

# Texas Commission on Environmental Quality

## Interoffice Memorandum

**To:** Commissioners **Date:** September 16, 2022

**Thru:** Laurie Gharis, Chief Clerk  
Toby Baker, Executive Director

**From:** Tonya Baer, Director  
Office of Air

**Docket No.:** 2021-1435-RUL

**Subject:** Commission Approval for Rulemaking Adoption  
Chapter 112, Control of Air Pollution from Sulfur Compounds  
Rules for Round Four Sulfur Dioxide Nonattainment Areas  
Rule Project No. 2021-035-112-AI

### **Background and reason(s) for the rulemaking:**

On April 30, 2021, the Environmental Protection Agency (EPA) designated parts of Howard, Hutchinson, and Navarro Counties as nonattainment for the Sulfur Dioxide (SO<sub>2</sub>) National Ambient Air Quality Standard (NAAQS). The attainment date for all three nonattainment areas is April 30, 2026. Air dispersion modeling of authorized emissions showed that certain sources in each nonattainment area contribute to violations of the SO<sub>2</sub> NAAQS. The rules are intended to make state and federally enforceable the emission rates, stack parameters, and other associated control requirements as well as accompanying compliance obligations (monitoring, recordkeeping, reporting, and testing requirements) that attainment demonstration modeling shows will result in attainment upon rule compliance. The rules will be submitted to the EPA along with the attainment demonstration state implementation plan (SIP) revisions being adopted concurrently for the three nonattainment areas (Non-Rule Project Nos. 2021-010-SIP-NR, 2021-011-SIP-NR, and 2021-012-SIP-NR).

### **Scope of the rulemaking:**

The rules provide new Subchapters E, F, and G in 30 Texas Administrative Code (TAC) Chapter 112, with a new subchapter for each nonattainment area. Because the attainment demonstration modeling required specific limits at individual sources at applicable sites to demonstrate attainment, the rules apply only to specified emission points and emission caps at specified sites in the nonattainment areas.

### **A.) Summary of what the rulemaking will do:**

For the site to which it applies, each new division provides the following:

- **Applicability** - Specifies each site in the nonattainment area that is subject to the rules and the emission points and caps at each site.
- **Definitions** - Provides definitions of terms in the division that may require clarification or that are used frequently.
- **Control Requirements** - Provides the emission rate limits, stack parameters, and other associated control requirements that attainment demonstration modeling indicated are needed to model attainment. Certain sources are prohibited from operation after the compliance date. For some sites, multiple options are provided to allow compliance flexibility.
- **Monitoring Requirements** - Specifies the monitoring needed to document that the emission limits are not exceeded.
- **Testing Requirements** - Where needed, requires compliance or performance testing to verify the accuracy of monitors or testing of fuels, raw materials, and/or finished products needed to calculate actual SO<sub>2</sub> emissions.
- **Approved Test Methods** - Specifies the methods for the testing requirements with a provision for alternate testing if approved by the executive director and the EPA.

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- Recordkeeping Requirements – Specifies the records that are to be maintained on site to document compliance with emission rate limits, stack parameter requirements, and reporting requirements.
- Reporting Requirements – Requires an annual report, documenting each exceedance that occurred and corrective actions and requires submission of copies of test reports within 60 days of the test. For the one fugitive emission source, an annual report on temperature testing is required to indicate if the testing done to establish the emission limit is valid. If the EPA makes a finding of failure to attain or to meet reasonable further progress, a full system audit must be performed and reported by sites notified by the TCEQ as a contingency measure.
- Compliance Schedule – Specifies the compliance date for each site, which were all proposed as January 1, 2025 (i.e., one full calendar year before the attainment date for each nonattainment area) but at adoption are changed for some facilities at three sites: the Alon USA Big Spring Refinery will comply for their fluidized catalytic cracking units and incinerators by November 1, 2023 and for their other facilities by January 1, 2025; the Orion Borger Carbon Black Plant will comply for their waste heat boiler by June 30, 2023 and for their other facilities by January 1, 2025; and the IACX Rock Creek Gas Plant will comply by October 1, 2023 for all their facilities.

**B.) Scope required by federal regulations or state statutes:**

The rules are intended to make state and federally enforceable the emission rate limits, stack parameters, and other associated control requirements as well as accompanying compliance obligations (monitoring, recordkeeping, reporting, and testing requirements) that are needed to demonstrate attainment.

**C.) Additional staff recommendations that are not required by federal rule or state statute:**

None.

**Statutory authority:**

Sections 382.002, 382.011, and 382.012 of the Texas Clean Air Act (TCAA), which is codified as Texas Health & Safety Code, (THSC), Chapter 382, provide authority for the commission's purpose to safeguard the state's air resources, as well as to control the quality of the state's air and prepare and develop a general, comprehensive plan for the proper control of the state's air; §§382.014, 382.015, 382.016, and 382.021 of the TCAA, provide for the collection of emission inventory information, the power to enter property, requirements for monitoring and examination of records, and sampling requirements. The Texas Water Code (TWC), §5.102 provides general authority for the commission necessary for it to exercise its jurisdiction and discharge its duties while §5.105 provides for the commission to adopt general policies by rule; and the TCAA, §382.017 and TWC, §5.103 provide authority for the adoption of rules.

The authority to adopt the SIP revision is derived from federal Clean Air Act, 42 United States Code, §7410, which requires states to submit SIP revisions that contain enforceable measures to achieve the NAAQS, and other general and specific authority in Texas Water Code, Chapters 5 and 7 and Texas Health and Safety Code, Chapter 382.

**Effect on the:**

**A.) Regulated community:**

Each provision in the rules will impact only the site to which it applies. In the Howard County SO<sub>2</sub> nonattainment area, the sites are the Alon USA, LP's (Alon) Alon USA Big Spring Refinery and the Tokai Carbon CB LTD's (Tokai) Tokai Big Spring Carbon Black Plant. In the Hutchinson County SO<sub>2</sub> nonattainment area, the sites are the Chevron Phillips Chemical LP's (CP Chem) CP Chem Borger Plant, IACX Rock Creek LLC's (IACX) IACX Rock Creek Gas Plant, Orion Engineered Carbon LLC's

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(Orion) Orion Borger Carbon Black Plant, Phillips 66 Company's (Phillips 66) Phillips 66 Borger Refinery, and Tokai's Tokai Borger Carbon Black Plant. In the Navarro County SO<sub>2</sub> nonattainment area, the site is the Arcosa LWS LLC's (Arcosa) Arcosa LWS LLC Lightweight Streetman Plant.

**B.) Public:**

The public will benefit from improved air quality in each nonattainment area.

**C.) Agency programs:**

The regional offices in Regions 1, 4, and 7 may receive reports of exceedances or testing and may have a slight increase in inspections needed. No other impact on agency programs is anticipated.

**Stakeholder meetings:**

No stakeholder meetings were held for these rules, but agency staff worked with each company and the EPA on the rule provisions both in developing the proposal and in addressing public comments.

**Public comment:**

The commission offered public hearings on May 18, 19, and 23, 2022, but only the May 19, 2022 hearing in Borger, Texas was opened because no one signed up to speak at the other two public hearings. The comment period closed on June 2, 2022. TCEQ received extensive comments from the EPA and all affected companies except IACX and Orion. The EPA made the following significant comments:

- Deadlines for compliance should be clarified, applied as expeditiously as possible, and justified for each site.
- Throughout the rules, the frequency of monitoring should be increased to hourly, consistent with the one-hour NAAQS, unless less frequent monitoring is justified.
- Continuous emissions monitoring systems (CEMS) should be evaluated for all sites and when not practical, continuous total sulfur analyzers should be considered.
- Changes to EPN and RN identifiers and the approval of any alternative emission limits require a full SIP revision.
- Throughout the rules, provisions for monitoring recordkeeping reporting and testing should be consistent, more detailed and include appropriate emission calculations and test methods.
- The rules should include all facilities modeled rather than only the sources with impacts above significant impact level exceedances.
- The rules should describe how and when maintenance, startup, and shutdown (MSS) activities are authorized, the process for doing so, which are authorized, appropriate recordkeeping, and that flare emission limits only apply to MSS and not upsets.
- There should be individual emission limits for the flares at the CP Chem site rather than a cap.
- For Arcosa, since SO<sub>2</sub> controls are not required, they should be required to stack test within 90 days of the effective date of the rules. The stack test protocol must be approved by the EPA and TCEQ 90 days prior to testing.
- Contingency measures could be triggered by failure to attain based on factors other than monitoring, and the rules should clarify that contingency is triggered if there is a failure to make reasonable further progress.
- An alternate means of control (AMOC) based on 30 TAC Chapter 115 requirements is not approvable.
- Averaging periods longer than one hour for hourly emission limits are only appropriate where compliance with the one-hour limits is extremely difficult and there is a high degree of variability in emission rates.
- Alon made the following significant comments:

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- The rules should require complying with “the currently applicable federal requirement” instead of to specific federal requirements.
- The concentration limit of 162 parts per million hydrogen sulfide (H<sub>2</sub>S) should be replaced by a requirement to comply with the H<sub>2</sub>S emission limits in 40 CFR Part 60 Subpart Ja.
- The flare monitoring requirements should be replaced by the requirement to comply with 40 CFR Part 60 Subpart Ja.
- The uptime requirements for monitors should be lowered to 90% from 95%.
- The provisions for full system audits are not appropriate because they do not know other sites’ emissions.
- Tokai made the following significant comments:
  - At the Big Spring Carbon Black plant, a time-weighted average of the emission limits applying in any fraction of an hour should be allowed for determining the emission limits that apply during transition periods where the number of furnaces operating during an hour changes.
  - The provisions for a full system audit should be deleted, and the contingency measures should only rely of the agency’s compliance program.
  - An AMOC based on 30 TAC Chapter 115 should be provided.
  - An option for approving minor modifications to monitoring and test methods should be included.
- CP Chem made the following significant comments:
  - The TCEQ cannot enforce a rule after it has been repealed.
  - Monitoring and recordkeeping requirements for their site should be on a block one-hour basis.
  - The monitoring requirements should be changed to specify the measurement of total sulfur with an accuracy of ±2% of full scale for concentrations over 50 ppm.
  - An AMOC option based on 30 TAC Chapter 115 should be included.
- Phillips 66 made the following significant comments:
  - The rule provisions impact Phillips 66’s ability to remain competitive, and their refineries are not subject to the rule requirements.
  - A seven-day average emission limit, as provided for the Alon site, should be provided for the FCCUs at the Phillips 66 Borger Refinery.
  - The minimum exhaust flow rates for the FCCUs should be removed from the rule.
  - The sulfur concentration limit on flared gases should only apply during normal operations.
  - The monitoring requirements should match those in applicable federal rules.
  - An option for determining the sulfur concentration to Flare 13 by evaluating the sulfur content of the vent gas from process units routed to Flare 13 should be provided.
  - Monitoring H<sub>2</sub>S concentrations rather than total sulfur concentrations of the units in the small source caps should be allowed
  - Reporting exceedances of stack parameters should not be required.
  - Full system audits should not be required if the executive director has not made a culpability analysis, and sites should not be required to identify exceptional events.
  - Phillips 66 provided an AMOC procedure based mostly on the AMOC provisions of Chapter 115.
  - Minor modifications to test methods should be allowed if approved by the executive director.
- Arcosa made the following significant comments:
  - Arcosa committed to installing controls and requested lowered stack parameters and a single lower emission rate based on the type(s) of controls that will be installed.
  - Arcosa committed to installing a CEMS to monitor emissions.

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**Significant changes from proposal:**

Based on public comment, numerous substantive revisions to the rules are proposed for adoption.

The significant changes are the following:

- Where feasible, earlier compliance dates were established.
  - Arcosa committed to installing a CEMS to monitor SO<sub>2</sub> emissions, so the provisions in the rules for testing fuels and raw materials are removed at adoption and replaced with a requirement for the CEMS.
  - Provisions for restricting changes to regulated entity numbers (RN) and emission point numbers are removed, and additional identification of the sites are provided with location information in case an RN is changed.
  - Requirements for stack heights are changed to a specific height rather than a minimum.
  - The calculations related to the tail gas split at the carbon black plants are changed to use the actual splits during each hour.
  - Calculation methods are added to clarify how emission rates will be calculated using monitoring and testing data.
  - At the Tokai Big Spring Carbon Black Plant, the use of the time-weighted average of emission limits applying in any fraction of an hour is allowed to determine the emission limits that apply during transition periods where the number of furnaces operating during an hour changes. Provisions for minor modifications of monitoring requirements are added to the monitoring requirement sections based on the language in §112.725(m).
  - Because Arcosa committed to meeting a single, lower emission limit, the dual emission limits are changed to a single lower limit, and because they committed to installing a CEMS, provisions for testing fuels and raw materials are removed.
  - Because CP Chem provided a calculation for SO<sub>2</sub> emissions from the sulfolene areas, the reporting requirement for measured temperature is removed.
  - At the Phillips 66 Borger Refinery, the emission limits for the FCCUs was changed to a seven-day rolling average, which made the proposed flow rate limits and tiered emission limits unnecessary.
  - For both refineries, the sulfur concentrations limits for refinery flare gas were specified as applying only during normal operations.
  - AMOC provisions are added to the control requirements sections for the Alon USA Big Spring Refinery, the Phillips 66 Borger Refinery, and the Streetman Plant and are referenced for each other site in the Howard County and Hutchinson County SO<sub>2</sub> nonattainment areas.
- Potential controversial concerns and legislative interest:

**There is no known legislative interest for this rulemaking.**

**Will this rulemaking affect any current policies or require development of new policies?**

This rulemaking will not affect current policies or require development of new policies.

**What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?**

Enforceable emission rate limits and other requirements are needed for the three concurrently proposed SIP revisions to be approvable. Agreed orders could be used instead of rules, but there is limited time to secure agreement from the several companies before the deadline for submitting the SIP revisions to the EPA. If these rules needed for the SIP are not adopted and approved by the EPA, the EPA could move forward with a FIP clock under FCAA §110(c).

**Key points in the adoption rulemaking schedule:**

*Texas Register* proposal publication date: April 29, 2022

Anticipated *Texas Register* adoption publication date: October 21, 2022

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**Anticipated effective date: October 27, 2022**  
**Six-month *Texas Register* filing deadline: October 29, 2022**

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**Attachments:**

None.

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