

C.H.S.J.

FEB 14 1973

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Mr. Waller
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BRN - A/P

Mr. John E. Trygg
Technical Secretary
Louisiana Air Control Commission
P. O. Box 60630
New Orleans, Louisiana 70160

TDK

FEB 12 1973

Dear Mr. Trygg:

The attached is a revised Compliance Schedule requested by the Commission covering the deficient areas referred to in your letter of November 9, 1972.

Very truly yours,

P. B. Cornell, Manager
Baton Rouge North Works

FPT/RMT:ef

Attach.

bcc: Mr. A. J. von Frank
Mr. T. D. Kent
Mr. J. E. Bowler
Mr. E. E. James
Mr. R. S. Christian, Attn. Mr. C. R. Walbridge

ASI-PR 0004153

BATON ROUGE NORTH WORKS
INDUSTRIAL CHEMICALS DIVISION
ALLIED CHEMICAL CORPORATION

REVISED AIR COMPLIANCE SCHEDULE

I. GENERAL

One of the principle products at this location is soda ash (sodium carbonate). The production of this product involves the following operations: calcining, conveying, grinding, screening, packing and loading. The effect from these operations creates a fugitive particulate (dust) condition, and our compliance schedule for abatement puts heavy emphasis on dust collection systems.

The Works' testing program has been primarily for dust fallout within its battery limits. The reason for this measurement is due to the relatively large and dense particles which agglomerate in a humid atmosphere and fall as fugitive dust within the perimeter of the Works.

Relative to State ambient standards, it is believed that fugitive particulate (dust) falls out much nearer the source than can be predicated by dispersion calculations. There is also a question on the value of dispersion calculations considering the multiple sources involved in an industrial complex. The dispersion calculations should incorporate valid point source data, accountability for all variables (meteorology) and computer programs applicable to the problem. The above technique and expertise were not available at this location so that no dispersion calculations were made.

Dust fallout data over the last year indicate the soda ash fugitive dusts settle out and meet the State ambient standard in a distance of less than a quarter of a mile from the source and, in general, within the boundaries of our plant. Limestone dust settles at a much faster rate. (Limestone is a major raw material used in the soda ash process).

Attached for reference to this revised compliance schedule is the schedule submitted on August 23, 1972.

II. EMISSION STANDARDS

Section 18.0 - Smoke Control

1) General burning of natural gas as fuel for power generation, calcining soda ash and cracking is in compliance. These operations use natural gas which rarely produces smoke.

2) Emission of smoke from vertical kilns during intermittent charging operations is in compliance. Charging of each kiln with limestone and coke seldom exceeds Ringelmann 1.

3) Smoke generated in decoking of furnace tubes in the vinyl chloride monomer operation is not in compliance.

- a. The furnace tubes are heated and blown with air and steam twice per month for 18 hours each time. During the initial stage of this operation Ringelmann 1 is exceeded for a period of 15-20 minutes. After the initial period during intermittent spalling with air, the smoke does not exceed Ringelmann 1 for more than four minutes in sixty consecutive minutes.
- b. The decoking procedure is a shutdown and start-up operation and on this basis we are asking the commission to approve compliance status under exemption 18.4 and/or 18.6.2 based on the limited amount of smoke being emitted in an unpopulated area of the plant.

4) Flaring of Ethane and Ethylene from brine well storage system near Plaquemine, Louisiana is in compliance.

- a. Pressure release venting for repair of lines, etc., does not cause smoke to exceed Ringelmann 1 more than an aggregate time of six hours in any ten consecutive days. The location for this operation is in an unpopulated area.

5) Smoke emission from Test Burning of Standby Fuel Oil for power generation is in compliance.

- a. The standby fuel oil facilities are tested periodically for readiness in event of a natural gas outage. The smoke emitted during the changeover from gas to oil will be controlled within the limit of four minutes in any sixty consecutive minutes.

6) Flaring of gases from the Dichloroethane (EDC) and vinyl chloride operation is in compliance.

- a. Smoke emission from flaring during this operation does not exceed Ringelmann 1 more than an aggregate time of six hours in any ten consecutive days.

7) Smoke emissions from Lead Melting Furnace is in compliance.

- a. The lead recovery process used for rebuilding diaphragm cells involves some organic matter which burns off in the lead melting furnace. The smoke generated during this operation will be controlled so that a Ringelmann 1 will not be exceeded for more than four minutes in sixty consecutive minutes.

Section 19.0 - Particulate Control

1) Soda ash loading operations into ships and barges. Fugitive dusts from these operations are considered to be in compliance on the basis of our fallout sampling over the past year.

Light Ash Loading - Process weight 175 tons/hr.
Emissions allowable 56 lbs/hr.

Dense Ash Loading - Process weight 250 tons/hr.
Emissions allowable 60 lbs/hr.

The loading operation is located in a remote area on the east bank of the Mississippi River. The shipping area is dusty during the loading operation, however, the dust fallout is within State ambient standards at our North and South property lines. Data show 13.8 tons/square mile/30 days at the South property line station and 5.8 tons/square mile/30 days soda ash at the North property line station. Ambient State standard is 20 tons/square mile/30 days.

2) Salt drying, conveying and loading operations are in compliance.

Process weight 25,000 lbs/hr.
Emission allowed 22 lbs/hr.
Stack tests on wet scrubber 18 lbs/hr.

3) Decoking of furnace tubes in the vinyl chloride monomer operation are in compliance.

Process weight 20,000 lbs/hr.
Emission allowed 19 lbs/hr.
Calculated emissions 6 lbs/hr.

The furnace tubes are heated twice per month for 18 hours. During this time the tubes are blown with air and steam for one to two minutes every thirty minutes. Estimate 200 lbs. carbon is half burned and blown out during each 18-hour period.

4) Lime slakers producing milk of lime are in compliance.

Process weight 1,650 tons dry lime + 5500 tons water per day
Particulate emissions allowed 62 lbs/hr.
Estimated emissions None visible (steam)

5) Vertical lime kilns during charging operations are believed to be in compliance.

Process weight 2,640 tons limestone and 210 tons coke per day
Particulate emissions allowed 52 lbs/hr.

These emissions, mostly fugitive, are believed to be in compliance as estimated by visual observations and evaluation of fallout data taken over the last year. Data shows less than the 20 tons/square mile/30 days (state requirement) at the Work's battery limits.

6) Other sources of particulate fugitive dust and their respective compliance schedules were designated as Plans 1-4 and were submitted to the Air Control Commission on August 23, 1972 (see attached). Following is a review of emission data in these plans.

Plan 1 - Design and install new dust collecting systems on lime kilns discharges and conveyors.

Process weight	1650 tons/day
Particulate emissions allowed	47 lbs/hour
Estimated emissions	260 lbs/hour
Expected emissions after installation of planned equipment -	
	30 lbs/hour

Plan 2 - Purchase and install three improved bag dust collector systems to replace present ones in Nos. 1, 3 and 4 elevator towers in soda ash section.

Process weight	6600 tons/day
Particulate emissions allowed	61 lbs/hour
Estimated emissions	600 lbs/hour
Expected emissions after installation of planned equipment -	
	55 lbs/hour

Plan 3 - Purchase and replace four bag dust systems in dense ash operating systems.

Process weight	1800 tons/day
Particulate emission allowed	48 lbs/hour
Estimated emissions	300 lbs/hour
Expected emissions after installation of planned equipment -	
	30 lbs/hour

Plan 4 - Design and install dust collecting systems on soda ash loadings into trucks and rail cars.

Process weight (Light Ash) loading	35 tons/hour
Particulate emissions allowed	42 lbs/hour
Estimated emissions	175 lbs/hour
Design criteria to be satisfied	30 lbs/hour

Process weight (Dense Ash) loading	70 tons/hour
Particulate emissions allowed	47 lbs/hour
Estimated emissions	88 lbs/hour
Design criteria to be satisfied	35 lbs/hour

Section 20.0 - Incinerator Standards

Question 1 through 4 under incinerator compliance schedule guidelines are not applicable as refuse is used for land fill.

Section 21.0 - Fuel Burning Equipment Standards

This item is not applicable as natural gas is used for steam and power generation.

Section 22.0 - Volatile Organic Compound Control

A supplemental schedule will be submitted based on federal approval of state regulations, as per guideline instructions.

Section 24.0 - Sulfur Dioxide Control

Sulfur dioxide from combustion of natural gas at Baton Rouge North Works and ethane gas at our brine wells near Plaquemine, Louisiana are in compliance.

Both natural gas and ethane contain less than 1 ppm sulfur. The resulting combustion products are within state standards at the property lines.

Section 25.0 - Carbon Monoxide Control

Carbon monoxide from vertical kiln operations. In compliance based on being an existing operation and classified as a priority III region.

Section 26.0 - Nitric Acid Industry Standards

Not applicable industry.

III. AMBIENT AIR STANDARDS

Section 9.0 - Suspended Particulate Level Control and

Section 10.0 - Dustfall Level Control

In reference to both of the above sections, as previously indicated, our problem area is fugitive dust. These fugitive dusts, soda ash and limestone, are relatively large, heavy particulate which settle rapidly after becoming airborne. Except for areas adjacent to the specific

operation our dust fallout data indicates compliance. However, in areas where compliance is not met, our original submitted compliance schedule should result in a reduction of particulate to meet state ambient standards.

Section 11.0 - Outdoor Burning Standards
Section 12.0 - Sulfur Dioxide Level Control
Section 13.0 - Carbon Monoxide Level Control
Section 16.0 - Nitrogen Oxide Level Control

These above parameters (Sections 11.0, 12.0, 13.0 and 16.0) are in compliance or are not applicable as reported in the emission standards section.

Section 14.0 - Hydrocarbon Level Control
Section 15.0 - Oxidant Level Control

A supplemental schedule covering Sections 14.0 and 15.0 will be submitted based on Federal approval of state regulations, as per guideline instructions.

IV. INCREMENTS OF PROGRESS

Increments of progress are given in the attachment of the original compliance schedule submitted.

Periodic progress reports will be made to the Technical Secretary on the status of BRNW compliance schedule at six month intervals.