



6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R05-OAR-2018-0731 FRL-9993-52-Region 5]**

**Air Plan Approval; Minnesota; Flint Hills Sulfur Dioxide (SO<sub>2</sub>)**

**Revision**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve a revision to the Minnesota sulfur dioxide (SO<sub>2</sub>) State Implementation Plan (SIP) for the Flint Hills Resources, LLC Pine Bend Refinery (FHR) as submitted on October 23, 2018. The proposed SIP revision pertains to the shutdown and replacement of certain equipment at the refinery as well as amendments to certain emission limits, resulting in an overall decrease of SO<sub>2</sub> emissions from FHR.

**DATES:** Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R05-OAR-2018-0731 at <http://www.regulations.gov>, or via email to [blakley.pamela@epa.gov](mailto:blakley.pamela@epa.gov). For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed

from Regulations.gov. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the "For Further Information Contact" section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Anthony Maietta, Environmental Protection Specialist, Control Strategies Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353-8777, [maietta.anthony@epa.gov](mailto:maietta.anthony@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

- I. What is the background for this action?
- II. What is EPA's analysis of the SIP revision?
  - a. Replacement of 21H1 and 21H2 coker heaters and their associated decoking units.
  - b. Emissions limits at the #5 sulfur recovery unit.
  - c. Emissions limits at the 31H2 Merox off-gas unit.
- III. SO<sub>2</sub> SIP and emissions impacts.
- IV. What action is EPA proposing?
- V. Incorporation by reference.
- VI. Statutory and Executive Order reviews.

**I. What is the background for this action?**

FHR operates an oil refinery located in the Pine Bend Area of Rosemount, Dakota County, Minnesota. On October 23, 2018, the Minnesota Pollution Control Agency (MPCA) submitted a request to EPA to approve the conditions cited as "Title I Condition: 40 CFR 50.4(SO<sub>2</sub> SIP); Title I Condition: 40 CFR 51; Title I Condition: 40 CFR pt. 52, subp. Y" in FHR's revised joint Title I/Title V document, Permit No. 03700011-102<sup>1</sup> (joint

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<sup>1</sup> In 1995, EPA approved consolidated permitting regulations into the Minnesota SIP. (60 FR 21447, May 2, 1995). The consolidated permitting regulations included the term "Title I condition" which was written, in part,

document 102) into the Minnesota SIP. Joint document 102 contains measures for FHR to implement changes to technology at the plant as well as to revise SO<sub>2</sub> emissions limits for existing equipment. MPCA posted joint document 102 for public comment on August 21, 2018, and the comment period ended on September 19, 2018. MPCA received no comments on the document.

## **II. What is EPA's analysis of the SIP revision?**

Joint document 102, issued by MPCA on October 5, 2018, contains amended SIP conditions for FHR that will replace SIP conditions in joint document 101, which EPA approved on July 10, 2018 (83 FR 33846). The amended SIP conditions in joint document 102 address the shutdown and replacement of two coker heaters in FHR's delayed coking units with smaller and more efficient heaters, as well as lowering allowable annual SO<sub>2</sub>

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to satisfy EPA requirements that SIP control measures remain permanent and enforceable. A "Title I condition" is defined, in part, as "any condition based on source specific determination of ambient impacts imposed for the purpose of achieving or maintaining attainment with a national ambient air quality standard and which was part of a [SIP] approved by the EPA or submitted to the EPA pending approval under section 110 of the act. . ." MINN. R. 7007.0100 (2013). The regulations also state that "Title I conditions and the permittee's obligation to comply with them, shall not expire, regardless of the expiration of the other conditions of the permit." Further, "any title I condition shall remain in effect without regard to permit expiration or reissuance, and shall be restated in the reissued permit." MINN. R. 7007.0450 (2007). Minnesota has initiated using the joint Title I/Title V document as the enforceable document for imposing emission limitations and compliance requirements in SIPs. The SIP requirements in the joint Title I/Title V document submitted by MPCA are cited as "Title I conditions," therefore ensuring that SIP requirements remain permanent and enforceable. EPA reviewed the state's procedure for using joint Title I/Title V documents to implement site specific SIP requirements and found it to be acceptable under both Title I and Title V of the Clean Air Act (July 3, 1997 letter from David Kee, EPA, to Michael J. Sandusky, MPCA).

emissions limits for the #5 sulfur recovery unit and 31H2 Merox off-gas unit. See Table 1 in Section III for a list of detailed changes to SO<sub>2</sub> allowable emissions limits associated with this proposed action. The amended SIP conditions in joint document 102 include:

**a) Replacement of 21H1 and 21H2 coker heaters and their associated decoking units**

The 21H1 (EQUI491) and 21H2 (EQUI492) coker heaters are older, less efficient coker heaters that will be removed, along with their associated steam-air decoking units (EQUI493 and EQUI494). These heaters and decoking units are being replaced with two new coker heaters (EQUI1491 and EQUI1492). The new coker heaters are natural draft heaters equipped with ultra-low oxides of nitrogen burners and heat recovery. These two features make them more energy efficient than the coker heaters they are replacing. Also, unlike the older coker heaters, the new coker heaters will be able to mechanically decoke without the need for separate steam-air decoking equipment. This mechanical decoking can be performed while the heater is online, which increases the utilization of the units but eliminates emissions associated with current steam-air decoking procedures. Overall, the new coker heaters will increase allowable annual average SO<sub>2</sub> emissions by 37.74 tons per year (tpy) over the old

coker heaters, however this increase in allowable emissions will be more than offset by the facility setting lower limits on other equipment, as shown in Table 1 below. Once EPA approval of joint document 102 is effective and the final construction activity to remove and replace the older units has completed, the SO<sub>2</sub> emissions limits for EQUI491, EQUI492, EQUI493, and EQUI494 will expire.

**b. Emissions limits at the #5 sulfur recovery unit.**

FHR is investing in SO<sub>2</sub> reduction activities that will allow the #5 sulfur recovery unit (STRU83) to meet a more stringent allowable SO<sub>2</sub> emission limit of 343 tpy in joint document 102, down from 409.8 tpy in joint document 101. One of the SO<sub>2</sub> reduction activities FHR is likely to undertake will involve rerouting downstream sulfur-laden air to the front end of the #5 sulfur recovery unit to recapture and reprocess the sulfur. The proposed reduction in allowable SO<sub>2</sub> emissions in joint document 102 is 66.8 tpy, as shown in Table 1 below.

**c. Emissions limits at the 31H2 Mercox off-gas unit.**

In order to help offset the increase in allowable SO<sub>2</sub> emissions from the installation of new coker heaters EQUI1491 and EQUI1492, the 31H2 mercaptan oxidation (Mercox) off-gas stream unit (EQUI546) will have its allowable SO<sub>2</sub> emissions reduced to 200 tpy in joint document 102. This is a 90.8 tpy

reduction in allowable SO<sub>2</sub> emissions from the limit in joint document 101. The allowable emissions limit revision is further shown in Table 1 below.

**III. SO<sub>2</sub> SIP and emissions impacts.**

As shown in Table 1, the impact of the amended SIP conditions in joint document 102 results in a decrease of allowable SO<sub>2</sub> emissions of 7.9 pounds of SO<sub>2</sub> per hour (lb/hr) for the 3-hour and 24-hour SO<sub>2</sub> standards, and for the annual SO<sub>2</sub> standard, allowable emissions are decreased by 119.8 tpy. Joint document 102 becomes effective upon the effective date of EPA's approval of MPCA's October 23, 2018 request.

**Table 1. Summary of Changes to Allowable SO<sub>2</sub> Emissions in Joint Document 102.**

<b>Unit</b>	<b>Sections in Joint Document 102 (where applicable*)</b>	<b>Change to Allowable in lb/hr (3-hr and 24-hr standards)</b>	<b>Change to Allowable in tpy (annual standard)</b>
EQUI1491/ 21H4 #1 coker heater	5.165.8, 5.165.9, 5.168.10	9.65	33.8
EQUI1492/ 21H5 #2 coker heater	5.166.8, 5.166.9, 5.166.10	9.65	33.8
EQUI491/ 21H1 #1 coker heater		-5.58	-13.2
EQUI492/ 21H2 #2 coker heater		-5.58	-13.2
EQUI493/ 21H1 steam-air decoking		-8.0	-1.73
EQUI494/ 21H2 steam-air decoking		-8.0	-1.73
EQUI546/ 31H2 Mercox off-gas	5.147.4	n/a	-90.8
STRU83/ #5 sulfur recovery unit	5.173.3	n/a	-66.8
	<b>Total Change</b>	<b>-7.9</b>	<b>-119.8</b>

\* SO<sub>2</sub> emissions limits for units that were decommissioned and removed do not exist in joint document 102

#### **IV. What action is EPA proposing?**

EPA is proposing to approve a revision to Minnesota's SO<sub>2</sub> SIP for FHR, as submitted by MPCA on October 23, 2018, and reflected in conditions labeled "Title I Condition: 40 CFR 50.4(SO<sub>2</sub> SIP); Title I Condition: 40 CFR 51; Title I Condition: 40 CFR pt. 52, subp. Y" in joint document 102.

#### **V. Incorporation by reference.**

In this rule, EPA proposes to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA proposes to incorporate by reference all the conditions in Minnesota Permit No. 03700011-102 cited as "Title I Condition: 40 CFR 50.4(SO<sub>2</sub> SIP); Title I Condition: 40 CFR 51; Title I Condition: 40 CFR pt. 52, subp. Y", effective January 13, 2017. EPA has made, and will continue to make, these documents generally available through [www.regulations.gov](http://www.regulations.gov), and at the EPA Region 5 Office (please contact the person identified in the "For Further Information Contact" section of this preamble for more information).

#### **VI. Statutory and Executive Order reviews.**



Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Clean Air Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian

tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: April 30, 2019.

Cheryl L Newton,  
Acting Regional Administrator, Region 5.

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