

The Commission, having considered the following Applications for Permit submitted by the following respective firms and having reviewed the staff recommendations and the Summary Reports attached hereto does hereby approve said Applications subject to the conditions contained with the Application, Summary Reports, or amendments thereto, and Subsection 4(d) of the Arkansas Plan of Implementation; provided, however, that the applicant complies with all general terms of the permit and all special terms and conditions to the permit, if any, which are so specified.

APPLICATION FOR PERMIT - PROCESS CONTROL EQUIPMENT

PERMIT NO.	FACILITY & LOCATION	COST
323-A	Big Creek Oil Company Magnolia, Arkansas	\$ 14,000
324-A	Ethyl Corporation Magnolia, Arkansas	\$ 700,000
325-A	Ace Asphalt Company Jonesboro, Arkansas	
326-A	Transvaal, Inc. Jacksonville, Arkansas	\$ 150,000
327-A	American Wheel & Foundry Ashdown, Arkansas	
328-A	Alcoa Bauxite, Arkansas	
144-A (Mod.)	Georgia-Pacific Crossett, Arkansas	
238-A (Mod.)	DeSota, Inc. Fort Smith, Arkansas	\$ 140,000

COMMISSIONERS

APPLICATION FOR PERMIT - INCINERATOR

218-AI (Mod.) City of North Little Rock
North Little Rock, Arkansas

[Handwritten signatures and initials]

Billy Frank
CHAIRMAN

SUBMITTED BY Jarrell E. Southall DATE PASSED 3/26/76

ARKANSAS DEPARTMENT OF
POLLUTION CONTROL AND ECOLOGY

LOCATION - SUBJECT: Air Permits

MINUTE ORDER NO. 76-9

March 26, 1976
PAGE 2 OF 2 PAGES

The Summary Reports, prepared by the staff, are designed to facilitate the administration of the air pollution control program for the State of Arkansas and, otherwise, for the convenience of the Commission and other interested persons. Copies of the Minute Orders, the Permits, and the Summary Reports are to be attached to the Applications for Permit which are on file in the Department's central office. It is further noted that the approvals of these applications are based upon information contained within the Application for Permit - not the Summary Reports. Nevertheless, the applicant is expected to forthwith notify the Department of any discrepancies found between the two documents.

COMMISSIONERS

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Billy Frank
CHAIRMAN

SUBMITTED BY Jarrell E. Southall DATE PASSED 3/26/76

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: BIG CREEK OIL COMPANY
MAGNOLIA, ARKANSAS

CSN: 140041

FIRST SUBMITTAL: 8/14/75 AMENDED: 3/23/76

CASE REFERENCES: _____

SUMMARY:

(See Attachment)

ESTIMATED COST: \$14,000 TOTAL PROJECT: \$461,000

COMMENCEMENT OF INSTALLATION: UPON COMMISSION APPROVAL

COMMENCEMENT OF OPERATION: UPON COMMISSION APPROVAL

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: APPROVAL WITH QUALIFICATION

ASSIGNED PERMIT NUMBER: 323-A

COMMISSION MINUTE ORDER NUMBER: _____

Amine desulfurization is to be employed at a new gas well (Green #1), which well will produce approximately 1000 MCF's/day of natural gas. Approximately 94 lbs/hr of sulfur dioxide will result from flaring amine plant off-gases. Dispersion analysis indicate compliance with Section 8 of the Air Code, based upon design data contained within application.

This well is located in the general vicinity of Dow and Ethyl at Magnolia, in which area flares have created air pollution problems. As a result, the Commission has required that both Dow and Ethyl discontinue flaring in the area. Noting that a permit for a flare at the Green well would create an inconsistency with previous Commission actions, the staff, with some reluctance, recommends approval.

The recommendation for approval is based upon the following considerations:

- (1) Duration of flow through the well is uncertain.
- (2) Compliance with Section 8 is indicated and assured through flare-amine plant operational design.
- (3) Cost of known sulfur removal methods is quite high. Operating cost of sulfur removal system exceeds income to be derived from sale of natural gas.

Recommendation for approval is made with the following qualifications:

- (1) Sulfur dioxide emission shall not exceed 94 lb/hr.
- (2) The applicant submit within one year of this date an approvable application demonstrating means for reducing sulfur emissions to the atmosphere.

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: ETHYL CORPORATION
MAGNOLIA, ARKANSAS

CSN: 140028

FIRST SUBMITTAL: 1/22/76 AMENDED: 3/12/76

CASE REFERENCES: _____

SUMMARY:

(See Attachments)

ESTIMATED COST: \$700,000 TOTAL PROJECT: \$6,900,000

COMMENCEMENT OF INSTALLATION: UPON COMMISSION APPROVAL

COMMENCEMENT OF OPERATION: _____

REVIEWED BY: LEH APPROVED: JES

RECOMMENDATION: APPROVAL

ASSIGNED PERMIT NUMBER: 324-A

COMMISSION MINUTE ORDER NUMBER: _____

Ethyl Corporation proposes to build a new chlorobutyronitrile (CBN) plant at its present location in Magnolia.

Bromine supplied from the present production facility at the plant site, is reacted with hydrogen to form hydrogen bromide (HBr). In another reaction, allyl chloride is mixed with a catalyst which is then sent to the hydrobromination area. In the hydrobromination area hydrogen bromide reacts with the allyl chloride-catalyst mixture to form trimethylene chlorobromide (TMCB). The TMCB is purified to remove waste from the desired product, and is then sent to the CBN production area for reaction to the final product.

Ethyl plans to control air emissions using two scrubbers denoted as C-1 and C-2, and an organic waste incinerator followed by two scrubbers, a water scrubber and a caustic scrubber, denoted as C-3.

Under normal operating conditions, there will not be any emissions from the reaction of bromine and hydrogen. During start-up conditions, HBr will be controlled by scrubbing the gas with water or water and caustic through either scrubber C-2 or C-3.

In the catalyst addition area, allyl chloride is scrubbed through an 18-foot long packed tower, C-1, to reduce emissions to .1 lb/hr. TMCB, the scrubbing liquid for C-1, is emitted at a rate of 2.4 lb/hr. In the hydrobromination area, the vapor stream is scrubbed to remove HBr through a packed tower, C-2. Expected emission from this scrubber is .8 lb/hr of hydrogen.

Organic waste from the purification of TMCB is sent to an incinerator in which the vapors are thermally destroyed at a temperature of 2900°F. The combustion gases are then scrubbed with water and caustic to remove hydrogen halides and any trace amounts of halogens. Samples of the organic wastes were sent to the manufacturer of the incinerator to determine proper operating conditions.

Several measures are taken to insure minimum emission of allyl chloride to the atmosphere from pollution control equipment C-1. Low temperatures and high pressure favor low emissions of allyl chloride. A high temperature alarm on the overhead air stream will sound if any upset in column temperature occurs. The column temperatures, pressure, and absorbent flow rate will be monitored in the control room to insure that the equipment is operating properly.

For C-2, the vapor will consist of a normal vent stream from the intermediate process reactor and an intermittent vent stream from the HBr area. The temperature in the water scrubber is measured and monitored in the control room. Periodic samples of the recirculating solution will be taken to determine the acid content. Proper levels of these two process variables will insure efficient operation of the scrubbing system.

To insure that the waste burns completely in the incinerator, emphasis is placed on keeping air and waste in proper proportions and on keeping the firebox at the proper temperature. An auxiliary natural gas burner is used to maintain an operating temperature of 2900°F at all times. A temperature controller on the firebox controls the natural gas flow, while the natural gas and combustion air supplied to the auxiliary burner are maintained in the proper proportions by a ratioing device monitoring the amount of waste liquid fed into the burner.

System safeguards include high temperature switches, low flow switches on the burner atomization stream, natural gas feed, and the water scrubber recirculation line. Each of these switches will automatically activate the unit shut down system in the event of inefficient or potentially dangerous operation. Activation of the low pressure switch in the recirculation line to the water scrubber, which indicates loss of recirculation water, initiates the emergency water supply to assure adequate cooling in the scrubber. System check points include a sample point on the caustic scrubber to check the composition of the stack gas, and a pH analyzer on the caustic scrubber recirculation line.

Sampling of pollution control equipment C-1, C-2, and C-3 shall be conducted during early operation of this facility.

A batch reactor will vent intermittently TMCB at an average emission rate of .094 lb/hr. Steam jet exhausts will also vent the following in small quantities (each less than .3 lb/hr) - TMCB, allyl chloride, 1,2- chlorobromopropane, dichloropropane, isopropyl chloride.

Six stationary tanks will be used for storage. Four of these will store CBN and will limit the emission of this product through conservation vents. Another tank will store CBN and TMCB together while another will store organic waste which is to be incinerated in C-3. CBN will be shipped by tank car. Venting from any of these source points will be intermittent with maximum emission occurring during filling operations. Emission estimates based upon evaporative losses during transfer of chemicals to the tanks show a total emission of .22 lb/hr of TMCB and CBN from one tank and an emission rate of .088 lb/hr or less from each of the other tank vents.

Approval is based upon the following condition:

A permit application will be submitted within three months to reduce the emission of ethylene from the existing EDB plant.

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: ACE ASPHALT COMPANY
JONESBORO, ARKANSAS

CSN: 160098

FIRST SUBMITTAL: 3/8/76 AMENDED: _____

CASE REFERENCES: _____

SUMMARY:

Ace Asphalt proposes to install a new asphalt batch plant in Jonesboro of a design which has not been installed in Arkansas. The aggregate is introduced into the upper end of the rotary dryer and the asphalt is introduced into the dryer itself after the aggregate has passed the burner zone. The asphalt and aggregate then mix thoroughly enough to capture the fines such that additional control equipment is not required. Test data submitted with the application predicts that the emission rate will be less than 2 pounds per hour.

This is an affected facility and therefore must comply with all requirements of the Federal New Source Performance Standards including a performance test to be performed within sixty days of achieving the maximum production rate but not later than 180 days after start-up.

ESTIMATED COST: _____ TOTAL PROJECT: \$150,000

COMMENCEMENT OF INSTALLATION: UPON APPROVAL

COMMENCEMENT OF OPERATION: 6/1/76

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: APPROVAL

ASSIGNED PERMIT NUMBER: 325-A

COMMISSION MINUTE ORDER NUMBER: _____

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: Transvaal, Inc.

Jacksonville, Arkansas

CSN: 600028

FIRST SUBMITTAL: March 16, 1976 AMENDED: _____

CASE REFERENCES: _____

SUMMARY: (See Attachment)

ESTIMATED COST: \$150,000 TOTAL PROJECT: 3,000,000

COMMENCEMENT OF INSTALLATION: April, 1976

COMMENCEMENT OF OPERATION: March, 1977

REVIEWED BY: TDR APPROVED: JES

RECOMMENDATION: Approval with Qualifications

ASSIGNED PERMIT NUMBER: 326-A

COMMISSION MINUTE ORDER NUMBER: _____

Transvaal, Inc. at Jacksonville proposes to replace their present 2,4-Dichlorophenol process with a new, more efficient one. Dichlorophenol is an intermediate used in the production of 2,4-D, a herbicide. A portion of the Dichlorophenol is to be used internally for herbicide manufacture, and a portion will be sold to other manufacturing firms. All reactors, storage vessels and tanks are to be vented to a caustic venturijet scrubber. Proposed emissions are 0.84 lb/hr of gaseous pollutants, chiefly sulfur dioxide and chlorine. Transvaal proposes that the new process will remedy the longstanding problem of Dichlorophenol related odors from the plant.

Transvaal proposes a steam turbine to automatically power the control equipment in the event of an electrical failure.

Waste material from a purification still will be either incinerated at the plant site or shipped for disposal by a commercial waste incinerator.

The application is submitted under Section 3(c) of the Arkansas Air Code as a confidential process, and Transvaal has complied with the requirements of that Section.

Qualifications 1) Upon commencement of operation of the permitted equipment, the scrubber stack and ambient air at the plant boundaries will be sampled daily for the pollutants listed and results reported to the Department weekly until the effectiveness of the control equipment is demonstrated to the Department. Further controls shall be required as indicated by these analyses, or as the Commission finds necessary.

2) Analytical procedures for item number one above for the pollutants listed will have the Department's approval before operation is begun.

3) At the end of the daily testing period, the scrubber stack and ambient air will be sampled monthly and reported quarterly to the Department.

4) If, an incinerator is to be used on site, Transvaal will apply for and obtain a separate permit for the incinerator prior to construction of said incinerator.

5) The total emissions from the permitted facility will not exceed 0.84 lb/hr.

6) Final design specifications and operating parameters for the venturi jet scrubber shall be submitted to the Department for review before the unit is purchased.

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: American Wheel and Foundry, Inc.
Ashdown, Arkansas

CSN: _____

FIRST SUBMITTAL: 3-25-76 AMENDED: _____

CASE REFERENCES: _____

SUMMARY: American Wheel and Foundry, Inc. proposes the installation of a secondary aluminum foundry at Ashdown. The capacity of the melting furnace is to be 40,000 pounds. Charging of only clean scrap and ingots is proposed. The fluxing is to be done with a mixture of nitrogen and chlorine gases (10 to 30 percent chlorine). The emissions are to be tested for chlorine and particulate during the first three months of operation.

Qualification: If the results of the sampling program indicate violation of Sections 4 or 7 of the Air Code, applicant will submit a permit application for the required control equipment within five months of commencement of operation.

ESTIMATED COST: _____ TOTAL PROJECT: \$300,000

COMMENCEMENT OF INSTALLATION: Upon Approval

COMMENCEMENT OF OPERATION: 5-76

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: Approval

ASSIGNED PERMIT NUMBER: 327-A

COMMISSION MINUTE ORDER NUMBER: _____

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: ALCOA

Bauxite

CSN: 630010

FIRST SUBMITTAL: 3-24-76 AMENDED: _____

CASE REFERENCES: _____

SUMMARY:

ALCOA is installing a boiler to produce 222,000 pounds per hour of steam. Natural gas is to be the primary fuel with fuel oil as the secondary fuel. ALCOA proposes to use only natural gas to fuel the boiler until a system for storage and handling of low sulfur fuel oil or an SO₂ scrubber has been installed. Since the design capacity of the boiler is 305 million BTU per hour heat input, it is an affected facility under the Federal New Source Performance Standards (NSPS). The maximum allowable particulate emission rate under NSPS for this boiler is 30.5 pounds per hour when burning fuel oil.

Prior to the operation of the boiler on fuel oil, ALCOA is to complete the installation of one electrostatic precipitator on a least one converter and dryer in Building 426 (Tabular Process). The effect of the increased emissions from the boiler and the decreased emissions of the controlled converter/dryer were evaluated by exercising the atmospheric dispersion model employed in the State Implementation Plan. Comparing the effect at the point of maximum concentration (545.0 km, 3825.0 km), it is noted that the contribution from the boiler at that point is 0.111 µg/m³ and the reduction from the controlled converter/dryer is 0.494 µg/m³.

(Continued)

ESTIMATED COST: _____ TOTAL PROJECT: \$4,250,000

COMMENCEMENT OF INSTALLATION: Upon Commission Approval

COMMENCEMENT OF OPERATION: Upon Commission Approval

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: Approval with Qualifications

ASSIGNED PERMIT NUMBER: 328-A

COMMISSION MINUTE ORDER NUMBER: _____

or an overall reduction of $0.383 \mu\text{g}/\text{m}^3$. Greater reductions are anticipated as other dryer/converters are controlled under the existing compliance schedule for ALCOA's Tabular emissions for maintenance of the National Standards.

Approval is recommended with the following qualifications:

- (1) Installation and operation of boiler be conducted in full compliance with applicable requirements of New Source Performance Standards.
- (2) Prior to operation of the boiler on fuel oil, installation of electrostatic precipitator as described above shall be completed and emissions therefrom sampled in accordance with approved procedures.
- (3) Operation of the boiler on fuel oil shall not be permitted unless the measured emissions from the controlled converter/dryer yields a net reduction at least equal to $0.383 \mu\text{g}/\text{m}^3$ at the point of maximum concentration.

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: Georgia-Pacific

Crossett, Arkansas

CSN: 020013

FIRST SUBMITTAL: 2-4-76 AMENDED: _____

CASE REFERENCES: _____

SUMMARY: (See Attachment)

ESTIMATED COST: _____ TOTAL PROJECT: _____

COMMENCEMENT OF INSTALLATION: _____

COMMENCEMENT OF OPERATION: _____

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: Approval

ASSIGNED PERMIT NUMBER: Modification of No. 144-A

COMMISSION MINUTE ORDER NUMBER: _____

Permit No. 144-A was issued to Georgia-Pacific on April 3, 1973, for the installation of power boiler No. 9-A. The boiler was designed to produce 400,000 pounds per hour of steam from the combustion of wood waste and 200,000 pounds per hour of steam from fuel oil. A multicone and venturi scrubber are used for particulate control. When the scrubber was tested, it was found to remove 87% of the SO₂ from the flue gas.

Georgia-Pacific has transferred the major steam load to 9-A, resulting in the paper mills production being dependent upon 9-A. Intermittent problems with the wood waste transfer equipment has occurred.

Therefore, Georgia-Pacific is proposing to modify Permit No. 144-A such that up to 375,000 pounds of steam per hour can be generated from the consumption of fuel oil. This modification will mean that boiler No. 9-A will be an affected facility under the Federal New Source Performance Standards, and must comply with these regulations.

Increased consumption of fuel oil to generate 375,000 lbs/hr steam will result in decreased particulate emissions but an increased emission of sulfur oxides. Georgia-Pacific proposes that the efficiency of the scrubber for sulfur oxide removal will yield emissions which conform to the New Source Performance Standards.

Approval of modification of Permit No. 144-A is based upon full compliance with New Source Performance Standards.

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: DeSoto, Inc. - South Plant
Ft. Smith, Arkansas

CSN: 660210

FIRST SUBMITTAL: _____ AMENDED: _____

CASE REFERENCES: _____

SUMMARY: Permit No. 238-A was issued on July 26, 1974, to Desoto for the installation of three bag collectors to control emissions from ten cyclones handling waste generated by wood working equipment. The waste is being transferred to cyclone collectors and burned in a conical burner. Desoto proposes to discontinue the use of these cyclones and conical burner by the installation of additional wood waste storage, a new baghouse, and the relocation of one of the existing baghouses. Desoto is also proposing the installation of additional wood working equipment and the rerouting of some of the dust collector lines. This will result in two existing cyclones, which are handling heavy chips, being vented to the atmosphere.

ESTIMATED COST: \$140,000 TOTAL PROJECT: \$185,000

COMMENCEMENT OF INSTALLATION: Upon Approval

COMMENCEMENT OF OPERATION: _____

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: Approval

ASSIGNED PERMIT NUMBER: Modification of 238-A

COMMISSION MINUTE ORDER NUMBER: _____

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
D.A.P.C.

SUMMARY REPORT RELATIVE TO PERMIT APPLICATION

SUBMITTED BY: City of North Little Rock
Alma and Atkinson Streets, North Little Rock, Arkansas

CSN: _____

FIRST SUBMITTAL: Feb. 18, 1975 AMENDED: March 25, 1976

CASE REFERENCES: _____

SUMMARY: The city of North Little Rock has requested Permit No. 218-AI be amended to reflect modifications in equipment as described in the city's application dated February 28, 1975. These changes and modifications reflect improved technology and increased capacity to be incorporated at the city's incinerator/heat recovery facility proposed to be constructed at Alma & Atkinson Street.

The city proposes to increase the disposal capacity from 65 tons/day to 100 tons/day. Maximum allowable emissions from any of the four incinerators is 0.08 grains/standard cubic foot adjusted to 12% carbon dioxide.

Emission resulting from the increased capacity will not interfere with attainment and maintenance of the national ambient air quality standards. In fact, the proposed emissions are substantially less than the emissions allocated to the facility in the dispersion model used to demonstrate the adequacy of the State Implementation Plan.

ESTIMATED COST: _____ TOTAL PROJECT: Approximately \$1,000,000

COMMENCEMENT OF INSTALLATION: July 1, 1976

COMMENCEMENT OF OPERATION: November 15, 1976

REVIEWED BY: CDH APPROVED: JES

RECOMMENDATION: _____

ASSIGNED PERMIT NUMBER: Modification of 218-AI

COMMISSION MINUTE ORDER NUMBER: _____