

MINUTE ORDER NO. 81-31

Compliance Order
PAGE 1 OF 1 PAGES

FINDINGS:

The Aluminum Company of America (ALCOA) operates an alumina chemicals complex at Bauxite. Alcoa is presently operating in violation of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (SIP), at Building 225, the sinter process. The equipment causing these violations are the multiclones on the #1 and #7 coolers. In order to achieve compliance with the Arkansas SIP, Alcoa has submitted the following schedule for implementation of a plan to install pollution control equipment at the Bauxite plant. This compliance schedule will be submitted to the Environmental Protection Agency (EPA), Region VI, in Dallas as a formal revision to the Arkansas SIP.


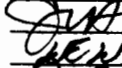
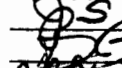
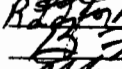
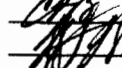
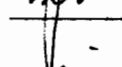
All applicable public participation requirements, if any, with respect to this proposed revision have been complied with.

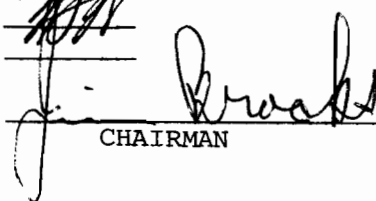
<u>Action</u>	<u>Date Required</u>
Process testing complete	June 1, 1981
Request for funding	June 15, 1981
Initiate detailed engineering design	July 1, 1981
Placement of the purchase order	August 15, 1981
Requisition steel	January 15, 1982
Initiate on-site construction	May 1, 1982
Start steel construction	August 1, 1982
Complete project construction	November 30, 1982
Start-up and debugging	December 1, 1982
Compliance testing	December 31, 1982

ORDER:

The compliance schedule as submitted by Alcoa is hereby approved as a formal SIP revision to the Arkansas Plan of Implementation for Air Pollution Control.

COMMIS-
SIONERS


 SUBMITTED BY Wilson Tolefree DATE PASSED 4-10-81
 CHAIRMAN

ALUMINUM COMPANY OF AMERICA

P. O. BOX 300 • BALXITE ARKANSAS 72011

ARKANSAS OPERATIONS

ALCOA

1981 April 07

Mr. Wilson L. Tolefree
Chief, Air Division
Arkansas Department of Pollution
Control and Ecology
8001 National Drive
Little Rock, Arkansas 72209

Dear Mr. Tolefree:

Aluminum Company of America has formally proposed a schedule to replace the existing multiclone control systems on our Sinter Kiln Cooler System designated Source Nos. 75 and 76 in the Arkansas Air Pollution Control State Implementation Plan. That schedule calls for activities to begin immediately and for all control systems to be operable by 1982 December 31. We understand that this schedule has been presented at a public meeting as a revision to the State Implementation Plan. The purpose of this letter is to provide you with additional information concerning the mileposts delineated in that schedule. We request that you also provide this information to Region VI of the Environmental Protection Agency when you submit the SIP revision for their review.

Our program calls for two separate control systems to be installed at different points in the process. The first equipment to be installed will be a baghouse to control emissions from the materials handling system that allows us to transfer the cooled sintered material to Bldg. 230 for further processing. Final engineering design is underway and actual installation of the baghouse will begin 1982 April and will be completed in the fall of 1982. This baghouse will reduce the exhaust load on the present system, but will not actually replace the multiclones.

The second system is also expected to be a baghouse and will be installed to control the hot gas streams from the coolers themselves. This application is somewhat more complex because of the hygroscopic nature of the material to be collected. In addition, the cooler exhaust systems are presently being modified to reduce the air flow to the control devices.

Individual schedules for each of these installations are attached as Attachments 1 and 2. I will explain in some detail the schedule associated with the second system (controlling the cooler off-gases). Although it is more complex, it is indicative of the steps in establishing such a schedule.

Mr. Wilson L. Tolefree
1981 April 07
Page 2

This schedule includes a three-month testing period during which time a number of measurements will be made to determine how gases from the kiln system can best be recirculated to reduce emission volumes. These tests will consist of temperature and oxygen measurements to determine safe recirculating rates, combustion air requirements and a materials balance. A copy of a letter describing these tests (Attachment 3) is attached for your information.

After the testing is complete, a request for funding will be developed in detail and submitted to the Corporate Office for approval. This request for funding is an integral part of Alcoa's Capital Expenditure Procedure and must be followed for all projects costing more than \$25,000. The request for funding must include detailed information concerning the equipment type, the equipment size and reasonable cost estimates. Therefore, that request cannot be prepared until the process testing is complete. This request is reviewed and approved by various technical and managerial representatives at Arkansas Operations and by appropriate individuals in the Corporate Office. Once the request has been reviewed and received approval from the individuals involved, it is reviewed by the Corporate Facilities Planning Committee and assigned an appropriate budget number. That budget number is then used to allocate funds and provide the necessary information to shareholders, the Securities and Exchange Commission and others concerning Alcoa's capital expenditure plans and programs. In addition, this funding mechanism allows us to take appropriate steps to ensure that the required funds are available at the scheduled time.

Detailed engineering design will begin on July 1, after the request for funding has been prepared and reviewed at the Arkansas plant. This detailed engineering is necessary to provide specifications for the control equipment itself and to produce certified drawings for the foundation work and the structural steel and will proceed independent of the funding review.

The purchase order will be submitted on August 15 after specifications have been complete and bids have been received from vendors. The lead time for a baghouse is 10-12 months, depending on the final specifications. Structural steel fabrication will begin on 1982 January 15, after certified drawings have been completed and reviewed by appropriate personnel. It is imperative that the certified drawings be complete to avoid fabricating errors.

We will begin on-site construction on 1982 May 1, and complete the foundation construction on 1982 August 1, in preparation for the installation of the control device itself. Installation of the control device will be completed on 1982 November 30. Start-up and de-bugging will begin on 1982 December 1. Compliance testing will be completed on 1982 December 31.

Mr. Wilson L. Tolefree
1981 April 07
Page 3

It is Alcoa's belief that the National Ambient Air Quality Standards for particulates will not be exceeded in the period prior to 1982 December 31. We base this belief on the following data:

Total allowable emissions for Arkansas Operations under SIP	= 1,336.4 lbs/hr.
Actual emissions for Arkansas Operations' sources (excluding Sources 75 and 76)	= <u>432.0</u> lbs/hr
Difference	= 904.2 lbs/hr

We estimate that current emissions from Sources 75 and 76 are well below the 904.2 lbs/hr. that is allowed for the Arkansas plant under the current SIP. The present allowable emission rate for those two sources is 210 lbs/hr. After the project is complete, the emissions will be well below this level, since the baghouse efficiency will be above 90%. The present multiclone stacks are 70' high. The other 76 particulate-emitting sources at the plant described in the SIP discharge from stacks which range in height from 31' to 140'. Since all sources will impact ambient air quality in a similar fashion due to their proximity and relatively uniform stack heights, we believe that ambient air quality standards are being maintained under present conditons and will be further improved as this project proceeds.

Sincerely,

N. Kloap / jfd

Nicholas Kloap
Supervisory Chemical Engineer

NK:lsc

PROJECT SCHEDULE
DUST COLLECTOR SYSTEM

Begin Final Engineering Design	1981 March 15
Request Funding	1981 March 15
Funding Approval	1981 June 15
Submit Purchase Order	1981 July 15
Begin Steel Fabrication	1981 December 1
Initiate On-Site Construction	1982 April 1
Complete Installation	1982 September 1
Start-up and De-bug	1982 September 1
Compliance Testing	1982 November 1

PROJECT SCHEDULE
#1 AND #7 MULTICLONE REPLACEMENT

Process Testing	1981 June 1
Request for Funding	1981 June 15
Begin Detailed Engineering Design	1981 July 1
Submit Purchase Order	1981 August 15
Begin Steel Fabrication	1982 January 15
Initiate On-site Construction	1982 May 1
Complete Foundation Work	1982 August 1
Complete Construction	1982 November 30
Start-up and De-bug	1982 December 1
Compliance Testing	1982 December 31

FROM J. D. RYBURN

TO MEMORANDUM

ARKANSAS OPERATIONS

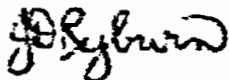
1981-03-16

RE: TESTING PROGRAM FOR KILN AND COOLER MODIFICATIONS - NO. 1
SINTER KILN

After modifications to the No. 1 sinter kiln are completed, specifically kiln seals and automatically controlled dampers on the cooler air inlets, tests will be performed to determine the effect of the changes on the kiln's combustion air balance, and on dust and air loads to the dust collection system. An oxygen analyzer is being installed in the cold end of the kiln to aid in determining excess air flows to the kiln. The following program will be completed within two months of completion of the required installations:

1. Determine excess air entering kiln through use of oxygen analyzer (2 weeks)
2. Establish best mix of primary and secondary combustion air for proper flame configuration (2 weeks)
3. After establishing optimum secondary air flows, perform a material balance around the cooler to determine air flows to dust collection system (3 weeks)
4. Determine dust loading to collection system after optimization of combustion air flows (1 week)

After completion of the program outlined above, the results will be published and distributed as necessary. Any questions concerning this program may be addressed to the writer.



J. D. RYBURN

JDR:fv

cc: R. J. Getty
J. E. Fowler
D. J. Steppe/J. W. Deere
Nicholas Klcap/J. F. Dey ✓
J. S. Coombs