

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF ALABAMA
SOUTHERN DIVISION

_____)	
UNITED STATES OF AMERICA and)	
the STATE OF ALABAMA and)	
ALABAMA DEPARTMENT OF)	
ENVIRONMENTAL MANAGEMENT,)	
Plaintiffs,)	
v.)	Case No. 1:19-cv-00626
)	
NOURYON FUNCTIONAL CHEMICALS)	
LLC f/k/a AKZO NOBEL FUNCTIONAL)	
CHEMICALS LLC,)	
)	
Defendant.)	
_____)	

CONSENT DECREE

TABLE OF CONTENTS

I.	JURISDICTION AND VENUE	3
II.	APPLICABILITY	3
III.	DEFINITIONS.....	4
IV.	CIVIL PENALTY	9
V.	COMPLIANCE REQUIREMENTS.....	11
VI.	PERMITS.....	18
VII.	EMISSION CREDIT GENERATION	22
VIII.	ENVIRONMENTAL MITIGATION	23
IX.	REPORTING REQUIREMENTS	24
X.	STIPULATED PENALTIES.....	27
XI.	FORCE MAJEURE	32
XII.	DISPUTE RESOLUTION	34
XIII.	INFORMATION COLLECTION AND RETENTION.....	37
XIV.	EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS	39
XV.	COSTS.....	41
XVI.	NOTICES	41
XVII.	EFFECTIVE DATE	43
XVIII.	RETENTION OF JURISDICTION.....	43
XIX.	MODIFICATION.....	44
XX.	TERMINATION.....	44
XXI.	PUBLIC PARTICIPATION.....	45
XXII.	SIGNATORIES/SERVICE	45
XXIII.	INTEGRATION	46
XXIV.	FINAL JUDGMENT.....	46
XXV.	APPENDICES.....	47

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), has filed a complaint concurrently with this Consent Decree against Defendant Nouryon Functional Chemicals LLC f/k/a Akzo Nobel Functional Chemicals LLC (“Akzo Nobel”), pursuant to Sections 113(b) of the Clean Air Act (the “Act” or “CAA”), 42 U.S.C. § 7413(b), alleging violations at the sulfuric acid plant at Akzo Nobel’s LeMoyne facility in Axis, Alabama (the “Facility”) of the following statutory and regulatory requirements of the Act:

- (1) Prevention of Significant Deterioration (“PSD”) requirements found at Part C of Subchapter I of the Act, 42 U.S.C. § 7475, and the regulations promulgated thereunder at 40 C.F.R. § 52.21 (the “Federal PSD Rules”);
- (2) Title V operating permit requirements found at Subchapter V of the CAA, 42 U.S.C. §§ 7661-7661f, and the regulations promulgated thereunder at 40 C.F.R. Parts 70 and 71 (collectively, “Title V Requirements”); and
- (3) The federally-enforceable State Implementation Plan (“SIP”) developed by the state of Alabama, which incorporates or implements the above requirements and which establish federally enforceable permitting programs for construction and operation of new and modified sources;

WHEREAS, the Complaint alleges that Akzo Nobel has constructed, reconstructed, or modified its sulfuric acid plant without obtaining the proper permits, installing required control technology, meeting emission limits, or complying with the requirements for monitoring, record keeping, and reporting as required by the CAA;

WHEREAS, the State of Alabama (“State”) and the Alabama Department of

Co-Plaintiff in this matter alleging violations of the applicable SIP provisions and/or other state and local rules, regulations, and permits incorporating and/or implementing the foregoing federal requirements;

WHEREAS, Akzo Nobel denies the violations alleged in the Complaint, and maintains that it has been and remains in compliance with the CAA and is not liable for civil penalties or injunctive relief;

WHEREAS, Akzo Nobel has conducted itself in good faith in its discussions with the EPA and ADEM concerning the violations alleged in the Complaint and has implemented certain operational changes and corrective measures at the Facility after commencing negotiations with the United States;

WHEREAS, by agreeing to entry of this Consent Decree, Akzo Nobel makes no admission of law or fact with respect to the allegations in the Complaint and continues to deny any non-compliance or violation of any law or regulation identified therein or in this Consent Decree; and

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith, will avoid litigation among the Parties, and is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue), below, and with the consent of the Parties,

IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367, and Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and over the Parties. Venue is proper in this judicial district pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because some of the violations alleged in the Complaint are alleged to have occurred in, and Akzo Nobel conducts business in, this judicial district. For purposes of this Decree, or any action to enforce this Consent Decree, the Parties consent to the Court's jurisdiction over this Consent Decree and any such action and over Akzo Nobel and further consent to venue in this judicial district.

2. For purposes of this Consent Decree, Akzo Nobel agrees that the Complaint states claims upon which relief may be granted pursuant to Sections 113, 165, and 502(a) of the Clean Air Act, 42 U.S.C. §§ 7413, 7475, and 7661a(a).

3. At least 30 days prior to the Date of Lodging of this Consent Decree, EPA notified the State of Alabama and Akzo Nobel of the violations alleged in the Complaint, in accordance with the requirements of CAA Sections 113(a)(1) and 113(b), 42 U.S.C. §§ 7413(a)(1) and 7413(b).

II. APPLICABILITY

4. The obligations of this Consent Decree apply to and are binding upon the United States, the State of Alabama, and Akzo Nobel and any successors, assigns, or other entities or persons otherwise bound by law.

5. No transfer of ownership or operation of the Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Akzo Nobel of its obligation to ensure that the terms of this Consent Decree are implemented, unless: (1) the transferee agrees in writing

to undertake the obligations required by this Consent Decree and to be substituted for Akzo Nobel as a Party to the Consent Decree and thus be bound by the terms thereof; and (2) the United States consents in writing to relieve Akzo Nobel of its obligations. At least thirty (30) Days prior to such transfer, Akzo Nobel shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States, EPA, and the State, in accordance with Section XVI (Notices) of this Decree. Any transfer of ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Consent Decree.

6. Akzo Nobel shall provide a copy of this Consent Decree to the Facility's Site Manager and Operations Manager and shall ensure that its officers, employees, agents and contractors whose duties might reasonably include compliance with any provision of this Consent Decree are made aware of both the existence of the Decree and any specific requirements of the Decree that fall within such person's duties. Akzo Nobel shall be responsible for ensuring that all employees and contractors involved in performing any Work pursuant to this Consent Decree perform such Work in compliance with the requirements of this Consent Decree.

7. In any action to enforce this Consent Decree, Akzo Nobel shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

8. For purposes of this Consent Decree, every term expressly defined by this Section shall have the meaning given that term herein. Every other term used in this Consent Decree that is also a term used in the CAA, 42 U.S.C. §§ 7401 *et seq.*, or in state or federal regulations promulgated pursuant to the CAA shall have the same meaning in this Consent Decree as such

term has in the CAA or those regulations. In the case of a conflict between federal and state definitions, federal definitions shall control.

- a. “100% Sulfuric Acid Produced” shall mean the quantity of sulfuric acid that would be produced at the Sulfuric Acid Plant multiplied by the concentration of actual sulfuric acid in the product. For example, if the Sulfuric Acid Plant produces 100 tons of a 98% sulfuric acid product, this equals 98 tons of 100% Sulfuric Acid Produced.
- b. “Acid Mist” shall mean the pollutant sulfuric acid mist as measured by Method 8 of 40 C.F.R. Part 60, Appendix A consistent with 40 C.F.R. § 60.81(b);
- c. “ADEM” shall mean the Alabama Department of Environmental Management and any of its successor departments or agencies;
- d. “Calendar Year” shall mean the period commencing on January 1 and ending on December 31 of the same year.
- e. “CD Emissions Reductions” shall mean any emissions reductions that result from any projects, controls, or any other actions utilized to comply with this Consent Decree;
- f. “CEMS” or “Continuous Emission Monitoring System” shall mean the total equipment, required under the CEMS Plan for the Facility attached as Appendix A to this Consent Decree, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters;
- g. “CEMS Plan” shall mean the CEMS Plan for the Sulfuric Acid Plant at the Facility, attached as Appendix A;
- h. “Complaint” shall mean the complaint filed by the United States in this action;

- i. “Consent Decree” or “Decree” shall mean this Consent Decree and all Appendices identified in Section XXV (Appendices) and attached hereto. In the event of any conflict between this Consent Decree and any Appendix hereto, this Consent Decree shall control;
- j. “Co-Plaintiff” shall mean the State of Alabama and the Alabama Department of Environmental Management;
- k. “Date of Lodging” shall mean the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Southern District of Alabama;
- l. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;
- m. “Defendant” or “Akzo Nobel” shall mean Akzo Nobel Functional Chemicals LLC;
- n. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;
- o. “Effective Date” is defined in Section XVII (Effective Date);
- p. “Facility” shall mean Akzo Nobel’s LeMoyne Facility, located at 13440 Highway 43 North, Axis, Alabama 36505;
- q. “Interest” shall mean the interest rate specified in 28 U.S.C. § 1961;
- r. “Long-Term SO₂ Limit” shall mean a 365-day rolling average sulfur dioxide emission limit expressed as pounds of sulfur dioxide emitted per ton (“lb/ton”) of 100% Sulfuric Acid Produced. Compliance with the Long-Term SO₂ Limit at the

Sulfuric Acid Plant shall be determined each day in accordance with the CEMS Plan attached to this Consent Decree as Appendix A. The Long-Term SO₂ Limit applies at all times, including during periods of Startup, Shutdown, and Malfunction;

- s. “Malfunction” shall mean, consistent with 40 C.F.R. § 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor maintenance or careless operation;
- t. “Month,” when computing any period of time under this Consent Decree, shall mean the period between and including a date in the starting month (e.g., January 12) and the day before that date in the next calendar month (e.g., February 11);
- u. “NSPS” shall mean the standards of performance for new stationary sources codified at 40 C.F.R. Part 60. General NSPS requirements are codified at 40 C.F.R. Part 60, Subpart A. NSPS requirements specifically for Sulfuric Acid Plants are codified at 40 C.F.R. Part 60, Subpart H;
- v. “NSR” shall mean a program for new source review under the CAA. Specifically:
 - (1) “Non-attainment NSR” and “major NSR” shall mean the non-attainment area new source review program within the meaning of Part D of Subchapter I of the CAA, 42 U.S.C. §§ 7501-7515;
 - (2) “PSD” shall mean the attainment area new source review program (prevention of significant deterioration) within the meaning of Part C of Subchapter I of the CAA, 42 U.S.C. §§ 7470-7492; and
 - (3) “Minor NSR” shall mean any state, regional or local statutes,

ordinances or regulations calling for review and approval of non-major new and modified sources of air pollution;

- w. “O&M Plan” shall mean the operations and maintenance plan for the Sulfuric Acid Plant that is discussed in Paragraph 16 below;
- x. “Operating Period” shall mean periods in which elemental sulfur is being fed to the furnace and periods of Shutdown;
- y. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral;
- z. “Parties” shall mean the United States, the State of Alabama and ADEM, and Akzo Nobel;
- aa. “Plaintiff” shall mean the United States, the State of Alabama and ADEM.
- bb. “Section” shall mean a portion of this Decree identified by a roman numeral;
- cc. “Short-Term SO₂ Limit” shall mean a 3-hour rolling average SO₂ emission limit expressed as pounds of SO₂ emitted per ton (“lb/ton”) of 100% Sulfuric Acid Produced. Compliance with the Short-Term SO₂ Limit at the Sulfuric Acid Plant shall be calculated in accordance with the CEMS Plan attached to this Consent Decree as Appendix A. The Short-Term SO₂ Limit does not apply during periods of Startup, Shutdown, or Malfunction;
- dd. “Shutdown” shall mean, consistent with 40 C.F.R. § 60.2, the cessation of operation of the Sulfuric Acid Plant for any purpose. With respect to the Sulfuric Acid Plant, shutdown begins at the time the feed of elemental sulfur to the furnace ceases and ends 3 hours later or when the blower is turned off, whichever is earlier;
- ee. “SO₂” shall mean the pollutant sulfur dioxide;

- ff. “Startup” shall mean, consistent with 40 C.F.R. § 60.2, the setting in operation of the Sulfuric Acid Plant for any purpose. Startup begins at the time the feed of elemental sulfur to the furnace commences and lasts for no more than 26 hours;
- gg. “Sulfuric Acid Plant” or “Plant” shall mean the process unit(s) engaged in the production of sulfuric acid and related products using the contact process at Akzo Nobel’s LeMoyne Facility in Axis, Alabama;
- hh. “Title V Permit” shall mean a permit required by or issued pursuant to the requirements of 42 U.S.C. §§ 7661 - 7661f;
- ii. “Ton” or “Tons” shall mean short ton or short tons. One Ton equals 2000 pounds;
- jj. “United States” shall mean the United States of America, acting on behalf of EPA;
and
- kk. “Work” shall mean any activity that Akzo Nobel must perform to comply with the requirements of this Consent Decree, including Appendices.

IV. CIVIL PENALTY

9. Within thirty (30) Days after the Effective Date of this Consent Decree, Akzo Nobel shall pay the sum of **\$300,000** as a civil penalty, together with Interest accruing from the date on which the Consent Decree is entered by the Court, at the rate specified in 28 U.S.C. § 1961, in accordance with the following subparagraphs and as follows: (1) \$150,000 to the United States; and (2) \$150,000 to ADEM.

- a. Akzo Nobel shall pay \$150,000 to the United States by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice, in accordance with written instructions to be provided by the Financial Litigation Unit of the U.S. Attorney’s Office for the Southern District of Alabama to Akzo

Nobel following lodging of the Consent Decree. Any funds received after 11:00 a.m. (Eastern Time) shall be credited on the next business day. At the time of payment, Akzo Nobel shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, to the United States in accordance with Section XVI (Notices) of this Decree; by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, OH 45268

The transmittal letter shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States v. Akzo Nobel Functional Chemicals LLC, and shall reference the civil action number and DOJ case number 90-5-2-1-11404.

- b. Payment of the civil penalty owed to ADEM under this Paragraph shall be made by certified or corporate check made payable to the Alabama Department of Environmental Management and sent to the following address:

Office of General Counsel
Alabama Department of Environmental Management
Post Office Pox 301463
Montgomery, Alabama 36130-1463

10. Akzo Nobel shall not deduct any penalties paid under this Consent Decree pursuant to this Section or Section X (Stipulated Penalties) in calculating its federal or state or local income tax.

V. COMPLIANCE REQUIREMENTS

11. **Short-Term SO₂ Limit.** Beginning no later than 30 Days after the Effective Date, during all Operating Periods other than Startup, Shutdown, and Malfunction (hereinafter “SSM”), Akzo Nobel shall meet a Short-Term SO₂ Limit of 2.5 lb of SO₂ per ton of 100% Sulfuric Acid Produced as provided in the CEMS Plan. Limitations on SO₂ emissions during Startup, which shall apply no later than 30 Days after the Effective Date, are set forth in Appendix C.

12. **Long-Term SO₂ Limit.** Beginning no later than 90 Days after the Effective Date, Akzo Nobel shall commence monitoring its SO₂ emissions in accordance with the CEMS Plan, but shall have until 365 days after the Effective Date to demonstrate compliance with the Long-Term SO₂ Limit of 1.5 lb of SO₂ per ton of 100% Sulfuric Acid Produced as provided in the CEMS Plan. Thereafter, Akzo Nobel shall continue to meet the Long-Term SO₂ Limit of 1.5 lb of SO₂ per ton of 100% Sulfuric Acid Produced as provided in the CEMS Plan.

13. **Acid Mist Emissions Limit.** Beginning on the Effective Date of the Consent Decree, emissions from the Sulfuric Acid Plant shall not exceed 0.15 lb of Acid Mist per ton of 100% Sulfuric Acid Produced, as set forth in 40 C.F.R. § 60.83.

14. **NSPS Applicability and Requirements.** By no later than the Effective Date, the Sulfuric Acid Plant shall be considered an affected facility for purposes of the NSPS, 40 C.F.R. Part 60, Subpart A and Subpart H. The Sulfuric Acid Plant shall comply with all applicable requirements for affected facilities under the NSPS 40 C.F.R. Part 60, Subparts A and H, and with the requirements of this Consent Decree, including the requirements of the CEMS Plan. The monitoring methods specified in the CEMS Plan are deemed approved as appropriate alternative monitoring methods for purposes of NSPS, pursuant to 40 C.F.R. 60.13(i), as provided in the CEMS Plan. Satisfactory compliance with the notice and compliance demonstration obligations

set forth in this Consent Decree shall be deemed to satisfy all applicable initial notification and compliance demonstration requirements of NSPS Subparts A and H.

15. **Air Pollution Control Practices.** At all times after the Effective Date of this Consent Decree, including periods of SSM, Akzo Nobel shall, to the extent practicable, maintain and operate the Sulfuric Acid Plant including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions, consistent with 40 C.F.R. § 60.11(d).

16. **Operation and Maintenance Plans.** No later than ninety (90) days after the Effective Date of the Consent Decree, Akzo Nobel shall prepare, implement, and submit to EPA, and the State, in the manner set forth in Section XVI (Notices), an Operation and Maintenance Plan (“O&M Plan”) for the Sulfuric Acid Plant. The O&M Plan shall describe the operating and maintenance procedures necessary to: a) minimize the frequency of Sulfuric Acid Plant Shutdowns (thereby reducing the number of Startups of the Sulfuric Acid Plant); and b) at all times, including during periods of SSM, maintain and operate the Sulfuric Acid Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. No less frequently than once every three years, Akzo Nobel shall review, and update as necessary, the O&M Plan and submit the updated plan to EPA and the State. Upon submission of the O&M Plan, Akzo Nobel shall immediately implement the O&M Plan. EPA and ADEM may provide comments and/or recommendations with respect to the O&M Plan or any revision thereof, but the O&M Plan and revision is not subject to Paragraph 19.

17. **Emissions Monitoring.**

- a. **Installation, Certification, and Calibration.** By no later than 90 Days after the Effective Date, Akzo Nobel shall install, certify, and calibrate an SO₂

continuous monitoring system capable of directly measuring the SO₂ emissions rate expressed as lb/ton of 100% Sulfuric Acid Produced and Akzo Nobel shall implement the CEMS Plan specified in Paragraph 17.c below.

b. Continuous Operation of SO₂ CEMS and Minimization of SO₂ CEMS

Downtime. By no later than 90 Days after the Effective Date, Akzo Nobel shall maintain and operate the CEMS. Except during CEMS breakdowns, repairs, calibration checks, zero span adjustments, and Plant downtime (i.e. the time period from the end of Shutdown of a Plant until the next Startup of that Plant), the CEMS shall be in continuous operation and shall be used at the Sulfuric Acid Plant to demonstrate compliance with the SO₂ emission limits established in Paragraphs 11 and 12 of this Consent Decree. Akzo Nobel shall take reasonable steps to avoid CEMS breakdowns and minimize CEMS downtime. This shall include, but is not limited to, operating and maintaining the CEMS in accordance with best practices and maintaining an on-site inventory of spare parts or other supplies necessary to make rapid repairs to the equipment.

c. SO₂ CEMS Plan. The CEMS Plan that describes how Akzo Nobel shall monitor compliance with the SO₂ emission limits established in Paragraphs 11 and 12 of this Consent Decree, including the methodology to be used to demonstrate compliance in the event of CEMS downtime lasting longer than 24 hours, is attached as Appendix A. Akzo Nobel shall implement the CEMS Plan at the Sulfuric Acid Plant. The monitoring methods specified

in the CEMS Plan are deemed approved as appropriate alternative monitoring methods for purposes of NSPS, pursuant to 40 C.F.R. § 60.13(i), as provided in the CEMS Plan.

18. **Performance Testing.**

- a. By no later than March 1, 2019, Akzo Nobel shall conduct the performance tests required in this Paragraph 18.
- b. SO₂ Emission Limits. Akzo Nobel shall conduct a performance test measuring the emission rate of SO₂ in accordance with the applicable requirements of 40 C.F.R. Part 60, Appendix A, Reference Method 8, and Part 60, Appendix B, Performance Specification 2, or an alternative method approved by EPA. This test shall consist of at least nine method test runs and may serve as the CEMS relative accuracy test required under Performance Specification 2. If applicable, this test may also serve as the NSPS performance test required under 40 C.F.R. § 60.8. Akzo Nobel shall take all steps necessary to assure accurate measurements of 100% Sulfuric Acid Production during each test run.
- c. Acid Mist Emission Limit. Akzo Nobel shall conduct a performance test measuring the emission rate of Acid Mist in accordance with the applicable requirements of 40 C.F.R. Part 60, Appendix A, Reference Method 8, or an alternative method approved by EPA. This performance test shall be used to demonstrate compliance with the Acid Mist emission limit established in Paragraph 13 and may serve as the NSPS performance test required under 40 C.F.R. § 60.8. Akzo Nobel shall take all steps necessary to assure

accurate measurements of 100% Sulfuric Acid Produced during each test run. Akzo Nobel shall conduct the first test by no later than March 1, 2019. Thereafter, Akzo Nobel shall conduct annual stack tests by March 1 of each Calendar Year and will submit the results of each test in the first report due under Section IX (Reporting Requirements) that is at least two months after the test.

- d. Advance Notification. By no later than forty-five (45) days before any performance test required by this Paragraph 18 is conducted, or such other period agreed upon by the Parties, Akzo Nobel shall provide notice of its intent to conduct such test to EPA and ADEM using the procedures specified in Section XVI (Notices). This notification must include the scheduled date of the test, an emissions test protocol, a description of the planned operating rate and operating conditions, and the procedures that will be used to measure 100% Sulfuric Acid Produced. If EPA, after consultation with the relevant state or local air permitting authority, requires any adjustment of the testing protocol or operating conditions, EPA shall notify Akzo Nobel within thirty (30) days of receipt of the notice, and Akzo Nobel shall make such adjustments and conduct the performance test in conformity with EPA's requirements.
- e. Report of Results. By no later than sixty (60) Days after conducting a performance test required under this Paragraph 18, or such other period as agreed upon by the Parties, Akzo Nobel shall submit to EPA and ADEM, pursuant to the requirements of Section XVI (Notices), a report

documenting the results of the performance tests.

19. **EPA Review of Submissions.** All work plans, reports, and other items that are developed and submitted to EPA for approval pursuant to this Consent Decree shall be complete and technically adequate.

- a. After review of any work plan, report, or other item that is required to be submitted, or revised and resubmitted, to EPA for approval pursuant to this Consent Decree, EPA shall in writing: (1) approve the submission; (2) approve the submission upon specified conditions; (3) approve part of the submission and disapprove the remainder; or (4) disapprove the submission (in which case EPA shall include a statement of the reasons for such disapproval).
- b. If the submission is approved pursuant to Paragraph 19.a(1), Akzo Nobel shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part, pursuant to Paragraph 19.a(2) or (3), Akzo Nobel shall, upon written direction from EPA, take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions, subject to Akzo Nobel's right to dispute only the specified conditions or the disapproval of portions of the submission under Section XII (Dispute Resolution) of this Consent Decree.
- c. If the submission is disapproved in whole or in part pursuant to Paragraph 19.a(3) or 19.a(4), Akzo Nobel shall, within thirty (30) Days or such other

time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding subparagraphs. If the re-submission is approved in whole or in part, Akzo Nobel shall proceed in accordance with the preceding subparagraph.

- d. Any stipulated penalties applicable to the original submission, as provided in Section X (Stipulated Penalties) of this Consent Decree, shall accrue during the thirty (30) Day period or other agreed upon period provided in Paragraph 19.c, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Akzo Nobel's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.
- e. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA may again require Akzo Nobel to correct any deficiencies in accordance with the preceding subparagraphs, may itself correct any deficiencies, or may finally disapprove the submission, subject to Akzo Nobel's right to invoke dispute resolution under Section XII (Dispute Resolution) and the right of EPA to seek stipulated penalties as provided in the preceding subparagraphs. If the resubmission is approved or corrected in whole or in part, Akzo Nobel shall proceed in accordance with Paragraph 19.b.

VI. PERMITS

20. Permits Prior to Construction or Installation. Akzo Nobel shall obtain all required federal, state, or local permits necessary for performing any compliance obligation under this Consent Decree, including without limitation permits for construction of pollution control technology and the installation of equipment (if necessary). Akzo Nobel may seek relief under the provisions of Section XI (Force Majeure) of this Consent Decree for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation if Akzo Nobel has submitted timely and administratively complete applications and has taken all other actions necessary to obtain such permit(s) or approval(s).

21. Permit Applications for Permits Incorporating the Limits and Requirements. No later than 90 Days after the Effective Date, Akzo Nobel shall submit an administratively complete application to ADEM under Ala. Admin. Code r. 335-3-14.01(1)(g) to revise Air Permit 503-5009-Z015 to incorporate the following provisions as non-expiring obligations into Air Permit 503-5009-Z015, so that the following limits, requirements and restrictions become and remain ‘applicable requirements’ within the meaning of 42 U.S.C. § 7661c(a), 40 C.F.R. § 70.2 and Ala. Admin. Code r. 335-3-16-.01(e), and these limits, requirements and restrictions shall survive termination of this Consent Decree:

- a. The limits and performance testing requirements for SO₂ and Acid Mist established in Paragraphs 11-13 and 18 of this Consent Decree;
- b. The monitoring requirements established in the CEMS Plan, which will become approved alternatives under 40 C.F.R. § 60.13(i) upon the execution of this Consent Decree;

- c. The applicability of 40 C.F.R. Part 60, Subparts A and H, and all requirements therein to the Sulfuric Acid Plant;
- d. The requirement to: 1) prepare an O&M plan meeting the requirements of Paragraph 16; (2) implement that plan; and (3) review and, as necessary, update the O&M Plan no less frequently than once every three years;
- e. All of Section VII (Emission Credit Generation); and
- f. A statement that the provisions in 21(a) through (e) were established pursuant to a Consent Decree with EPA and are ‘applicable requirements’ within the meaning of 42 U.S.C. § 7661c(a), 40 C.F.R. § 70.2 and Ala. Admin. Code r. 335-3-16-.01(e), and shall not be deleted or modified without written approval of EPA.

Following submission of the complete permit applications described in Paragraphs 20 and 21, Akzo Nobel shall cooperate with EPA and ADEM by promptly submitting to the applicable agency all available information that the applicable agency seeks following its receipt of these permit applications.

22. SIP Amendment In Lieu of Permit. In lieu of incorporating the terms of the Consent Decree directly into a federally-enforceable air permit issued in accordance with Paragraph 21, Akzo Nobel may request ADEM to submit the portions of the Consent Decree specified in Paragraph 21(a) through 21(f), to the U.S. EPA for approval under the Alabama SIP in accordance with 42 U.S.C. § 7410, including but not limited to 42 U.S.C. § 7410(k). Upon approval by the U.S. EPA, which approval shall not be unreasonably withheld, those portions of this Consent Decree will be incorporated into the Alabama SIP, and subsequently incorporated into Title V permits covering the Sulfuric Acid Plant consistent with applicable requirements in

40 C.F.R. Part 70 or State-specific rules adopted and approved consistent with Part 70. Akzo Nobel agrees not to contest the submittal of any such proposed SIP revision that incorporates the terms of this Consent Decree to U.S. EPA or U.S. EPA's approval of such submittal, or the incorporation of the applicable portions of this Consent Decree through these SIP requirements into the Title V permits.

23. Title V. Within 60 days of issuance of any permit or approval under Paragraph 21 or source-specific SIP revision under Paragraph 22, Akzo Nobel shall file any applications necessary to incorporate the limits, requirements, and restrictions of those permits or the source-specific SIP revisions into the Title V Permit covering the Sulfuric Acid Plant, in accordance with state Title V rules. Such application(s) for a Title V permit or for any subsequent renewal or modifications thereof, shall:

- a. expressly incorporate the Consent Decree provisions listed in 21(a) through 21(f); and,
- b. specify that such provisions shall remain applicable unless superseded by future, federally approved requirements pursuant to the CAA and shall not be revised without the express written approval of EPA.

Akzo Nobel shall not challenge the inclusion of the provisions listed in Paragraph 21 in any Title V permit unless such provisions are superseded by future, federally approved requirements pursuant to the CAA, but nothing in this Consent Decree is intended nor shall it be construed to require the establishment of Emission Limits requirements or limitations other than those expressly prescribed in this Consent Decree nor to preclude Defendant from challenging any more stringent Emission Limits should they be proposed for reasons independent of this Consent Decree.

24. Permits Required for Termination. Prior to termination of the Consent Decree, Akzo Nobel must have both: (i) obtained permits/authorizations in accordance with Paragraph 21, or secured the source-specific SIP revisions required under Paragraph 22, and (ii) also have obtained the Title V permit or amended Title V permit in accordance with Paragraph 23, such that all limits, requirements, and restrictions described or referenced by Paragraph 21 will survive termination of the Consent Decree.

25. Enforcement of Permits. Notwithstanding the reference to a Title V permit in this Consent Decree, the enforcement of such permit shall be in accordance with its own terms and the CAA. The Title V permit shall not be enforceable under this Consent Decree, although any term or limit established by or under this Consent Decree shall be enforceable under this Consent Decree regardless of whether such term has or will become part of a Title V permit, subject to the terms of Section XX (Termination) of this Consent Decree. Nothing in this Consent Decree is meant to preclude enforcement of the underlying permit or terms of the underlying permit included in the Title V permit.

26. Copies of Permit Applications and Permits. Using the procedures set forth in Section XVI (Notices), Akzo Nobel shall provide EPA with a copy of each application for a federally enforceable permit necessary to implement the requirements of this Consent Decree that is filed after the Effective Date, as well as a copy of any permit proposed as a result of such application and any final permit issued as a result of such application. Akzo Nobel shall provide EPA with such application(s) on the same Day such application(s) is (are) submitted to ADEM. Akzo Nobel shall provide EPA with such proposed permit(s) within seven (7) days of the issuance of such permit(s). Akzo Nobel shall provide EPA with such final permit(s) within seven (7) days of the issuance of such final permit(s). If, as of the Effective Date, Akzo Nobel has

received any permit necessary to implement the requirements of this Consent Decree and such permits have not already been submitted to EPA prior to the Effective Date, then no later than thirty (30) days after the Effective Date, Akzo Nobel shall submit copies of such applications and such permits to EPA using the procedures set forth in Section XVI (Notices).

VII. EMISSION CREDIT GENERATION

27. Prohibition. Akzo Nobel shall neither generate nor use any CD Emissions Reductions: as netting reductions; as emissions offsets; or to apply for, obtain, trade, or sell any emission reduction credits. Baseline actual emissions for each unit during any 24-month period selected by Akzo Nobel shall be adjusted downward to exclude any portion of the baseline emissions that would have been eliminated as CD Emissions Reductions had Akzo Nobel been complying with this Consent Decree during that 24-month period. Any plant-wide applicability limits (“PALs”) or PAL-like limits that apply to emissions units addressed by this Consent Decree must be adjusted downward to exclude any portion of the baseline emissions used in establishing such limit(s) that would have been eliminated as CD Emissions Reductions had Akzo Nobel been complying with this Consent Decree during such baseline period.

28. Outside the Scope of the Prohibition. Nothing in Paragraph 27 is intended to prohibit Akzo Nobel from seeking to:

- a. Use or generate emission reductions from emissions units that are covered by this Consent Decree to the extent that the proposed emission reductions represent the difference between CD Emissions Reductions and more stringent control requirements that Akzo Nobel may elect to accept for those emissions units in a permitting process;

- b. Use or generate emission reductions from emissions units that are not subject to an emission limitation or control requirement pursuant to this Consent Decree; or
- c. Use CD Emissions Reductions for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding PSD and Non-attainment NSR rules, but including, for example, Reasonably Available Control Technology rules) that apply to the Facility; provided, however, that Akzo Nobel shall not be allowed to trade or sell any CD Emissions Reductions.

VIII. ENVIRONMENTAL MITIGATION

29. Akzo Nobel shall implement the Environmental Mitigation Project described in Appendix B to this Consent Decree (the “Project”) in compliance with the schedule and other terms of the Consent Decree and Appendix B. As specified in Appendix B, Akzo Nobel shall spend not less than \$150,000 to implement the Project. Akzo Nobel shall not include its internal personnel costs in overseeing the implementation of the Project as counting toward the total spend requirement for the Project.

30. Akzo Nobel shall maintain, and present to EPA upon reasonable request, all documents to identify and substantiate the funds expended and work completed to implement the Project described in this Section and Appendix B, and shall provide these documents to EPA within thirty (30) Days of a request for the documents.

31. Akzo Nobel certifies the truth and accuracy of the following:

- a. That Akzo Nobel is not otherwise required by law to perform the Project;
- b. That Akzo Nobel is unaware of any other person who is required by law to

perform the Project, and that Akzo Nobel will not use the Project, or portion thereof, to satisfy any obligations that it may have under other applicable requirements of law; and

- c. That Akzo Nobel was not planning to perform the Project generally described in Appendix B other than in settlement of the claims resolved in this Decree.

32. Within one hundred eighty (180) calendar days following the completion of the Project required by this Section and the expenditure of all funds required under the Decree for the Project, Akzo Nobel shall submit to the United States, a Mitigation Project Completion Report, as described in Appendix B.

IX. REPORTING REQUIREMENTS

33. After the Effective Date, Akzo Nobel shall submit to EPA and ADEM a semi-annual progress report for the Facility no later than January 31 and July 31 of each Calendar Year, with the first report due on July 31, 2019. Each semi-annual progress report shall contain the following information for the Sulfuric Acid Plant with respect to the preceding semi-annual calendar period (i.e. January 1 to June 30 or July 1 to December 31):

- a. Work performed and progress made toward implementing the requirements of Section V (Compliance Requirements) above;
- b. Any significant problems encountered or anticipated in complying with the requirements of Section V (Compliance Requirements) above, together with implemented or proposed solutions;
- c. A summary of the emissions monitoring and testing data collected pursuant to this Consent Decree including the mass of SO₂ and Acid Mist emitted

- and the daily and total quantity of 100% Sulfuric Acid Produced during the reporting period;
- d. A tabulation of the 3-hour rolling average and the 365-day rolling average SO₂ emission rates expressed in terms of pounds SO₂ emitted per ton of 100% Sulfuric Acid Produced (lb/ton);
 - e. The actual monthly emissions of SO₂ measured in accordance with the CEMS Plan;
 - f. A general description of all periods of SSM, including the quantity of SO₂ and Acid Mist emitted and the causes of Malfunction(s);
 - g. The date and time identifying each period during which each CEMS was inoperative except for zero and span checks and the nature of the system repairs or adjustments;
 - h. The status of permit applications and a summary of all permitting activity pertaining to compliance with this Consent Decree;
 - i. A copy of any reports submitted to any state or local permitting authority pertaining to compliance with this Consent Decree;
 - j. All changes or updates made to the O&M Plans specified in Paragraph 16; and
 - k. A description of any non-compliance with the requirements of this Consent Decree and an explanation of the likely cause of the non-compliance and the remedial steps taken, or to be taken, to prevent or minimize such non-compliance, and to mitigate any adverse environmental harm.

34. If Akzo Nobel violates, or determines that it will violate, any requirement of this Consent Decree, Akzo Nobel shall notify EPA and the State of such violation and its likely duration, in writing, within fourteen (14) Days of the day Akzo Nobel first becomes aware of the violation, with an explanation of the likely cause of the violation and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Akzo Nobel shall so state in the report. Akzo Nobel shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days of the day Akzo Nobel becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Akzo Nobel of its obligation to provide the notice required by Section XI (Force Majeure) of this Consent Decree.

35. Whenever any event affecting the Facility or Akzo Nobel's performance under this Consent Decree may pose an immediate threat to the public health or welfare or the environment, Akzo Nobel shall comply with any applicable federal and state or local laws and, in addition, shall notify EPA Region 4 and ADEM pursuant to Section XVI (Notices) orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Akzo Nobel first knew of the violation or event. This notice requirement is in addition to the requirement to provide notice of a violation of this Consent Decree set forth in the preceding Paragraph.

36. All reports shall be submitted to the persons designated in Section XVI (Notices) of this Consent Decree.

37. Each report submitted by Akzo Nobel under this Section shall be signed by a plant manager, a corporate official responsible for environmental management and compliance, or a corporate official responsible for plant management and shall include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This certification requirement does not apply to emergency notifications where compliance would be impractical.

38. The reporting requirements of this Consent Decree do not relieve Akzo Nobel of any reporting obligations required by any federal, state, or local law, regulation, permit, or other requirement. However, the reporting requirements of this Consent Decree shall not require Akzo Nobel to re-submit any report, plan, or information submitted by Akzo Nobel to EPA and the State prior to the Effective Date of this Consent Decree.

39. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law, including EPA's confidential business information regulations, 40 C.F.R.

Part 2.

X. STIPULATED PENALTIES

40. Akzo Nobel shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree,

according to all applicable requirements of this Consent Decree and within the specified time schedules established by or approved under this Consent Decree.

41. Late Payment of Civil Penalty. If Akzo Nobel fails to pay the civil penalty required to be paid under Section IV of this Consent Decree (Civil Penalty) when due, Akzo Nobel shall pay a stipulated penalty of \$1,000 per Day for each Day that the payment is late.

42. Short-Term SO₂ Limit. For each violation of the Short-Term SO₂ Limit in any non-overlapping 3-hour period (*i.e.*, no more than eight violations in a single twenty-four hour period):

<u>Percentage Over the Limit</u>	<u>Penalty per Violation</u>
1 - 50%	\$250
51 - 100%	\$500
Over 100%	\$750

Where a violation of the Short-Term SO₂ limit also violates the NSPS SO₂ Limit, the provisions of this stipulated penalty paragraph shall apply.

43. Long-Term SO₂ Limits. For each violation of the Long-Term SO₂ Limit:

<u>Period of Noncompliance</u>	<u>Penalty per Day</u>
1st - 14th Day	\$1000
15th - 30th Day	\$1500
31st Day and each Day thereafter	\$2000

44. Performance Testing, Emissions Monitoring, and Permitting Requirements. For each violation of any of the requirements of Section V.17 (Emission Monitoring), V.18 (Performance Testing), the SO₂ CEMS Plan, or Section VI (Permits):

<u>Period of Noncompliance</u>	<u>Penalty per violation per Day</u>
1st - 14th Day	\$1000
15th - 30th Day	\$1500
31st Day and each Day thereafter	\$2000

45. Reporting Requirements. The following stipulated penalties shall accrue per violation per day for each violation of the requirements of Section IX (Reporting Requirements) of this Consent Decree:

<u>Period of Noncompliance</u>	<u>Penalty per violation per Day</u>
1st through 14th Day	\$150
15th through 30th Day	\$250
31st Day and beyond	\$500

46. Environmental Mitigation Project Requirements. If Akzo fails to undertake and complete the Environmental Mitigation Project in compliance with Section VIII of this Consent Decree and Appendix B, Akzo Nobel shall pay stipulated penalties for each Day of violation as follows:

<u>Period of Noncompliance</u>	<u>Penalty per violation per Day</u>
1st through 14th Day	\$1000
15th through 30th Day	\$1500
31st Day and beyond	\$2000

47. Emission Credit Generation Requirements. The following stipulated penalties shall accrue for violations of the requirements of Section VII (Emission Credit Generation) of this Consent Decree:

<u>Pollutant for which reductions were impermissibly used or baseline was not adjusted downward</u>	<u>Penalty per ton of pollutant impermissibly used or counted in baseline</u>
Sulfur Dioxide	\$25,000
Acid Mist	\$100,000

In addition to stipulated penalties, 1) Akzo Nobel shall purchase and retire the amount of emissions offsets impermissibly used or sold and 2) any PSD, Non-attainment NSR, and/or

synthetic Minor NSR permit improperly relying on CD Emissions Reductions in violation of Section VII will be subject to reevaluation as to whether a significant emissions increase and significant net emissions increase occurred such that the project qualified as a major modification.

48. All Other Requirements. The following stipulated penalties shall accrue per violation per day for each violation of any requirement of this Consent Decree not specifically referenced in Paragraphs 41 through 47 above:

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1st through 14th Day	\$350
15th through 30th Day	\$500
31st Day and beyond	\$750

49. Subject to the provisions of Paragraph 19 above, stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

50. The United States and ADEM may seek stipulated penalties under this Section. Akzo Nobel shall pay any stipulated penalty to the United States and the State within 30 Days of receiving written demand by either Plaintiff. Where both the United States and ADEM seek stipulated penalties for the same violation of the Consent Decree, Akzo Nobel shall pay 50 percent of the total stipulated penalty amount due to the United States and 50 percent to the State. The United States and the State will consult with each other prior to making a demand for stipulated penalties. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff. Where only one Plaintiff demands stipulated penalties for a violation, it shall make the demand on its own behalf, and

Akzo Nobel shall pay the full amount of the stipulated penalties due for the violation to that Plaintiff, and Akzo Nobel shall not be liable for additional stipulated penalties to the other Plaintiff for that violation.

51. After consultation with each other, the United States and the State may, in the unreviewable exercise of its discretion, reduce or waive the portion of the stipulated penalties otherwise due to that agency under this Consent Decree.

52. Stipulated penalties shall continue to accrue as provided in Paragraph 49, during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement of the Parties or by a decision of the United States that is not subject to judicial review or appealed to the Court, Akzo Nobel shall pay accrued penalties determined to be owing, together with Interest, within thirty (30) Days of the effective date of the agreement or the receipt of the United States' decision or order.
- b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Akzo Nobel shall pay all accrued penalties determined by the Court to be owing, together with Interest, within sixty (60) Days of receiving the final Court decision.

53. Akzo Nobel shall pay stipulated penalties in the manner set forth and with the confirmation notices required by Paragraph 9, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

54. Akzo Nobel shall not deduct stipulated penalties paid under this Section in calculating its state and federal income tax.

55. If Akzo Nobel fails to pay stipulated penalties according to the terms of this Consent Decree, Akzo Nobel shall be liable for Interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Akzo Nobel's failure to pay any stipulated penalties.

56. Subject to the provisions of Section XIV (Effect of Settlement/ Reservation of Rights) of this Consent Decree, the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States or the State for Akzo Nobel's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of relevant statutory or regulatory requirements, Akzo Nobel shall be allowed a credit for any stipulated penalties paid against any statutory penalties imposed for such violation.

XI. FORCE MAJEURE

57. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Akzo Nobel, of any entity controlled by Akzo Nobel, or of Akzo Nobel's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Akzo Nobel's best efforts to fulfill the obligation. The requirement that Akzo Nobel, or an entity controlled by Akzo Nobel exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (1) as it is occurring and (2) after it has occurred to prevent or minimize any resulting delay to the greatest extent practicable. "Force majeure" does not include Akzo Nobel's financial inability to perform any obligation under this Consent Decree.

58. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Akzo Nobel shall provide notice orally or by electronic or facsimile transmission to EPA and the State, within 72 hours of when Defendant first knew that the event might cause a delay. Within ten (10) Days thereafter, Akzo Nobel shall provide written notice to EPA and the State with an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Akzo Nobel's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Akzo Nobel, such event may cause or contribute to an endangerment to public health, welfare or the environment. Akzo Nobel shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure event. Failure to comply with the above requirements shall preclude Akzo Nobel from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Akzo Nobel shall be deemed to know of any circumstance of which Akzo Nobel, any entity controlled by Akzo Nobel, or Akzo Nobel's contractors, knew or should have known.

59. If EPA, after a reasonable opportunity for review and comment by the State, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Akzo

Nobel in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

60. If EPA, after a reasonable opportunity for review and comment by the State, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Akzo Nobel in writing of its decision.

61. If Akzo Nobel elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than fifteen (15) days after receipt of EPA's notice. In any such proceeding, Akzo Nobel shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Akzo Nobel complied with the requirements of Paragraphs 57 and 58, above. If Akzo Nobel carries this burden, the delay at issue shall be deemed not to be a violation by Akzo Nobel of the affected obligation of this Consent Decree identified to EPA and the Court.

XII. DISPUTE RESOLUTION

62. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve all disputes arising under or with respect to this Consent Decree. Akzo Nobel's failure to seek resolution of a dispute under this Section shall preclude Akzo Nobel from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of Akzo Nobel arising under this Consent Decree (including the payment of stipulated penalties), provided that Akzo Nobel had written notice prior to such action of the intention of the United States or the State to seek

enforcement of the obligation (e.g., through a demand for stipulated penalties) and an opportunity to dispute the position of the United States or the State under this Section.

63. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Akzo Nobel sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed thirty (30) Days from the date that the dispute arises unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position of the United States shall be considered binding unless, within thirty (30) Days after the conclusion of the informal negotiation period, Akzo Nobel invokes formal dispute resolution procedures as set forth below.

64. Formal Dispute Resolution. Akzo Nobel shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Akzo Nobel's position and any supporting documentation relied upon by Akzo Nobel.

65. The United States shall serve its Statement of Position within forty-five (45) Days of receipt of Akzo Nobel's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Akzo Nobel, unless Akzo Nobel files a motion for judicial review of the dispute in accordance with the following Paragraph.

66. Akzo Nobel may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section XVI (Notices) of this Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be filed within ten (10) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Akzo Nobel's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

67. The United States shall respond to Akzo Nobel's motion within the time period allowed by the Local Rules of this Court. Akzo Nobel may file a reply memorandum, to the extent permitted by the Local Rules.

68. Standard of Review. In any dispute brought under this Section, Akzo Nobel shall bear the burden of demonstrating that its position complies with this Consent Decree and the Clean Air Act. The Court shall decide the dispute based upon applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with the law.

69. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Akzo Nobel under this Consent Decree, unless and until final resolution of the dispute so provides or unless ordered by the Court. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in

Paragraph 52. If Akzo Nobel does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

XIII. INFORMATION COLLECTION AND RETENTION

70. The United States and the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Facility at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Akzo Nobel or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Akzo Nobel's compliance with this Consent Decree.

71. Upon request, EPA and the State shall provide Akzo Nobel splits of any samples taken by EPA or the State or their authorized representatives.

72. Until four (4) years after the termination of this Consent Decree, Akzo Nobel shall retain, and shall instruct its contractors' and agents' to preserve, all non-identical copies of all documents, records, or other information (including documents, records, emails or other information in electronic form) in its or its contractors or agents possession or control, or that come into its or its contractors' or agents' possession or control, and that relate to Akzo Nobel's performance of its obligations under this Consent Decree. This information retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State,

Akzo Nobel shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

73. At the conclusion of the information-retention period provided in the preceding Paragraph, Akzo Nobel shall notify the United States and the State at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Akzo Nobel shall deliver any such documents, records, or other information to the requesting Party.

74. In connection with any request for documents, records, or other information pursuant to this Consent Decree, Akzo Nobel may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law, provided that Akzo Nobel shall not assert a legal privilege for any data, records or information (excluding legal advice) generated or received in connection with Akzo Nobel's obligations pursuant to the requirements of this Consent Decree. If Akzo Nobel asserts a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Akzo Nobel. If the United States or the State and Akzo Nobel disagree as to whether a particular document or record is privileged, Akzo Nobel shall deliver such document or record to the United States or the State unless it invokes dispute resolution pursuant to Section XII (Dispute Resolution), in which case Akzo Nobel shall not have an obligation to deliver such document or record until a final determination is made, pursuant to the procedures set forth in Section XII (Dispute Resolution), that such document or record is not privileged.

75. Akzo Nobel may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Akzo Nobel seeks to protect as CBI, Akzo Nobel shall follow the procedures set forth in 40 C.F.R. Part 2.

76. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Akzo Nobel to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

77. This Consent Decree resolves the civil claims of the United States and the State for the violations at the Facility alleged in the Complaint filed in this action, the April 7, 2015 letter from Beverly H. Banister of EPA Region 4, and the Notice of Violation dated January 26, 2016, as well as for any associated violations of the New Source Performance Standards applicable to the Sulfuric Acid Plant under Section 111 of the CAA, 42 U.S.C. § 7411, and 40 C.F.R. Part 60, Subparts A and H, through the date of the lodging of the Consent Decree.

78. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 77. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the Clean Air Act or implementing regulations, or under other federal or state laws, regulations or permit conditions, except as expressly specified in Paragraph 77. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising

at, or posed by, Akzo Nobel's Facility, whether related to the violations addressed in this Consent Decree or otherwise.

79. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties or other appropriate relief relating to the Facility or Akzo Nobel's violations, Akzo Nobel shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon the contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 77 of this Section.

80. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Akzo Nobel is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits; and Akzo Nobel's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Akzo Nobel's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Clean Air Act, or with any other provisions of federal, State, or local laws, regulations, or permits.

81. This Consent Decree does not limit or affect the rights of the Parties against any third parties, nor does it limit the rights of any third parties, not party to this Consent Decree, against Akzo Nobel, except as otherwise provided by law.

82. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

83. Nothing in the Complaint filed in this action or in this Consent Decree, including the execution and implementation of this Consent Decree, shall constitute or be construed as an admission by Akzo Nobel of any violation of the CAA, or of any implementing regulation, or of any of the allegations of the Complaint. The terms of this Consent Decree may not be used as evidence in any litigation, between the Parties or otherwise, except (a) pursuant to Section XII (Dispute Resolution), (b) in an action to enforce this Consent Decree, or (c) in an action by the Plaintiff and/or Co-Plaintiff in which Akzo Nobel asserts a defense based on Paragraph 77 of this Consent Decree.

XV. COSTS

84. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect costs (including attorneys' fees) incurred in any action to collect any portion of the civil penalty or any stipulated penalties or other costs due under this Consent Decree but not paid by Akzo Nobel.

XVI. NOTICES

85. Unless otherwise specified herein, whenever notifications, submissions, statements of position, or communications are required by this Consent Decree (referred in this Paragraph as a "notice" or "notices"), they shall be made electronically as described below, unless such notices are unable to be uploaded to the CDX electronic system (in the case of EPA) or transmitted by email (in the case of any other party). For all notices to EPA, Akzo Nobel shall register for the CDX electronic system and upload such notices at https://cdx.epa.gov/epa_home.asp. Any notice

that cannot be uploaded or electronically transmitted via email shall be provided in writing to the addresses below:

As to the United States by email:

eescdcopy.enrd@usdoj.gov

Re: DJ # 90-5-2-1-11404

As to the United States by mail:

EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-5-2-1-11404

As to the EPA by mail:

Air Enforcement Division Director
U.S. Environmental Protection Agency
Office of Civil Enforcement
Air Enforcement Division
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW
Mail Code: 2242-A
Washington, DC 20460

Air Enforcement and Toxics Branch Chief
U.S. Environmental Protection Agency Region 4
Air Enforcement and Toxics Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

As to the State and ADEM:

Chief, Air Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

As to Akzo Nobel:

Lemoyne Site Manager
Akzo Nobel Functional Chemicals LLC
13440 Highway 43 North
Axis, Alabama 36505

86. Any Party may, by written notice to every other Party, change its designated notice recipient or notice address provided above.

87. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVII. EFFECTIVE DATE

88. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Akzo Nobel hereby agrees that it shall be bound to perform duties scheduled in this Consent Decree to occur prior to the Effective Date. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirements to perform duties scheduled to occur before the Effective Date shall terminate.

XVIII. RETENTION OF JURISDICTION

89. The Court shall retain jurisdiction over this case until termination of this Consent Decree, pursuant to Section XX (Termination), for the purpose of resolving disputes arising under this Consent Decree or entering orders modifying this Consent Decree, pursuant to Sections XII (Dispute Resolution) and XIX (Modification), or effectuating or enforcing compliance with the terms of this Consent Decree.

XIX. MODIFICATION

90. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

91. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XII of this Decree (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 68 the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

92. After Akzo Nobel has completed the requirements of Section VI (Permits) and VIII (Environmental Mitigation) of this Consent Decree, has completed and maintained continuous satisfactory compliance with all the requirements of Section V (Compliance Requirements) and Section IX (Reporting Requirements) of this Consent Decree for a period of two years, and has paid the civil penalty required by Section IV and any accrued stipulated penalties as required by Section X of this Consent Decree, Akzo Nobel may serve upon the United States and the State a Request for Termination, stating that Akzo Nobel has satisfied those requirements, together with all necessary supporting documentation.

93. Following receipt by the United States and the State of Akzo Nobel's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Akzo Nobel has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with

the State, agrees that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

94. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Akzo Nobel may invoke Dispute Resolution under Section XII (Dispute Resolution) of this Decree. However, Akzo Nobel shall not seek Dispute Resolution of any dispute regarding termination until sixty (60) days after service of its Request for Termination.

XXI. PUBLIC PARTICIPATION

95. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Akzo Nobel consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Consent Decree, unless the United States has notified Akzo Nobel in writing that it no longer supports entry of the Consent Decree.

XXII. SIGNATORIES/SERVICE

96. Each undersigned representative of Akzo Nobel, the State, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, or his or her designee, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

97. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Akzo Nobel agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. INTEGRATION

98. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Consent Decree and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than the Appendices, which are attached to and incorporated in this Consent Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Consent Decree or the settlement it represents, nor shall it be used in construing the terms of this Consent Decree.

XXIV. FINAL JUDGMENT

99. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Akzo Nobel.

XXV. 26 U.S.C. SECTION 162(F)(2)(A)(II) IDENTIFICATION

100. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 6; Section V (Compliance Requirements), Paragraphs 11-18, 19(a)-(b); Section VI (Permits), Paragraphs 20-23 and 26; Section VIII (Environmental Mitigation), Paragraphs 29-32; Section IX (Reporting Requirements), Paragraphs 33-34 and 36-37; Section XIII (Information

Collection and Retention), Paragraphs 70 and 72-73, and related Appendices A, B, and C; is restitution or required to come into compliance with law.

XXVI. APPENDICES

101. The following Appendices are attached to and part of this Consent Decree:

Appendix A: CEMS Plan for SO₂ Emissions

Appendix B: Environmental Mitigation Project

Appendix C: SO₂ Emissions Limits During Startup

Signature Page for *United States of America et al. v. Akzo Nobel Functional Chemicals LLC*.

FOR THE UNITED STATES OF AMERICA:

Date: 8/29/19

/s/ Jeffrey Bossert Clark
JEFFREY BOSSERT CLARK
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
950 Pennsylvania Avenue, NW
Washington, D.C. 20530

Date: 6/19/19

/s/ James W. Beers, Jr.
JAMES W. BEERS, JR.
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
(202) 305-0455

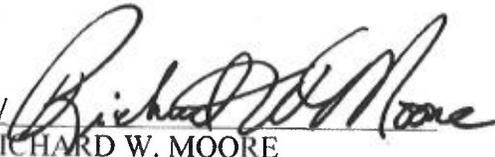
Signature Page for *United States of America et al. v. Akzo Nobel Functional Chemicals LLC*.

FOR THE UNITED STATES OF AMERICA:

Date:

June 18, 2019

/s/



RICHARD W. MOORE

United States Attorney

Southern District of Alabama

63 South Royal Street, Suite 600

Mobile, AL 36602

(251) 441-5845

Signature Page for *United States of America et al. v. Akzo Nobel Functional Chemicals LLC*.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: _____

6/10/19

/s/



LEIF PALMER
Regional Counsel
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

/s/



MARLENE J. TUCKER
Associate Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

OF COUNSEL:

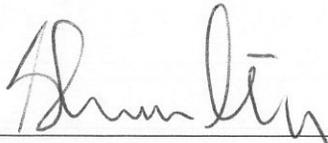
PROVIDENCE SPINA
Attorney, Air Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U. S. Environmental Protection Agency

Signature Page for *United States of America et al. v. Akzo Nobel Functional Chemicals LLC*.

FOR THE STATE OF ALABAMA AND THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT:

STEVE MARSHALL, ATTORNEY GENERAL

Date: 6-5-19

By: /s/ 

STEVEN SHAWN SIBLEY
Assistant Attorney General and
Associate General Counsel
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

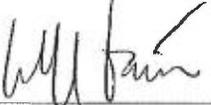
Date: 6-5-19

/s/ 

LANCE R. LEFLEUR
Director
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

Signature Page for *United States of America et al. v. Akzo Nobel Functional Chemicals LLC*.

FOR AKZO NOBEL FUNCTIONAL CHEMICALS LLC:

Date: 4/21/19 /s/ 
IGNACIO GARIN
GENERAL MANAGER SULFUR DERIVATIVES.
AKZO NOBEL FUNCTIONAL CHEMICALS LLC

Date: 4/25/19 /s/ 
SUSAN BOOTH
VP Marketing Sales
AKZO NOBEL FUNCTIONAL CHEMICALS LLC

APPENDIX A**LEMOYNE FACILITY
AXIS, ALABAMA****CEMS Plan for SO₂ Emissions
Akzo Nobel Functional Chemicals, LLC
Sulfuric Acid Plant with Hydrogen Peroxide Scrubber****Principle**

This CEMS Plan is the mechanism for determining compliance with all SO₂ emission limits in the Consent Decree for Akzo Nobel LeMoyne Facility Sulfuric Acid Plant located in Axis, Alabama. The methodology described in this CEMS Plan will provide a continuous real-time indication of compliance with the emission limits established in the Consent Decree by determining the emission rate in terms of both pounds of SO₂ emitted per unit of time and pounds of SO₂ emitted per ton of 100% Sulfuric Acid Produced (lb/ton). The system will utilize three analyzers: one to measure stack SO₂ concentration, one to measure stack oxygen (O₂) concentration, and one to measure stack volumetric flow rate. From these data, the emission rate, expressed as both pounds per unit of time and lb/ton, will be directly calculated using Equations 1, 2, and 3 below. For the purposes of this Plan, Standard Conditions are a temperature of 68°F and a pressure of 14.696 pounds per square foot absolute (psia).

Equation 1:

$$M_{SO_2Stack} = Q_{Stack} \cdot Cs$$

Equation 2:

$$P_{TonsH_2SO_4} = \frac{Q_{Stack} \cdot (0.264 - 0.0126 \cdot \%O_2 - 7.61 \cdot Cs)}{S}$$

Equation 3:

$$E_{lb/ton} = \frac{M_{SO_2Stack}}{P_{TonsH_2SO_4}} = \frac{Q_{Stack} \cdot Cs \cdot S}{Q_{Stack} \cdot (0.264 - 0.0126 \cdot \%O_2 - 7.61 \cdot Cs)}$$

Where:

$P_{TonsH_2SO_4}$	= 100% Sulfuric Acid Production, tons per unit of time
M_{SO_2Stack}	= Mass SO ₂ stack emission rate, lb per unit of time
Q_{Stack}	= Volumetric flow rate of stack gas, dry standard cubic feet (DSCF) per unit of time
$\%O_2$	= Stack O ₂ concentration, percent by volume dry basis
Cs	= Stack SO ₂ concentration, lb/DSCF (to convert parts per million by volume, dry basis (ppm) to lb/DSCF, multiply by 1.660×10 ⁻⁷)
$E_{lb/ton}$	= lb SO ₂ per ton 100% Sulfuric Acid Produced
S	= the acid production rate factor, 11,800 DSCF/Ton of 100% Sulfuric Acid Produced;

The mass emission rate equation (Equation 1) calculates the SO₂ mass emission rate by multiplying the

total stack gas flow rate by the stack SO₂ concentration. The 100% Sulfuric Acid Production Rate equation (Equation 2) is based on a material balance of the contact process and the fact that the ratio of oxygen to nitrogen of the incoming air is fixed. The lb/ton equation (Equation 3) is the ratio of the mass SO₂ emission rate to the 100% Sulfuric Acid Production Rate.

The benefit of using this method is the ability to obtain continuous information regarding the SO₂ mass emission rate, the fact that lb/ton measurements will be “weighted” based on the flow rate during each measurement, and the elimination of errors associated with measuring sulfuric acid flow and using converter inlet Reich testing.

Definitions

Terms used in this CEMS Plan that are defined in the Clean Air Act (“CAA”) or in Federal or state regulations promulgated pursuant to the CAA shall have the meaning assigned to them in the CAA or such regulations, unless otherwise defined in the Consent Decree. The terms used in this CEMS Plan that are defined in the Consent Decree shall have the meaning assigned to them therein.

Emissions Monitoring

Akzo Nobel will undertake the following monitoring procedures at the LeMoyné Facility:

- Emissions monitoring will be accomplished using an O₂ analyzer at the exit stack, an SO₂ analyzer at the exit stack, and a stack flow rate analyzer. Except for analyzer malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), Akzo Nobel will continuously conduct monitoring during all Operating Periods including Startups and Shutdowns.
- At least once every 15-minute quadrant, the analyzers will sample, analyze, and log the stack SO₂ concentration (lb/DSCF), the stack O₂ concentration (percent by volume, dry), and the volumetric flow rate (DSCF per minute). The sampling shall be done on a 1-minute average basis.
- During routine calibration checks and adjustments of any analyzers, a minimum of two valid data points, separated by at least 15-minutes is required to calculate the hourly average.
- If any one or more than one analyzer is/are not operating, a like-kind replacement (*i.e.*, a redundant analyzer) may be used as a substitute. The use of a substitute analyzer is not required if the process is down.
- If any one or more than one analyzer is/are not operating for a period of 24 hours or greater and no redundant analyzer is available, data gaps in the array involving non-operational analyzer(s) will be filled in as follows. The use of these procedures is not required if the process is down.
 - Exit stack gas will be sampled and analyzed for SO₂ at least once every three hours, during all Operating Periods. Sampling will be conducted by Reich test or other established method (*e.g.*, portable analyzer). Sampling results from the most recent sampling cycle will be used to fill the 1-hour average data gaps. The 3-hour averages will be calculated using Equations 4 and 5.
 - O₂ in the exit stack gas will be sampled and analyzed at least once every three hours, during all Operating Periods. Sampling will be conducted by Orsat test or other method (*e.g.*, portable analyzer). Sampling results from the most recent sampling cycle will be used to fill the 1-hour average data gaps. The 3-hour averages will be calculated using Equations 4 and 5.

- Stack volumetric flow rate will be estimated using engineering judgment (e.g., stack test).
- If any one or more than one analyzer is/are not operating for a period of less than 24 hours, Akzo Nobel will either: (i) follow the requirements set forth for a 24-hour or greater period of downtime to fill in the data gaps; or (ii) use the data recorded for the 3-hour average immediately preceding the affected analyzer's(s') stoppage to fill in the data gap. The use of these procedures is not required if the process is down.

Emissions Calculations

A 1-hour average is calculated from all valid data points collected during the hour. A full operating hour is a clock hour with 60 minutes of unit operation and a partial operating hour is a clock hour with less than 60 minutes of unit operation.

For full and partial operating hours, exclude data recorded during periods of CMS breakdown, repair, calibration checks, and zero and span adjustments.

For full operating hours, if required maintenance or quality assurance activities are NOT performed in the operating hour, then four valid data points, (i.e., one valid data point in each of the 15-minute quadrants of the hour) are required to calculate the hourly average.

For full operating hours, if required maintenance (i.e., preventative, corrective, or other) or quality assurance activities are performed in the operating hour, a minimum of two valid data points, separated by at least 15 minutes is required to calculate the hourly average.

For partial operating hours, all of the valid 1-minute averages are used to calculate the hourly average. At least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.

For any partial operating hour in which required maintenance or quality assurance activities are performed, the following conditions need to be met when calculating the hourly average:

- If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average.
- If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of paragraph 40 CFR §60.13(h)(2)(iii) are met, based solely on valid data recorded after the successful calibration.

The 1-hour average lb/ton SO₂ emission rate (E_{1hravg}) will be calculated every hour using Equation 4.

Equation 4:

$$E_{1hravg} = \frac{S \cdot \sum_{i=1}^n Q_{Stack\ i} \cdot C_{S_i}}{\sum_{i=1}^n Q_{Stack\ i} \cdot (0.264 - 0.0126 \cdot \%O_{2i} - 7.61 \cdot C_{S_i})}$$

Where:

$$\begin{aligned} \%O_{2i} &= \text{Stack O}_2 \text{ concentration, percent by volume dry basis at measurement} \\ &\quad \text{"i"} \\ Cs_i &= \text{Stack SO}_2 \text{ concentration, lb/DSCF at measurement "i"} \\ Q_{Stack\ i} &= \text{Stack volumetric flow rate, DSCF per minute at measurement "i"} \\ S &= \text{the acid production rate factor, 11,800 DSCF/Ton of 100\% Sulfuric Acid} \\ &\quad \text{Produced;} \\ n &= \text{the number of valid minutes over the 1-hour period;} \\ E_{1hravg} &= \text{1-hour average lb SO}_2 \text{ per ton 100\% Sulfuric Acid Produced} \end{aligned}$$

3-Hour Rolling Average

For purposes of calculating a rolling 3-hour average, the system will maintain an array of the 3 most recent 1-hour averages calculated in accordance with Equation 4. Every 1-hour, the system will add the most recent readings to the array and exclude the oldest readings. The 3-hour rolling average is valid if it consists of three consecutive, valid 1-hour averages.

The 3-hour rolling average lb/ton SO₂ emission rate (E_{3hravg}) will be calculated every hour. using Equation 5.

Equation 5:

$$E_{3hravg} = \frac{\sum_{i=1}^3 E_{1hravg\ i}}{3}$$

Where:

$$E_{3hravg} = \text{3-hour average lb SO}_2 \text{ per ton 100\% Sulfuric Acid Produced}$$

24-Hour Block Average

A 24-hour block average is the arithmetic average of the applicable 1-hour averages for a calendar day. As defined on the Consent Decree a "Day" shall mean a calendar day unless expressly stated to be a business day. For the purposes of calculating the 24-hour block average, the system will maintain an array of all of the valid 1-hour averages calculated in accordance with Equation 4 for the calendar day. The 24-hour block average lb/ton SO₂ emission rate ($E_{24hravg}$) will be calculated at the end of every day (midnight) using Equation 6. The 24-hour block average is valid if it consists of at least one valid 1-hour average.

Equation 6:

$$E_{24hravg} = \frac{\sum_{i=1}^n E_{1hravg\ i}}{n}$$

Where:

n = the number of valid 1-hour block averages over the 24-hour period;
 $E_{24hravg}$ = 24-hour average lb SO₂ per ton 100% Sulfuric Acid Produced

365-Day Rolling Average

For the purposes of calculating the 365-day rolling average, the system will maintain an array of all of the valid 24-hour block averages calculated in accordance with Equation 6 for the 365 days. Every day at the end of the day (midnight), the system will add the readings from that day to the array and exclude the readings from the oldest day.

The 365-day rolling average lb/ton SO₂ emission rate ($E_{365-Day Avg}$) will be calculated using Equation 7.

Equation 7:

$$E_{365-day Avg} = \frac{\sum_{i=1}^n E_{24hravg i}}{n}$$

Where:

n = the number of valid 24-hour block averages over the 365-day period;
 $E_{365-day Avg}$ = 365-day rolling average lb SO₂ per ton of 100% Sulfuric Acid Produced.

Rounding of Numbers resulting from Calculations

Upon completion of the calculations, the final numbers shall be rounded as follows:

E_{3hravg} : Rounded to the nearest tenth.
 $E_{365-day Avg}$: Rounded to the nearest hundredth.

The number "5" shall be rounded up (e.g., a short-term rate of 2.2511 shall be rounded to 2.3).

Rounding of Variables C_s , % O_2 , and Q_{Stack}

Rounding of the variables identified as C_s , % O_2 , and Q_{Stack} in the equations set forth in this CEMS Plan shall be done based on the accuracy of the measuring device as provided by the manufacturer of the device.

Compliance with Consent Decree SO₂ Limits

Short-Term SO₂ Limits

The Short-Term Limit does not apply during periods of Startup, Shutdown, or Malfunction. During all other Operating Periods, Akzo Nobel will be in compliance with the Short-Term SO₂ Consent Decree Limit if E_{3hravg} does not exceed 2.5 lb of SO₂ per ton of 100% Sulfuric Acid Produced. Limitations on SO₂ emissions during Startup are set forth in Appendix C of the Consent Decree.

NSPS SO₂ Limits

The NSPS Limit does not apply during periods of Startup, Shutdown, or Malfunction. During all other Operating Periods, Akzo Nobel will be in compliance with the NSPS Limit if E_{3hravg} does not exceed 4.0 lb of SO₂ per ton of 100% Sulfuric Acid Produced.

Long-Term SO₂ Limit

The Long-Term Limit includes periods of Startup, Shutdown, and Malfunction. Akzo Nobel will be in compliance with the Long-Term SO₂ Limit if $E_{365-day Avg}$ does not exceed 1.5 lb of SO₂ per ton of 100% Sulfuric Acid Produced.

Recordkeeping and Reporting

In addition to any requirements in the Consent Decree, Akzo Nobel shall maintain records of the date, time, and duration that any of the three analyzers required under this CEMS plan is not operating. In each semi-annual report required under Section IX of the Decree and in each excess emission report required by the NSPS, Akzo Nobel specifically shall identify all periods of analyzer downtime during the reporting period and all data during the reporting period that is "substitute" data. "Substitute" data means data that is not generated contemporaneously by an analyzer at the same time as the gas flow stack (or duct) emissions are being measured, but rather, is substituted for contemporaneous analyzer measurements consistent with the provisions of the "Emissions Monitoring" section of this CEMS Plan when an analyzer is not operating.

Retention of All CEMS Data, including Data during Startup, Shutdown, and Malfunction

Akzo Nobel will retain all data generated by its SO₂ analyzer, O₂ analyzer, and stack flow analyzer, including all data generated during Startup, Shutdown, and/or Malfunction (SSM) of the Sulfuric Acid Plant in accordance with Section XIII (Information Collection and Retention) of the Consent Decree.

Analyzer Specifications

The three analyzers will meet the following specifications:

Table 1

Parameter	Location	Range
SO ₂ , parts per million, dry basis (to convert to lb/DSCF, multiply by 1.660×10 ⁻⁷)	Stack	Dual range: Normal: 0 – 500 ppm SO ₂ SSM: 0 – 3,600 ppm SO ₂
O ₂ , percentage, dry basis	Stack	Single range: 0 – 20.9 % O ₂
Volumetric flow rate, DSCFM	Stack	13 to 125% of the maximum expected volumetric flow rate

The stack SO₂ analyzer will meet all applicable requirements of 40 C.F.R. §§ 60.11, 60.13, 40 C.F.R. Part 60, Appendix B, Performance Specification 2, and the Quality Assurance and Quality Control Procedures in 40 C.F.R. Part 60, Appendix F, Procedure 1.

The stack O₂ analyzer will meet 40 C.F.R. Part 60 Appendix B, Performance Specification 3 and the Quality Assurance and Quality Control Procedures in 40 C.F.R. Part 60, Appendix F, Procedure 1.

The volumetric flow rate analyzer will meet 40 C.F.R. Part 60, Appendix B, Performance Specification 6 and the Quality Assurance and Quality Control Procedures in 40 C.F.R. Part 60, Appendix F, Procedure 1.

Compliance with the NSPS: 40 C.F.R. Part 60, Subpart H

In addition to the requirements in this CEMS Plan, Akzo Nobel also will comply with all of the requirements of the NSPS relating to monitoring except that, pursuant to 40 C.F.R. § 60.13(i), this CEMS Plan will supersede the following provisions of 40 C.F.R. Part 60, Subpart H:

- The requirement at 40 C.F.R. § 60.84(a) that the stack SO₂ analyzer have a span value of 1000 ppm. In lieu of this, Akzo Nobel will utilize the span values specified in Table 1 above; and
- The procedures specified at 40 C.F.R. § 60.84(b) for converting monitoring data into the units of the applicable standard. In lieu of this, Akzo Nobel will utilize the procedures specified in this CEMS Plan for calculating compliance with the NSPS 3-hour average limit.

APPENDIX B ENVIRONMENTAL MITIGATION PROJECT

Akzo Nobel shall implement the approved Environmental Mitigation Project (“Project”), as described below, and shall comply with the requirements of this Appendix, Section VIII of the Consent Decree (Environmental Mitigation), and all other Consent Decree requirements. The Mitigation Project is the Alabama State Port Authority Clean Diesel Project.

I. Alabama State Port Authority Clean Diesel Project

- A. Akzo Nobel shall implement the Alabama State Port Authority Clean Diesel Project, wherein a higher-polluting diesel engine utilized in loading equipment in Mobile County, Alabama will be retrofitted, replaced or repowered with a lower-emitting engine. Specifically, a McDuffie 988F Loader, identified and operated by the Alabama State Port Authority, will be repowered from an unregulated higher-polluting 1995 engine to a more efficient, lower-polluting 2005 (Tier 2) engine. The Parties expect that this Project will result in emission reductions of nitrogen dioxide (“NO_x”) (a contributor to ground-level ozone and acid rain and a precursor to PM formation), particulate matter (“PM”), carbon monoxide (“CO”), carbon dioxide (“CO₂”), and hydrogen carbon (“HC”). In addition to its own direct effects, SO₂ contributes to both ground-level ozone formation and acid rain and is a precursor to the formation of PM. Therefore, reductions in PM and NO_x resulting from this mitigation project will help serve to mitigate the effects of SO₂ emissions from the Facility.
- B. Akzo Nobel shall spend at least \$150,000 to implement the Project.
- C. Akzo Nobel may arrange for an appropriate third-party (“Contractor”) to assist Akzo Nobel’s implementation of the Project.
- D. The Project shall be implemented at the Alabama State Port Authority, located at Alabama State Docks Boulevard, Mobile, AL, 36603.

II. Overall Schedule and Budget for the Environmental Mitigation Project

- A. The Project shall be completed no later than one year from the Date of Entry of the Consent Decree.
- B. Commencing with its first progress report due pursuant to Section IX (Reporting Requirements) of the Consent Decree, and continuing semi-annually thereafter until completion of the Project, Akzo Nobel will include in the progress report information describing:
 - 1. A schedule for implementation of the Project; and
 - 2. A description of the anticipated environmental benefits of the Project, including an estimate of reductions of NO_x and PM emissions.

C. Within sixty (60) days following the completion of the Project, Akzo Nobel shall submit to the United States for approval of the Project's closure, a completion report that documents:

1. The date the Project was completed;
2. The total amount of project dollars spent in implementing the Project; and
3. A description of the environmental benefits achieved by the Project, including an estimate of reductions of NO_x and PM emissions.

Pursuant to Section VIII of the Consent Decree, EPA may request additional information on the Project after Akzo Nobel submits the closure report, if the information provided is not adequate to conclude that a Project has been performed and completed in accordance with the Consent Decree. If EPA concludes based on the Mitigation Project Completion Report or subsequent information provided by Akzo Nobel that the Project has been performed and completed in accordance with the Consent Decree and this Appendix, then EPA will approve completion of the Project for purposes of the Consent Decree.

APPENDIX C**SHORT-TERM SO2 EMISSION LIMITS DURING STARTUP**

3-hour Time period (Hours after Startup Commences)	Short-Term SO2 Emission Limit Lbs/ton Akzo Nobel LeMoyne Sulfuric Acid Plant
1st-3rd Hour	15
2nd-4th Hour	15
3rd-5th Hour	15
4th-6th Hour	15
5th-7th Hour	15
6th-8th Hour	15
7th-9th Hour	15
8th-10th Hour	15
9th-11th Hour	15
10th -12th Hour	15
11th-13th Hour	12
12th-14th Hour	9
13th-15th Hour	6
14th-16th Hour	6
15th-17th Hour	6
16th-18th Hour	6
17th-19th Hour	6
18th-20th Hour	6
19th-21st Hour	6
20th-22nd Hour	6
21st-23rd Hour	6
22nd -24th	6
23rd-25th	4.8
24th-26th	3.6