

ALABAMA DEPARTMENT
OF ENVIRONMENTAL MANAGEMENT

IN THE MATTER OF

JEFFERSON COUNTY COMMISSION
NPDES PERMIT NO. AL0022942
NPDES PERMIT NO. AL0023027

ORDER NO. 85-044-WP

FINDINGS OF FACT

Pursuant to the provisions of the Alabama Environmental Management Act, Code of Alabama 1975, §§ 22-22A-1 to 22-22A-15 (1984) and the Alabama Water Pollution Control Act, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (1984), the Alabama Department of Environmental Management (hereinafter, "the Department") makes the following FINDINGS OF FACT:

PATTON CREEK WASTEWATER TREATMENT PLANT

1. The Jefferson County Commission (hereinafter, "the Permittee") operates a waste treatment facility known as the Patton Creek Wastewater Treatment Plant which discharges pollutants from a point source into Patton Creek, a water of the State and tributary of the Cahaba River.

2. The Permittee has a valid NPDES Permit (Number AL0022942) which authorizes the discharge of pollutants into Patton Creek from such point source, designated therein as outfall number 001, subject to certain limitations, terms and conditions.

3. Pursuant to Code of Alabama 1975, § 22-22-9 (1984), the Department established standards of water quality applicable to Patton Creek to assure that such waters would be suitable for agricultural irrigation, livestock watering, industrial cooling and process water supplies. These standards require, among other things, that dissolved oxygen concentrations in such waters shall not, as a result of discharges to such waters, be less than 3.0 mg/l, provided, however, that if the dissolved oxygen concentration is depressed below 3.0 mg/l solely as a result of natural phenomena or conditions, such lower concentration shall then be the minimum standard which must be achieved and maintained in such waters.

4. Discharge Monitoring Reports submitted to the Department by the Permittee for October 1983 through September 1984 indicate that the Permittee has discharged pollutants from such point source into Patton Creek in violation of the monthly average limitations for biochemical oxygen demand and ammonia as nitrogen established in NPDES Permit Number AL00229242.

5. During water quality surveys conducted by the Department on six days during August and October 1983, dissolved oxygen concentrations in Patton Creek ranged from a minimum of 0.9 mg/l to a maximum of 3.6 mg/l. The discharge of pollutants from the Permittee's Patton Creek Wastewater Treatment Plant has caused or contributed to the depressed dissolved oxygen concentrations in Patton Creek.

6. The Permittee cannot comply with the limitations on the discharge of pollutants from such point source established in NPDES Permit Number AL0022942 without the construction of new or additional treatment works or modification of existing treatment works. The Permittee may elect to achieve compliance with the discharge limitations established in NPDES Permit Number AL0022942 by terminating the discharge into Patton Creek.

CAHABA RIVER WASTEWATER TREATMENT PLANT

7. The Permittee operates a waste treatment facility known as the Cahaba River Wastewater Treatment Plant which discharges pollutants from a point source into the Cahaba River, a water of the State.

8. The Permittee was issued a valid NPDES Permit (Number AL0023027) which authorized the discharge of pollutants into the Cahaba River from such point source, designated therein as outfall number 001, subject to certain limitations, terms and conditions.

9. Pursuant to Code of Alabama 1975, § 22-22-9 (1984), the Department established standards of water quality applicable to the Cahaba River from the junction of Lower Little Cahaba River to the dam near U.S. Highway 280 to assure that such waters would be suitable for fish, aquatic life and wildlife propagation. These standards require, among other things, that dissolved oxygen concentrations in such waters shall not, as a result of

discharges to such waters, be less than 5.0 mg/l, provided, however, that if the dissolved oxygen concentration is depressed below 5.0 mg/l solely as a result of natural phenomena or conditions, such lower concentration shall then be the minimum standard which must be achieved and maintained in such waters.

10. Computer steady-state modeling predicts that the discharges from the Cahaba River Wastewater Treatment Plant will cause or contribute to conditions in the Cahaba River in contravention of water quality standards, specifically dissolved oxygen levels less than 5.0 mg/l during periods of low flow conditions. During water quality surveys conducted by the Department during August and October 1983, dissolved oxygen levels in the Cahaba River below the Cahaba River Wastewater Treatment Plant fell below 5.0 mg/l. The discharges from the Cahaba River Wastewater Treatment Plant have caused or contributed to conditions in the Cahaba River in contravention of water quality standards, specifically dissolved oxygen less than 5.0 mg/l.

11. The Permittee has applied to the Department for issuance of a new NPDES permit for the discharge from the Cahaba River Wastewater Treatment Plant. A NPDES permit must be consistent with applicable water quality standards. Where discharge limitations necessary to attain and maintain water quality standards are not technologically feasible, a permit must specify alternative limitations to assure attainment and

maintenance of water quality standards. Such limitations may include transportation of wastes to other less affected waters, limitations on periods of authorized discharge or other measures.

12. Rather than issue a NPDES permit with alternative limitations at this time, the Department has elected to defer issuance of the permit until more extensive water quality modeling can be performed to better determine if a 5.0 mg/l dissolved oxygen concentration can be attained and maintained in the Cahaba River during periods of low flow.

TREATMENT PLANT CONSOLIDATION

13. As a means of achieving compliance with NPDES Permit Number AL0022942, the Permittee has proposed to terminate the discharge from the Patton Creek Wastewater Treatment Plant and transfer all wastes entering such plant to the Cahaba River Wastewater Treatment Plant for treatment and ultimate discharge into the Cahaba River.

14. Such transfer would effect a net reduction in the ultimate oxygen demand on the Cahaba River and Patton Creek and reduce the frequency and severity of water quality standard violations in the Cahaba River and Patton Creek, but may not eliminate water quality standard violations caused by or contributed to by the discharge from the Cahaba River Wastewater Treatment Plant. Until more extensive water quality modeling can be performed and a new NPDES permit can be developed and issued

for the discharge from the Cahaba River Wastewater Treatment Plant, the transfer of wastes from the Patton Creek Wastewater Treatment Plant to the Cahaba River Wastewater Treatment Plant would provide interim benefit to the water quality of the Cahaba River.

15. The Permittee cannot comply with the limitations on the discharge of pollutants from outfall number 001 at the Cahaba River Wastewater Treatment Plant established in paragraph J of this Order if it transfers the wastes from the Patton Creek Wastewater Treatment Plant to the Cahaba River Wastewater Treatment Plant without the construction of new or additional treatment works or modification of existing treatment works.

ORDER

Based upon the foregoing FINDINGS OF FACT and pursuant to Code of Alabama 1975, §§ 22-22A-5(10), 22-22-9(c), 22-22-9(j) and 22-22-9(1) (1984), it is hereby ORDERED:

PATTON CREEK WASTEWATER TREATMENT PLANT

A. That, except as provided in any bypass or upset provision in NPDES Permit Number AL0022942, commencing immediately after receiving notice of this Order and continuing through April 29, 1988 the Permittee shall not discharge pollutants from outfall number 001 at the Patton Creek Wastewater Treatment Plant in excess of the following discharge limitations:

DISCHARGE LIMITATIONS

JULY THROUGH DECEMBER

<u>Pollutant Parameter</u>	<u>Monthly Average Kg/day (lbs/day)</u>	<u>Weekly Average Kg/day (lbs/day)</u>	<u>Other Units (Specify)</u>	
			<u>Monthly Average</u>	<u>Weekly Average</u>
Biochemical Oxygen Demand (5 day)	417(917)	625(1376)	25 mg/l	37.5 mg/l
Suspended Solids	500(1101)	750(1651)	30 mg/l	45 mg/l
Ammonia as Nitrogen	333(734)	500(1101)	20 mg/l	30 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				5.0 mg/l -

JANUARY THROUGH JUNE

Biochemical Oxygen Demand (5 day)	584(1284)	876(1927)	35 mg/l	52.5 mg/l
Suspended Solids	500(1101)	750(1651)	30 mg/l	45 mg/l
Ammonia as Nitrogen	333(734)	500(1101)	20 mg/l	30 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				5.0 mg/l

B. That, commencing immediately after receiving notice of this Order, the Permittee shall comply with all limitations, terms and conditions of NPDES Permit Number AL0022942 to the extent not inconsistent with this Order.

C. That, commencing immediately after receiving notice of this Order, the Permittee shall monitor any bypass which occurs at the Patton Creek Wastewater Treatment Plant. Grab samples shall be collected daily and analyzed for biochemical oxygen demand (5 day), suspended solids and ammonia as nitrogen. In

addition, flow shall be accurately monitored. The results of bypass monitoring shall be reported to the Department in accordance with the provisions of NPDES Permit Number AL0022942 for submission of discharge monitoring reports.

D. That the Permittee shall prepare and submit to the Department no later than May 1, 1985, a plan describing in general terms the new or additional treatment works or modification of existing treatment works necessary for the Permittee to achieve compliance with NPDES Permit Number AL0022942. The plan shall specify dates by which final design drawings and specifications for each segment of the new or additional treatment works or modification of existing treatment works will be submitted to the Department, dates by which contracts will be executed for construction of such treatment works and dates by which construction of such treatment works will be initiated. Such plans, specifications and contracts may provide for achieving compliance by termination of the discharge into Patton Creek.

E. That the Permittee shall complete construction of new or additional treatment works or complete modification of existing treatment works necessary for the Permittee to achieve compliance with the discharge limitations in NPDES Permit Number AL0022942 no later than October 31, 1987.

F. That the Permittee shall comply with all discharge limitations contained in NPDES Permit Number AL0022942 not later than April 30, 1988.

CAHABA RIVER WASTEWATER TREATMENT PLANT

G. That, except as provided in paragraph J hereof, commencing immediately after receiving notice of this Order and continuing until a new NPDES permit is issued to the Permittee or such permit is denied, the Permittee shall not discharge pollutants from outfall number 001 at the Cahaba River Wastewater Treatment Plant in excess of the following discharge limitations:

DISCHARGE LIMITATIONS

MAY THROUGH NOVEMBER

<u>Pollutant Parameter</u>	<u>Monthly Average Kg/day (lbs/day)</u>	<u>Weekly Average Kg/day (lbs/day)</u>	<u>Other Units (Specify): Monthly Average</u>	<u>Weekly Average</u>
Biochemical Oxygen Demand (5 day)	83(167)	114(250)	5 mg/l	7.5 mg/l
Suspended Solids	455(1001)	682(1501)	30 mg/l	45 mg/l
Ammonia as Nitrogen	15(33)	23(50)	1 mg/l	1.5 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				7.0 mg/l

DECEMBER THROUGH FEBRUARY

Biochemical Oxygen Demand (5 day)	121(267)	182(400)	8 mg/l	12 mg/l
Suspended Solids	455(1001)	682(1501)	30 mg/l	45 mg/l
Ammonia as Nitrogen	30(67)	45(100)	2 mg/l	3 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				7.0 mg/l

DISCHARGE LIMITATIONS

MARCH & APRIL

<u>Pollutant Parameter</u>	Monthly Average Kg/day (lbs/day)	Weekly Average Kg/day (lbs/day)	Other Units (Specify)	
			Monthly Average	Weekly Average
Biochemical Oxygen Demand (5 day)	83(167)	114(250)	5 mg/l	7.5 mg/l
Suspended Solids	455(1001)	682(1501)	30 mg/l	45 mg/l
Ammonia as Nitrogen	30(67)	45(100)	2 mg/l	3 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				7.0 mg/l-

H. That commencing immediately after receiving notice of this Order, the Permittee shall comply with all limitations, terms and conditions of NPDES Number AL0023027 to the extent not inconsistent with this Order.

I. That not later than 180 days after receiving notice of this Order, the Permittee shall submit to the Department a draft plan of study for a comprehensive water quality survey and mathematical modeling study of that portion of the Cahaba River necessary to evaluate the water quality impacts of present and future discharges from the Cahaba River Wastewater Treatment Plant. The draft plan of study shall address (1) selection of an appropriate mathematical model; (2) measurement of stream flow,

determination of times of travel and collection of other pertinent field data; (3) calibration and verification of the selected model; (4) use of the calibrated, verified model to predict the water quality response of the river under critical (7-day, 10-year low flow) conditions; (5) a schedule for initiating and completing tasks described in the draft plan of study; and (6) the names and qualifications of persons who prepared the draft plan of study and who will be employed to carry out such study. Within 45 days after receiving the Department's comments on the draft plan of study, the Permittee shall submit a final plan of study which addresses the Department's comments. The draft and final plan of study, as well as the comprehensive water quality survey and mathematical modeling study, shall be prepared by persons qualified by experience and training in water quality modeling.

TREATMENT PLANT CONSOLIDATION

J. That if and when the Permittee transfers all wastes from the Patton Creek Wastewater Treatment Plant to the Cahaba River Wastewater Treatment Plant and until a new NPDES permit is issued to the Permittee or such permit is denied, the Permittee shall not discharge pollutants from outfall number 001 at the Cahaba River Wastewater Treatment Plant in excess of the following discharge limitations:

DISCHARGE LIMITATIONS

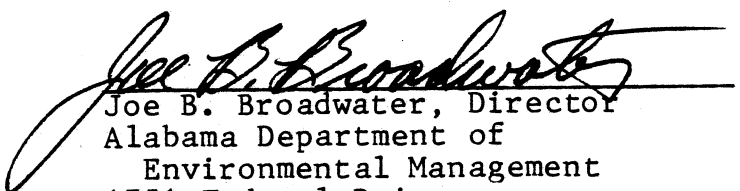
Pollutant Parameter	Monthly Average Kg/day (lbs/day)	Weekly Average Kg/day (lbs/day)	Other Units (Specify)	
			Monthly Average	Weekly Average
Biochemical Oxygen Demand (5 day)	227(500)	341(751)	5.0 mg/l	7.5 mg/l
Suspended Solids	1365(3002)	2047(4504)	30.0 mg/l	45.0 mg/l
Total Kjeldahl Nitrogen	91(200)	136(300)	2.0 mg/l	3.0 mg/l
				<u>Daily Minimum</u>
Dissolved Oxygen				7.0 mg/l

K. That, if the Permittee elects to transfer all wastes from the Patton Creek Wastewater Treatment Plant to the Cahaba River Wastewater Treatment Plant, the Permittee shall prepare and submit to the Department no later than May 1, 1985, a plan describing in general terms the new or additional treatment works or modification of existing treatment works necessary for the Permittee to achieve compliance with the discharge limitations established in paragraph J hereof. The plan shall specify dates by which final design drawings and specifications for each segment of the new or additional treatment works or modification of existing treatment works will be submitted to the Department, dates by which contracts will be executed for construction of such treatment works and dates by which construction of such treatment works will be initiated.

L. That, if the Permittee elects to transfer all wastes from the Patton Creek Wastewater Treatment Plant to the Cahaba River Wastewater Treatment Plant, the Permittee shall complete construction of new or additional treatment works or complete modification of existing treatment works necessary for the Permittee to achieve compliance with the discharge limitations established in paragraph J hereof no later than October 31, 1987.

M. That the provisions of any orders previously issued to the Permittee by the Department or the Alabama Water Improvement Commission which are applicable to discharges from the Patton Creek Wastewater Treatment Plant or the Cahaba River Wastewater Treatment Plant and which are inconsistent with the provisions contained herein are hereby revoked.

ORDERED and ISSUED this 14 day of March 1985.



Joe B. Broadwater, Director
Alabama Department of
Environmental Management
1751 Federal Drive
Montgomery, Alabama 36130
(205) 271-7700

CERTIFICATE OF SERVICE

I hereby certify that I have served Order No. 85-044-WP upon the Jefferson County Commission by sending the same, postage paid, through the United States Mail, as Certified Mail No. 9714800, with instructions to forward and return receipt requested to:

Chriss H. Doss, President
Jefferson County Commission
202-A Courthouse
Birmingham, Alabama 35263-0055

Done this 7th day of March 1985.


David A. Ludder

P15 9714800
DAL/rds 85-044-WP 3/7/85
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		
Chriss H. Doss, President		
STREET AND NO.		
Jefferson County Commis:		
202-A Courthouse		
Birmingham, Alabama 35263-0055		
POSTAGE \$		
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	\$
	SPECIAL DELIVERY	\$
	RESTRICTED DELIVERY	\$
	SHOW TO WHOM AND DATE DELIVERED	\$
	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	\$
	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	\$
RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	\$
TOTAL POSTAGE AND FEES \$		
POSTMARK OR DATE		

PS Form 3800, Apr. 1976.

DAL/rds 85-044-WP 3/7/85 Final

1. ☒ **REGISTERED MAIL** Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

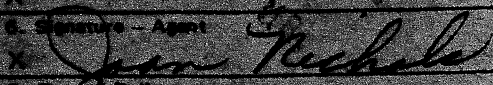
3. Article Addressed to:


Chriss H. Doss, President
Jefferson County Commission
202-A Courthouse
Birmingham, Alabama 35263-0055

4. Type of Service: ☒ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail

Article Number: 9714800

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee: 

6. Signature - Agent: 

7. Date of Delivery: 3-11-85

8. Addressee's Address (ONLY if requested and fee paid)