

40 CFR Part 52

[TX-58-1-7256a; FRL-5557-8]

State of Texas; Approval of State Implementation Plan (SIP) Addressing the Sulfur Dioxide Emission Limit; Site-Specific Revision to the SIP for the Aluminum Company of America (ALCOA) Facility in Rockdale, TX**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Direct final rule.

SUMMARY: This document announces the EPA's decision to approve a September 20, 1995, request from the State of Texas for a site-specific revision to the Texas sulfur dioxide (SO₂) SIP. The revision amends the SO₂ emission limitations applicable to the ALCOA facility in Milam County, Texas. In this action, the EPA is approving Texas' SIP revision allowing an increase in lignite fuel emissions of SO₂ from 3.0 pounds per million British thermal units (lb/MMBtu) to 4.0 lb/MMBtu. The SIP revision also includes new requirements for limits on the sulfur content of the petroleum coke used at the ALCOA facility and an increased stack height to "Good Engineering Practices" (GEP) as defined in 40 CFR 51.100 (ii). Texas has modeled these changes demonstrating that with the revisions the National Ambient Air Quality Standards (NAAQS) for SO₂ will remain protected.

DATES: This action is effective on November 22, 1996, unless adverse comments are received by October 23, 1996. If the effective date is delayed, timely notice will be published in the Federal Register.

ADDRESSES: Comments should be mailed to Thomas H. Diggs, Chief, Air Planning Section (6PD-L), Environmental Protection Agency Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733. Copies of the State's petition and other information relevant to this action are available for inspection during normal hours at the following locations:

Environmental Protection Agency,
Region 6, Air Planning Section (6PD-L), 1445 Ross Avenue, Suite 1200,
Dallas, TX 75202-2733.

Air and Radiation Docket and
Information Center, Environmental
Protection Agency, 401 M. Street,
S.W., Washington, DC 20460.

Texas Natural Resource Conservation
Commission, Office of Air Quality,
12124 Park 35 Circle, P.O. Box 13087,
Austin, TX 78711-3087.

Anyone wishing to review this
petition at the EPA office is asked to

contact the person below to schedule an
appointment 24 hours in advance.

FOR FURTHER INFORMATION CONTACT: Ms. Petra Sanchez, Air Planning Section (6PD-L), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733, telephone (214) 665-6686.

SUPPLEMENTARY INFORMATION:**I. Background**

On May 31, 1972 the EPA approved the original Texas SIP submission allowing for 3.0 lbs/MMBtu SO₂ emissions from solid fossil fuel-fired steam generators at the ALCOA plant. In 1979, ALCOA petitioned the Texas Air Control Board (TACB), now the Texas Natural Resource Conservation Commission (TNRCC), to allow relaxed SO₂ emission limitations for its power plant units.

The 1979 relaxation increased the allowable SO₂ limit to 5.0 lb/MMBtu, and was published in the *Texas Register* on July 6, 1979. After a public hearing conducted by the TACB on November 13, 1979, ALCOA modified its original petition and agreed to gradually lower the SO₂ emission limit from 5.0 lb/MMBtu SO₂ to 4.5 lb/MMBtu in 1981, and eventually to 4.0 lb/MMBtu after January 1, 1982. The TACB adopted this phased-in schedule on December 14, 1979, thus, lowering the requirement to 4.0 lb/MMBtu, as it remains today in the Texas regulations (see TAC § 112.8). However, the increase in allowable SO₂ limits was not officially revised and submitted to the EPA for approval as a SIP revision. Also in 1979, a new 545 MW power plant (Sandow Four) was built, doubling the fuel capacity from 2.1 million to 5.6 million tons of lignite per year. Sandow Four is owned by TU Electric Company and is under a contractual agreement with ALCOA to supply most of its power to ALCOA's operations. Therefore, Sandow Four Unit is not part of this SIP action but must meet more stringent emissions limitations. Sandow Four has a Prevention of Significant Deterioration (PSD) permit and is under New Source Performance Standards (NSPS) as well thus, BACT (Best Available Control Technology) applies. Under NSPS, Sandow Four is subject to a limitation of 1.2 lb/MMBtu SO₂ emissions in accordance with 40 CFR 60, Subpart D.

SIP Violation

On May 5, 1981, the EPA issued a Notice of Violation to ALCOA for exceeding the 3.0 lb/MMBtu SO₂ limit in the approved 1972 SIP. Without an approved SIP revision, ALCOA should have complied with the 3.0 lb/MMBtu

limit under federal law rather than the higher state limit. The SIP revision provided by Texas includes information on the ALCOA facilities (i.e., Sandow One, Two, and Three) to ensure that a sulfur limit relaxation for those units will result in acceptable levels of SO₂ concentrations and to ensure continued attainment of the SO₂ National Ambient Air Quality Standards. To support the proposal, ALCOA submitted technical feasibility studies and economic evaluations, supported by ambient monitoring data and dispersion modeling. Compliance with the NAAQS and Prevention of Significant Deterioration (PSD) increments for SO₂ emission levels were supported through modeling procedures. The final submittal from the State contained limits on the use of sulfur-bearing fuels for the three units to prevent potential violations of the SO₂ NAAQS. A public hearing announcement was published on May 11, 1995, and a hearing was held on June 14, 1995, in Rockdale, Texas. No adverse comments were received. Comments were generally supportive of the action. The EPA found the SIP revision to be administratively complete in a letter dated November 28, 1995. For further details on the SIP submittal, please reference the Technical Support Document on file.

Good Engineering Practice and Stack Height Increase at Sandow Three

In June of 1995, ALCOA completed construction of a new stack for Sandow Three to increase the height of the emission point from 81 to 161 meters. The increase in height helped avoid the down-washing effect caused by the presence of large nearby structures. However, another effect of increasing stack height is to disperse emissions over a larger area, resulting in lower ambient concentrations without a true emissions reduction in grams per second. To limit over-crediting, the EPA federal regulations which define "Good Engineering Practices" (GEP) for the stack height, were evaluated to ensure that emissions do not result in excessive concentrations due to atmospheric downwash, or wakes created by terrain or structures in the vicinity of a source. Requirements, promulgated under 40 CFR Part 51, regulate stack height "credits" instead of actual stack height.

A GEP stack is defined under 40 CFR 51.100 (ii) by a formula that relates stack height to the dimensions of nearby structures, thus restricting stack increases to the modeling height necessary to avoid over-crediting by dilution. It also specifies certain site-specific demonstrations that are required to justify increases of an

existing stack to GEP formula height. The EPA interpretation of this rule (stated in a July 29, 1992 memo from the EPA's Office of Air Quality Planning and Standards to the EPA Directors) waives the requirement for a site-specific demonstration if a new structure has been built since the construction of the original stack. Thus, the siting of a new nearby structure removes a presumption that the original stack height is the GEP height, since the new structure may create downwash effects that were not anticipated in the original stack design. In ALCOA's case, the stack for Sandow Three was built in the early 1950's and Sandow Four was built in the late 1970's on adjacent property. The presence of the Sandow Four structure created new downwash effects. Therefore, the stack height increase is allowed by the EPA's stack height regulations, as long as it is within the allowable height as defined by 40 CFR 51.100(ii).

Dispersion Modeling Analysis

Dispersion modeling was used to demonstrate that ambient SO₂ concentrations are predicted to be below the NAAQS and allowable Prevention of Significant Deterioration (PSD) increments. Dispersion modeling integrates historical meteorological data and continuous industrial emissions to predict whether the population outside of a facility's property could be exposed to SO₂ levels above applicable health-based standards.

Alcoa hired Earth Tech/Sigma Research to conduct the modeling analyses to demonstrate that the ALCOA aluminum reduction facility and power plant was in compliance with the NAAQS. The PSD increments modeling was also performed to determine whether an incremental increase in SO₂ emissions from three to four pounds per MMBtu heat input at Units one, two, and three of the Sandow Power Plant would cause any violations.

The Industrial Source Complex—Short Term (ISCST2) model was used to model the Sandow power plant point sources along with 132 non-ALCOA background sources. The Buoyant Line and Point (BLP) Source model was used to model all of the line and scrubber stacks for the aluminum reduction facilities. The meteorological data used in the analyses were obtained from the Austin surface station and the Stephenville upper air station. The modeling was conducted in accordance to EPA's *Guideline on Air Quality Models* and were generally consistent with the EPA's regulatory recommendations.

NAAQS Modeling Analysis

The NAAQS analyses was performed in three phases. Results of the ISCST2 model and BLP dispersion modeling runs were summed up to provide ambient concentrations on an hourly basis for each receptor. Ambient concentrations were then compared with the primary and secondary NAAQS. The NAAQS limits are:

NATIONAL SO₂ STANDARDS

NAAQS	Micrograms per cubic meter (ug/m ³)
Primary annual SO ₂	80
Primary 24-hour	365
Secondary 3-hour	1,300

To demonstrate compliance with the SO₂ NAAQS, four alternatives were used (based on smelter production levels and sulfur content in the anodes). As discussed in the Technical Support Document, the modeling runs predicted no violations of the applicable NAAQS.

The predicted concentrations for the annual average and the highest-second-high (H2H) concentrations for three-hour and 24-hour concentrations were below the SO₂ NAAQS for all years evaluated. The maximum annual concentrations for seven and eight lines scenarios are 76.83 ug/m³ and 76.90 ug/m³, respectively. Both occur at 684900 easting and 3389100 northing, approximately six kilometers north of the center of the ALCOA Rockdale facility. Meanwhile, the maximum H2H 24-hour concentration which occurs with the 2.6 percent sulfur content eight-line scenario is 355.29 ug/m³ at 683783 easting and 3381889 northing. The maximum H2H three-hour concentration which occurs with the 3.0 percent sulfur content seven-line operating scenario is 1025.59 ug/m³ at 682500 easting and 3382000 northing.

PSD Modeling Analysis

In addition to the NAAQS evaluations, the EPA requires an analysis to ensure that incremental increases of SO₂ due to a SIP relaxation will not cause a violation of the PSD increments. Milam County is classified as a Class II area for the purpose of establishing its allowable PSD increments.

There are no Class III areas in Texas. Numerical increments for SO₂ are defined below as the maximum increase above baseline, ambient concentrations.

CLASS II PSD INCREMENT STANDARDS FOR SO₂

PSD increment	ug/m ³
Annual SO ₂ average	20
24-hour SO ₂ average	91
3-hour SO ₂ average	512

The PSD modeling analysis was also performed in three phases. For the PSD analysis, the main ALCOA increment-consuming sources are Sandow One, Two, and Three. These sources were modeled with ISCST2 using a 1.0 lb/MMBtu emission rate increase, representing the proposed increase in allowable SO₂ emission from 3.0 to 4.0 lb/MMBtu. Sandow Four was also included in the modeling because it too consumes PSD increment. The modeling predicted some exceedances of allowable PSD increments in an area about thirty kilometers to the southwest of the ALCOA facility. The predicted exceedances however, occurred inside the private property owned by the Acme Brick Company.

Closure of FM 1786 and Construction of Alternate Route

The TNRCC modeling staff predicted excesses of the NAAQS on a public roadway, Farm-to-Market Road 1786 (FM 1786), which was originally built as an entrance into the plant. ALCOA confirmed these possible impacts in their preliminary modeling efforts. After the public hearing, ALCOA and Milam County agreed to provide an alternate route as part of the county road system, resolving potential citizen complaints. ALCOA eventually acquired a 2.4-mile section of FM 1786 and privatized the road to limit its public access. On November 23, 1994, the Governor of Texas signed the deed transferring this section of roadway to ALCOA. With the closure of the former FM 1786, which is the entrance to the Rockdale Operations Facility, measures to restrict public access are to be taken. A gate has been installed and security guards patrol for unauthorized entry.

Monitoring

ALCOA is currently operating a monitoring network with two monitors collecting data on SO₂ concentrations, fluoride, wind speed, and wind direction. The Agreed Order requires ALCOA to continue providing ambient SO₂ and meteorological monitors installed and operated at the TNRCC approved sites in accordance with the Quality Assurance Project Plan (QAPP) to ensure that the NAAQS are protected. The QAPP was submitted to the TNRCC for approval and was approved on June

13, 1995. The TNRCC assumes all responsibility for ensuring quality data collection, analysis, calibration, and reporting requirements from ALCOA will protect the NAAQS. Monitoring reports submitted to the TNRCC currently show no exceedances of the NAAQS.

Enforceability

In order to protect the annual NAAQS, an annual limit of 3.1 million MW-hours of power generation from Sandow One, Two and Three is imposed on the facility. This limit was used to calculate the annual average for all four operating scenarios modeled. The Agreed Order adopted by TNRCC and ALCOA ensure the annual limits will be enforced and become federally enforceable through this SIP action. Within sixty days after adoption of the Agreed Order by the TNRCC, ALCOA began a fuel sampling program to determine continuous compliance with the emissions limit of 4.0 lbs SO₂/MMBtu.

ALCOA is required to ensure that the total percentage of sulfur contained in the new petroleum coke used in the anodes in the operating potlines and portions of potlines do not exceed the following amount when averaged over a thirty-day period and considering the number of potlines in operation during that period:

Number of operating potlines	Percent SO ₂ allowed in new petroleum coke
8	2.6
7 or fewer	3.0

When additional potlines or portions of potlines are started up or shut down, the maximum allowable percentage of sulfur in the new petroleum coke shall conform with the applicable sulfur limits stated above. If ALCOA operates a portion of a potline between the number of potlines specified above, the maximum allowable percentage of sulfur in the new petroleum coke shall be determined by proportional interpolations between the pair of limits specified above. ALCOA will notify the TNRCC Regional Office ten (10) days prior to the start up or shut down of any potline(s) or portions of potlines except that in the case of an emergency shutdown, notice shall be given as soon as reasonably possible.

ALCOA is prohibited from using any new petroleum coke without test reports or on-site testing demonstrating compliance. ALCOA is also required to ensure that the sulfur content of the

returned anode butts is no greater than the sulfur content of the new petroleum coke used in the manufacture of those returned anode butts. ALCOA will demonstrate compliance with the total sulfur content limits specified in the Agreed Order by limiting the percent sulfur in new petroleum coke to the petroleum coke supplier and will require its supplier to sample, analyze, and demonstrate that the total sulfur content complies with ALCOA's percent sulfur specification before shipment of any single lot of new petroleum coke is made. Test reports from suppliers may be used to document the sulfur content of new petroleum coke, or on-site testing of each incoming new petroleum coke shipment in accordance with ASTM Methods D346-90 or ASTM D4239-85. ALCOA will maintain records documenting compliance with the requirements of the Agreed Order. Records will include computations which show the amounts and total percent sulfur content of new petroleum coke and the sulfur content of the returned anode butts used in production of anodes. The sulfur content of the returned anode butts may be based on records of the new petroleum coke that went into them and ALCOA records showing the statistically established relationship between that sulfur content and the sulfur content of returned anode butts.

Recordkeeping and Reporting Requirements

ALCOA will maintain a record of the gross power generated for each calendar month, and of the gross power generated for the previous twelve month period. Records will be made available upon request to the TNRCC, the EPA or any local air pollution control agency having jurisdiction. Periodic compliance demonstrations will be conducted at least quarterly beginning with the calendar quarter ending December 31, 1995 using methods prescribed for the initial demonstration in the Agreed Order. Results will be reported to the TNRCC and the EPA Region VI no later than thirty days after the completion of testing.

The provisions for the Milam County Agreed Order are adopted through this SIP action. The Order includes SO₂ maximum allowable emissions limits, recordkeeping, reporting and compliance monitoring requirements and other required stipulations briefly described in this notice. For further details on compliance monitoring and record keeping requirements please reference the Agreed Order and the Technical Support Document.

Final Rulemaking Action

In today's action, the EPA is approving the ALCOA SIP revision which includes among other things, TNRCC Agreed Order No. 95-0583-SIP. Texas's revised Milam County SO₂ Order creates an enforceable restriction on the operations of a primary aluminum smelting plant and three units of a lignite-fueled power plant at the ALCOA facility. This action is also approving revisions to 31 TAC Chapter 112, section 112.8, "Allowable Emissions From Solid Fossil Fuel-Fired Steam Generators," Subsections 112.8(a) and 112.8(b). Adequate modeling demonstrating that the NAAQS for SO₂ and SO₂ PSD increment will be protected in Milam County, Texas was also provided.

This action is being published without a prior proposal because the EPA views this as a noncontroversial revision and anticipates no adverse comments to the proposal. However, the EPA is publishing a separate document in this Federal Register publication, which constitutes a "proposed approval" of the requested SIP revision and clarifies that the rulemaking will not be deemed final if timely adverse or critical comments are filed. The "direct final" approval shall be effective on November 22, 1996, unless the EPA receives adverse or critical comments by October 23, 1996.

If the EPA receives comments adverse to or critical of the approval discussed above, the EPA will withdraw this approval before its effective date by publishing a subsequent Federal Register document which withdraws this final action. All public comments received will then be addressed in a subsequent rulemaking document. Please be aware that the EPA will institute a second comment period on this action only if warranted by significant revisions to the rulemaking based on comments received in response to this action. Any parties interested in commenting on this action should do so at this time. If no such comments are received, the EPA hereby advises the public that this action will be effective on November 22, 1996.

Nothing in this action should be construed as permitting, allowing or establishing a precedent for any future request for revision to any SIP. The EPA shall consider each request for revision to the SIP in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

This action has been classified as a Table 3 action for signature by the Regional Administrator under the

procedures published in the Federal Register on January 19, 1989 (54 FR 2214-2225), as revised by a July 10, 1995, memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation. The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order 12866 review. Section 202 of the Unfunded Mandates Reform Act of 1995, signed into law on March 22, 1995, requires that the EPA prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditure by State, local, and tribal governments, in aggregate, or by the private sector, of \$100 million or more in any one year. Section 203 requires the EPA to establish a plan for obtaining input from and informing, educating, and advising any small governments that may be significantly or uniquely affected by the rule.

Under section 205 of the Unfunded Mandates Reform Act, the EPA must identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which a budgetary impact statement must be prepared. The EPA must select from those alternatives the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule, unless the EPA explains why this alternative is not selected or the selection of this alternative is inconsistent with law.

This final rule is estimated to result in the expenditure by State, local, and tribal governments or the private sector of less than \$100 million in any one year. Therefore the EPA has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. Small governments will not be significantly or uniquely affected by this rule. Hence, the EPA is not required to develop a plan with regard to small governments. This rule only approves the incorporation of existing State rules into the SIP. It imposes no additional requirements.

Under 5 U.S.C. 801 (a)(1)(A) as added by the Small Business Regulatory Enforcement Fairness Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller General of the General Accounting Office prior to publication of the rule in today's Federal Register. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

Under the Regulatory Flexibility Act, 5 U.S.C. 600 *et seq.*, the EPA must

prepare a regulatory flexibility analysis assessing the impact of any proposed or final rule on small entities (5 U.S.C. 603 and 604). Alternatively, the EPA may certify that the rule will not have a significant impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and government entities with jurisdiction over populations of less than 50,000.

SIP approvals under section 110 and subchapter I, part D of the Act do not create any new requirements but simply approve requirements that the State is already imposing. The Federal SIP approval does not impose any additional requirements. Therefore, I certify that the SIP does not have a significant impact on any small entities affected. Moreover, due to the nature of the Federal-State relationship under the Act, preparation of a regulatory flexibility analysis would constitute Federal inquiry into the economic reasonableness of the State action. The Act forbids the EPA to base its actions concerning SIPs on such grounds. See *Union Electric Co. v. EPA*, 427 U.S. 246, 256-66 (S.Ct. 1976); 42 U.S.C. 7410(a)(2).

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 22, 1996. Filing a petition for reconsideration by the Regional Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Sulfur oxides.

Dated: August 9, 1996.
Allyn M. Davis,
Acting Regional Administrator.

Title 40, part 52, of the Code of the Federal Regulations is amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart SS—Texas

2. Section 52.2270 is amended by adding paragraph (c) (101) to read as follows:

§ 52.2270 Identification of Plan.

* * * * *

(c) * * *

(101) Revisions to Texas Natural Resource Conservation Commission Regulation II and the Texas State Implementation Plan concerning the Control of Air Pollution from Sulfur Compounds, submitted by the Governor by cover letters dated October 15, 1992 and September 20, 1995. These revisions relax the SO₂ limit from 3.0 lb/MMBtu to 4.0 lb/MMBtu, and include Agreed Order No. 95-0583-SIP, which stipulates specific SO₂ emission limit compliance methodologies for the Aluminum Company of America, located in Rockdale, Texas.

(i) Incorporation by reference.

(A) Texas Natural Resource Conservation Commission Agreed Order No. 95-0583-SIP, approved and effective on August 23, 1995.

(B) Revisions to 31 TAC Chapter 112, Section 112.8, "Allowable Emissions From Solid Fossil Fuel-Fired Steam Generators," Subsections 112.8(a) and 112.8(b) as adopted by the TNRC on August 23, 1995.

(ii) Additional material.

(A) The State submittal entitled *Revisions to the State Implementation Plan Concerning Sulfur Dioxide in Milam County*, dated June 14, 1995.

(B) The document entitled *Dispersion Modeling Analysis of ALCOA Rockdale Operations, Rockdale, Texas*, dated April 28, 1995 (document No. 1345-05).

[FR Doc. 96-24047 Filed 9-20-96; 8:45 am]

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40 CFR Part 52

[WA56-7131a; FRL-5603-7]

Approval and Promulgation of Implementation Plans: Washington

AGENCY: Environmental Protection Agency.

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving in part several minor revisions to the State of Washington Implementation Plan (SIP) and, at the same time, taking no action on two sections of these revisions which are unrelated to the purposes of the SIP. Pursuant to section 110(a) of the Clean Air Act (CAA), the Director of the Washington Department of Ecology (WDOE) submitted a request to EPA