

FILE

SEGMENT COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-3-R-9

Fisheries Investigations and Surveys of the Waters of Region 5-B.

Job No. C-1 Pollution Studies

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ABSTRACT

The nature and danger to aquatic life of the effluent from E. L. Bruce Company, wood products plant at Center, Texas was jointly investigated by field personnel of the Texas Game and Fish Commission and the State Health Department. A surveillance was maintained on a strong acid waste being discharged from Atlas Chemical Industries, Inc., Darco Division plant at Marshall, Texas. One conference was held with Atlas Chemical officials at which time the Texas Game and Fish Commission and the State Health Department were assured that corrective measures were being planned.

SEGMENT COMPLETION REPORT

State of Texas

Project No. F-3-R-9

Name: Fisheries Investigations and Surveys of
the Waters of Region 5-B.

Job No. C-1

Title: Pollution Studies

Period covered: February 1, 1961 - January 31, 1962.

OBJECTIVES:

To determine the source and nature of natural or man made pollutants which affect the fish population.

PROCEDURE:

When evidence of pollution was found or reported, a search was made to find the source and nature of the pollution.

FINDINGS:

Two pollution problems were encountered during the segment, both resulting from industrial effluents.

The E. L. Bruce Company of Center, Shelby County, requested the assistance of the Game and Fish Commission with their problem of disposing of waste water. This company manufactures plywood veneers and laminated wood floor tile from hardwoods and use water for steaming logs and for holding their stockpile of logs to prevent rotting. Periodically, they must release this water to recover logs from the pits in which they are stored and also to flush out the steam vats in which logs are steamed before going into the production line.

The company officials were advised on December 5, 1961, that while the Game and Fish Commission was not in a position to offer a solution to their problem, that we could determine if their waste water was lethal to fish or not. They were also advised that the State Health Department should be contacted as they were more specialized to handle industrial waste studies.

On December 19, 1961, preliminary field tests were made by Mr. C. C. Reigal, Engineer Assistant, State Health Department. These tests included inspection and water analysis. At the same time, a Game and Fish Commission crew took seining collections from approximately the same location as the water samples were taken. Table 1 is the location of these water samples and Table 2 is the results of the water analysis. Table 3 is the seining results. It should be pointed out that seining conditions were very poor.

Table 1.

LOCATION OF HEALTH DEPARTMENT WATER SAMPLES

Station No. 9	Cotton Ford Road
10	Junction of Prairie Creek and Drainage ditch east of plant.
11	Entry to holding pit #1 (raw waste storage)
12	Pit #2 (secondary raw waste)
14	Pit #3 (log storage)
15	Pit #4 (log storage)
16	County road above plant crossing Prairie Creek
17	Ditch between pits 1 and 2, intermittent discharge of waste.

Table 2.

RESULTS OF HEALTH DEPARTMENT WATER SAMPLES

Station No.	pH	Chlorides P.P.M.	Sulphates P.P.M.	Chlorine Demand P.P.M.	Dissolved Oxygen P.P.M.	BOD P.P.M.	Alkalinity P.P.M.
9	6.7	34	74	5.0	3.0	3.0	28
10	6.7	28	74	5.0	0.6	15.0	32
11	4.5	3	20	7360.0	0.0	2060.0	0
12	6.4	4	82	155.0	0.0	150.0	222
14	7.2	37	30	11.5	3.0	1.5	192
15	8.6	345	290	6.0	8.5	10.5	620
16	6.3	40	28	2.5	8.4	-	12
17	6.8	28	28	20.0	0.0	6.0	88

Table 3

SEINING RESULTS, 15 FOOT BAG SEINE

Station #1	Drainage ditch coming from between pits 1 and 2, below Health Department Collection #17.	
	Golden shiner	1
	<u>Notemigonus crysoleucas</u>	
	Mosquitofish	1
	<u>Gambusia affinis</u>	
Station #2	Health Department Collection #10	
	Mosquitofish	
	<u>Gambusia affinis</u>	4
	Crayfish	1
Station #3	Cotton Ford Road Crossing Prairie Creek	
	Ribbon shiner	
	<u>Notropis fumeus</u>	1

The second pollution problem was discovered prior to the present segment but surveillance work was done during this segment to keep data current on abatement plans, if any, and on the nature and condition of the effluent. The Atlas Chemical Company's Darco Division, located near Marshall, Texas, manufactures activated carbon from lignite. Strong acids are used in the process and the waste is discharged into Potters Creek, a small tributary of the Sabine River. This results in a very low pH in Potters Creek although very little, if any, change can be detected in the Sabine River. Water analyses during the period indicate that the acid condition still exists. A conference was held which included officials of the plant, field personnel of the Texas Game and Fish Commission and the State Health Department. At this conference, Atlas Chemical Company officials gave assurance that research work was being conducted to find a solution to the problem. It was also stated that this work would be accelerated.

RECOMMENDATIONS:

It is recommended that this job be continued in order to maintain surveillance on existing pollution situations and to investigate any new pollution situations that may arise.

Prepared by Charles E. Gray

Approved

Marion Toole
Coordinator

Date June 26, 1962

Charles E. Gray
Regional Supervisor

