to be enforceable the proposed SIP must provide for reporting of monitoring data and records required under sections XIII.I.4 and XIII.I.5. Such a reporting requirement must be included to ensure that the public can enforce this proposed SIP provision, as provided for under section 304 of the Clean Air Act.

VII. Other Provisions of Regulation No. 7 Need to be Revised to Ensure their Enforceability and to Take Credit for Emissions Reductions

Other provisions of Regulation No. 7 similarly need to be revised or amended to ensure their enforceability and to ensure that the expected emissions reductions are actually achieved in the Front Range nonattainment area and given proper credit by the EPA.

A. Section XII.G.2

This section relates to emissions from condensate tanks at natural gas processing plants and is unenforceable because it fails to set forth any monitoring, recordkeeping, or reporting requirements that would ensure compliance with the required emissions reductions. We are further concerned that this section only requires a 95% reduction in VOC emissions from condensate tanks at natural gas processing plants, whereas most of the proposed SIP would require a 98% reduction in VOC emissions. We would recommend that this section be revised to require a 98% reduction in VOC emissions and to require similar monitoring, recordkeeping, and reporting requirements as are required for condensate tanks at exploration and production facilities.

B. Section XII.H

This section relates to VOC emissions from glycol dehydrators. Similar to the aforementioned concerns, this section lacks any monitoring, recordkeeping, and reporting requirements that would ensure the enforceability of this provision. Furthermore, we question whether it is appropriate to require only a 90% reduction in emissions from glycol dehydrators. As mentioned in earlier comments submitted to the APCD and in *The Path Forward*, a 98% control efficiency is easily achieved from glycol dehydrators. In fact, the State of Wyoming currently requires that glycol dehydrators that emit 15 tons/year or more of VOCs and that are located in the Jonah-Pinedale natural gas fields reduce emissions by 98%. In light of the Front Range region's nonattainment status, it is unclear why we would not want to at least adopt rules that are equal to, if not better, than those being implemented in Wyoming.

C. Section XVI

This section requires that natural gas-fired stationary or reciprocating internal combustion engines greater than 500 horsepower "employ air pollution control technology to control emissions" in the Front Range nonattainment area. The section further requires that rich burn reciprocating internal combustion engines utilize a non-selective catalyst and an air fuel controller to control emissions and that lean burn reciprocating internal combustion engines

utilize an oxidation catalyst to control emissions. Unfortunately, this provision does not actually require any level of emissions reductions, whether of NOx or VOCs, and therefore cannot be relied upon as an emission reduction measure used to demonstrate attainment with the ozone NAAQS. Furthermore, this section lacks any monitoring, recordkeeping, or reporting requirements to ensure the enforceability of this provision. There is no means for the APCD, EPA, or the public to verify compliance and take enforcement action, if necessary.

VIII. The Proposed SIP Maintains Reporting and Permitting Exemptions for Drill Rig Engines that Interfere with Attainment and Maintenance of the NAAQS

We support proposals to eliminate certain exemptions under Regulation No. 3 related to the reporting of emissions and permitting of sources of air pollution. However, we are concerned that the proposal overlooks a significant exemption that not only puts air quality at risk, but also is also contrary to the Clean Air Act.

Regulation No. 3 exempts stationary internal combustion engines powering portable drilling rigs from reporting and permitting requirements and interferes with attainment and maintenance of the NAAQS. *See* AQCC Regulation No. 3, Part A, Section II.D.1.1. and Regulation No. 3, Part B, Section II.D.1.c.(i). Indeed, the Colorado SIP at AQCC Regulation 3 currently exempts reporting and preconstruction review and permitting of emissions from drill rig engines across the entire state, including the Front Range ozone nonattainment area. Regulation No. 3, Part A, Section II.D.1.1 states that, “Internal combustion engines powering portable drilling rigs” are exempt from the requirement to file Air Pollutant Emission Notices (“APENs”) because “cumulatively as a category, they are deemed to have a negligible impact on air quality.” Regulation No. 3, Part B, Section II.D.1.c.(i) states that stationary internal combustion engines that “power portable drilling rigs” are exempt from permitting requirements because “cumulatively as a category, [they] are deemed to have a negligible impact on air quality.” These exemptions were adopted March 10, 1983, and subsequently approved by the EPA and incorporated into the Colorado SIP in 1986. *See* 51 Fed. Reg. 31125

While these exemptions may have been consistent with the Clean Air Act in 1983, they currently are not. The reason is due to a significant increase in oil and gas drilling throughout the state of Colorado, which in turn has led to massive increase in the use of drill rig engines and massive increases in NOx emissions. The assertion that drill rig engines “have a negligible impact on air quality” today is simply not true.

In 1983, the APCD estimated that NOx emissions from drill rig engines could be as high as 2,200 tons per year. *See* Statement of Basis and Purpose of Revisions to Regulation No.3, Part F, Section I.D.V. Today, total NOx emissions from drill rig engines in Weld County alone are estimated to be more than 3,000 tons/year according to the emissions inventory for the DJ Basin recently prepared by the Independent Petroleum Association of the Mountain States (“IPAMS”). Emissions from drill rig engines have clearly increased dramatically since 1983.

Additionally, the pace of oil and gas drilling in Colorado, including in the Front Range nonattainment area, continues to increase, leading to increasing NOx pollution. According to the Colorado Oil and Gas Conservation Commission (“COGCC”), a record 6,368 drilling permits

were issued in 2007, including 1,527 in Weld County. So far in 2008, 4,625 drilling permits have been issued in Colorado, with 1,249 issued in Weld County. Since 2002, the total number of drilling permits issued annually by the COGCC in the Front Range nonattainment region has increased by over 100%. See Table below.

Drilling permits issued by the COGCC in the Front Range nonattainment area.⁹

County	2008 (as of August 19)	2007	2006	2005	2004	2003	2002
Adams	30	89	37	34	39	26	9
Arapahoe	6	10	11	7	5	2	1
Boulder	27	37	21	13	17	7	6
Broomfield	2	0	1	1	0	7	2
Denver	23	25	19	0	0	0	0
Douglas	0	0	0	0	0	0	0
Jefferson	0	3	1	0	0	0	0
Larimer	12	5	0	1	0	0	1
Weld	1249	1527	1418	901	832	757	760
TOTAL	1349	1696	1508	957	893	799	779

Today, it cannot be denied that NOx emissions from drill rig engines are significant and do not pose “negligible” impacts to air quality, particularly in the Front Range nonattainment area where NOx emissions are known to be contributing to the region’s ozone problem. On the contrary, NOx emissions not only appear to currently pose significant impacts, but also appear to pose ever-increasing threats to air quality. Especially in areas experiencing increasing oil and gas drilling, including Weld County, NOx emissions from drill rig engines are rapidly comprising a proportion of overall of NOx emissions that is by no means negligible.

Among other things, a SIP is required to ensure maintenance and attainment of the NAAQS by regulating stationary sources of air pollution, including through reporting of emissions and permitting of sources. The EPA has explained:

Air quality planning requirements for new and modified stationary sources of air pollution are an integral part of the PSD [Prevention of Significant Deterioration] program. States must develop, adopt, and submit to EPA for approval a State Implementation Plan (SIP) that contains emission limitations and other control measures to attain and maintain the NAAQS and to meet other requirements of section 110(a) of the [Clean Air] Act. Each SIP must contain a preconstruction review program for the construction and modification of any stationary source of air pollution to assure that the NAAQS are achieved and maintained.

70 Fed. Reg. 59583-59584. Thus, SIPs must ensure that stationary sources of air pollution do not jeopardize NAAQS through a preconstruction review program for the construction or modification of such sources.

⁹ Data from August 19, 2008 COGCC Staff Report, available online at http://cogcc.state.co.us/Staff_Reports/2008/August2008SR.pdf.

The Colorado SIP ensures protection of NAAQS by requiring polluters to submit APENs and to obtain permits for the construction of stationary sources. APENs are required by the state of Colorado to keep emissions inventories current. According to the SIP, “APEN information is to be used to achieve the most accurate and complete inventory possible, and to provide for the most accurate enforcement program achievable based upon that inventory.” Statement of Basis and Purpose of Revisions to Regulation No.3, Part F, Section I.A. And as the EPA has already explained, construction permits are required to ensure that air pollutants emitted from stationary sources achieve and maintain NAAQS.

Because the Colorado SIP exempts stationary engines powering portable drilling rigs from APEN and preconstruction review and permitting requirements, it fails to comply with the Clean Air Act. As a practical matter, the Colorado SIP fails to prevent NOx emissions from drill rig engines from causing or contributing to violations of NAAQS, and the RAQC must remove the exemption to ensure approval of the SIP.

IX. The Proposed SIP Maintains a Permitting Requirement that Fails to Attain and Maintain the NAAQS

The proposed SIP also maintains a permitting requirement that fails to ensure attainment and maintenance of the NAAQS. Regulation No. 3, Part B, Section III.D.1.c states that the APCD cannot approve a construction permit if the source or activity would “cause” an exceedance of any NAAQS. As written, this permitting provision means that the APCD could only deny a permit if the one source or activity being permitted alone would “cause” an exceedance of the NAAQS.

While we support the intent behind this SIP provision, Section III.D.1.c must be revised to ensure not only that any permitted source or activity will not cause an exceedance of the NAAQS, but also that the permitted source or activity will **not contribute** to an exceedance of the NAAQS. This revision is needed because sources or activities alone may not cause an exceedance of the NAAQS, but together with other operating sources or activities, may do so. The SIP must ensure that the APCD does not approve construction permits for sources or activities that alone may cause an exceedance of the NAAQS and that cumulatively with other sources may contribute to an exceedance.

X. The Proposed Changes to Regulation 11 Need to be Subject to Additional Rulemaking to Fulfill Public Notice and Hearing Requirements

It is unclear whether the changes to the I/M emission cutpoints under Regulation No. 11 will be proposed for inclusion in the SIP in the upcoming AQCC rulemaking. As a housekeeping matter, the proposed changes to the I/M emission cutpoints at Regulation No. 11 must be subject to additional rulemaking before they can be incorporated into the SIP. When the changes to Regulation No. 11 were adopted by the AQCC by last spring, nothing in the rulemaking notice indicated that Regulation No. 11 would be incorporated into the Colorado SIP. Section 110(a)(1) of the Clean Air Act requires reasonable notice and public hearings be provided before proposed SIP provisions can be submitted to the EPA for approval. If the state-only I/M cutpoint changes are not being proposed for inclusion in the SIP, we would strongly

urge the RAQC to recommend otherwise and ensure that the Regulation No. 11 changes be subject to additional rulemaking in accordance with the Clean Air Act.

XI. Oil and Gas Emissions Inventory is not Based on Actual Emissions

Section 172(c)(3) of the Clean Air Act requires that nonattainment SIPs “shall include a comprehensive, accurate, current inventory of **actual** emissions from all sources of the relevant pollutant or pollutants in such area[.]” 42 USC § 7502(c)(3) (emphasis added). Unfortunately, it appears that portions of the emissions inventory from oil and gas operations in the Front Range ozone nonattainment area may not represent actual emissions as required by the Clean Air Act. We previously provided comments on this subject to the APCD on March 18, 2008.

Our primary concern is that the oil and gas operations emissions inventory, which was prepared by the Independent Petroleum Association of the Mountain States (“IPAMS”), an oil and gas industry lobby organization, does not reflect actual emissions from many sources that are currently unregulated and uninventoried under the Colorado SIP, including well completions, well blowdowns, pneumatic devices, and drill rig engines.¹⁰ According to the emissions inventory prepared by IPAMS, actual emissions data from these sources was not gathered. Instead, emission factors were developed based on an unknown number of sources and then extrapolated to the entire nonattainment area.

This method of inventorying emissions is especially of concern with regards to VOC emissions from well blowdowns, pneumatic devices, and well completions because no quality assurance and quality check (“QA/QC”) review was completed for the emissions factors and inventories developed for these sources. Indeed, according to the scope of work for the IPAMS inventory, emissions from natural gas well completions and recompletions, blowdowns, and high-bleed pneumatic controllers will not be subject to any QA/QC review.¹¹ This raises significant concerns because VOC emission factors have not been formally developed for natural gas well completions, blowdowns, or high-bleed pneumatic devices. Additionally, data both from the Front Range nonattainment area and other parts of the Rocky Mountain west indicate that emissions of VOCs from completions/recompletions, blowdowns, and pneumatics can be significant.¹² Without relying upon an established protocol to ensure quality data, we are uncomfortable supporting the accuracy and completeness of any such data, let alone agreeing such data represents actual emissions as required by the Clean Air Act.

The lack of QA/QC review is especially of concern in light of the EPA’s guidance on this issue. According to the EPA’s “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards and Regional Haze Regulations,” states should “perform QA checks and procedures on their [emission] inventories” associated

¹⁰ The IPAMS oil and gas emissions inventory is online at [http://www.wrapair.org/forums/ssjf/documents/eiccts/OilGas/2008-04_%2706_Baseline_Emissions_DJ_Basin_Technical_Memo_\(04-30\).pdf](http://www.wrapair.org/forums/ssjf/documents/eiccts/OilGas/2008-04_%2706_Baseline_Emissions_DJ_Basin_Technical_Memo_(04-30).pdf).

¹¹ The scope of work for the Phase III oil and gas emission inventory is available online at http://www.wrapair.org/forums/ssjf/documents/eiccts/OilGas/Phase_III_Oil&Gas_EI_project_Scope_of_Work_Final_110507.pdf.

¹² For example, inventories in Wyoming indicate that well completions release 86 tons of VOCs/completion. See, http://www.wrapair.org/forums/ssjf/documents/eiccts/OilGas/WRAP_Oil&Gas_Final_Report.122805.pdf.

with implementing the 8-hour ozone National Ambient Air Quality Standards (“NAAQS”).¹³ According to the EPA’s guidance:

The purpose of QA is to ensure development of a complete, accurate, and consistent emission inventory. A well-developed and well-implemented QA program fosters confidence in the inventory and in any resulting regulatory and/or control program.

Guidance at 63. In light of the EPA’s guidance on this issue, as well as concerns related to the accuracy and completeness of the IPAMS emission inventory data, it does not appear that the oil and gas emissions inventory relied upon by the proposed SIP complies with Clean Air Act requirements, at least with VOC emissions from well blowdowns, completions and recompletions, and high-bleed pneumatic devices.

With regards to drill rig engine emissions inventories, we are similarly concerned that actual emissions have not been measured and properly inventoried in the Front Range ozone nonattainment area. To begin with, the IPAMS inventory relied on information that did not represent actual emissions measurements. Second, the IPAMS inventory reports that operator-submitted information, including data regarding emission factors, was by no means consistent. According to the IPAMS emission inventory, “Due to the variability in the type of information provide by the participating companies, it was decided to sum the drilling emissions for each company separately using the data and assumptions for that company, and then to sum all participating companies’ drilling emissions and scale this to the basin-wide drilling emissions.” IPAMS Inventory at 13. This method of inventorying emissions appears seriously flawed. Not only did IPAMS not ensure that operators utilized consistent, accepted, and quality checked emission factors to estimate emissions, but IPAMS simply scaled the sum total of variable data to the region, instead of assessing actual emissions from drill rig engines by county. As a result, it does not appear that the proposed SIP is based on actual emission data as required by the Clean Air Act.

XII. Climate Change Impacts need to be Taken into Account

Finally, we are concerned that climate change impacts have not been taken into account in the development of the proposed SIP. Studies indicate that climate change threatens to exacerbate ozone air pollution problems in the western United States, and the proposed SIP must take into account such impacts.

Indeed, a study submitted in 2007 for publication in the *Journal of Geophysical Research—Atmospheres* by scientists with Harvard, NASA, and the Argonne National Laboratory reports that climate change is expected to increase maximum 8-hour ozone concentrations by 2-5 parts per billion over large portions of the United States, including much of Colorado.¹⁴ To take into account climate change, the same study recommended that an

¹³ This guidance is available online at http://www.epa.gov/ttn/chief/eidocs/eiguid/eiguidfinal_nov2005.pdf.

¹⁴ See Shiliang, W, L.J. Mickley, E.M. Leibensperger, D.J. Jacob, D. Rind, and D.G. Streets, “Effects of 200-2050 global climate change on ozone air quality in the United States” (October 9, 2007). Submitted for publication to the *Journal of Geophysical Research—Atmospheres*. This study is available online at http://www-as.harvard.edu/chemistry/trop/publications/wu2007/GCAP_AQ.pdf.

additional 10% reduction in NOx emissions would be needed to offset any climate change penalty.

It is unclear whether modeling for the proposed SIP has taken into account the impacts of climate change. If not, we request the RAQC ensure that the proposed SIP take into account climate change and determine whether additional emissions reduction strategies, in particular NOx reduction strategies, should be adopted.

Conclusion

While there appear to be a number of areas that need improvement in the proposed SIP, there are a number of options the RAQC can pursue to ensure an effective ozone reduction plan. We would strongly urge the RAQC to ensure that all proposed SIP provisions are enforceable and consistent with the Clean Air Act, as explained above. Furthermore, we would strongly urge the RAQC to consider adopting additional safeguards to not only ensure compliance with the ozone NAAQS, but to ensure lasting protecting of public health in the Front Range region. As a priority, we would strongly urge the RAQC to:

- Adopt stronger motor vehicle NOx and VOC emission budgets than have been proposed by staff, as we recommended in comments at the August 11, 2008 meeting.
- Adopt NOx emission reduction strategies. A number of NOx emission reductions strategies are set forth in *The Path Forward*, including strategies to cost-effectively reduce NOx emissions from coal-fired power plants, cement kilns, and drilling rigs. We would strongly urge the RAQC to adopt NOx controls for these sources through the current SIP revision.
- Adopt emission controls for sources outside of the nonattainment area, including coal-fired power plants (such as the Rawhide plant located in northern Larimer County and the Pawnee power plant in Morgan County) and other sources of emissions related to oil and gas emissions, including existing reciprocating internal combustion engines, drilling rigs, and condensate storage tanks.
- Adopt the California Paints/Solvents/Consumer Products Rule, which would further help to reduce VOC emissions throughout the State of Colorado.
- Direct the Governor to opt-in to the federal reformulated gasoline program within six months after adoption of the SIP revision by the AQCC.
- Direct staff to propose for rulemaking the adoption of a clean car program, through which Colorado would adopt California's clean car standards, within six months after adoption of the SIP revision by the AQCC.

We appreciate the RAQC's time and attention to our concerns. We look forward to providing any needed clarification, explanation, or justification at the September 8, 2008 meeting. Thank you.

Sincerely,

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cc: Colorado Air Quality Control Commission
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