

The attached water quality standards revisions reflect the changes made as a result of public comment at the public hearing held on December 17, 1979. The only changes made from the draft presented to the Commission at the Commission meeting of November 16, 1979 are in Section (c)(3)(C) of the intermittent stream policy.

In view of the above the Commission hereby approves the attached water quality standards revisions.

COMMISSIONERS

SUBMITTED BY: H. G. Hannah

DATE PASSED: 1/25/80

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

ARKANSAS WATER QUALITY STANDARDS

REGULATION NO. 2

NOVEMBER 15, 1979

ATTACHMENT I

On page v of the current standards, delete the Fishery Class "W" pertinent to Coffee Creek.

On page ix of the current standards, delete the line pertinent to Coffee Creek under "Stream" in its entirety; add the following paragraph at the end of page ix.

Coffee Creek shall be exempt from all General and Specific criteria except the following, which are necessary to protect the beneficial instream water uses of industrial and agricultural raw water supplies:

(1) Nuisance

No discharge to Coffee Creek shall contain substances which will create a nuisance or a potential public health hazard.

(2) Taste and Odor

No discharge to Coffee Creek shall contain odor-producing and taste-producing substances in such amounts that will unreasonably interfere with existing instream uses.

(3) Solids, Floating Material, and Deposits

No discharge to Coffee Creek shall contain solids, floating material and deposits of a persistent nature, and oil, grease or petrochemical substances, attributable to municipal, industrial or other waste discharge except in such amounts that will not unreasonably interfere with the existing uses of Coffee Creek.

(4) Toxic Substances

Toxic concentrations of metals or other substances attributable to municipal, industrial, or other waste discharges shall not be present in the receiving water in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with normal propagation of aquatic life.

ATTACHMENT II

PROPOSED JUSTIFICATION FOR EXCEPTION
OF COFFEE CREEK
FROM SPECIFIC AND CERTAIN GENERAL CRITERIA
AS SPECIFIED IN REGULATION NO. 2

Georgia Pacific Corporation at Crossett has alleged that Coffee Creek, a tributary of the Ouachita River located near Crossett, Arkansas, has been "misclassified" and does not, in actuality, have the beneficial uses as a Class B Stream under the Arkansas Water Quality Standards. This allegation is based on the following facts.

The drainage network forming the "headwaters" of Coffee Creek extend throughout a major portion of Georgia Pacific's mill complex and a major portion of the city of Crossett. Flow of Coffee Creek is comprised of run-off as a direct response to precipitation events and wastewater from Georgia Pacific and the city of Crossett, all of which is directed to Georgia Pacific's treatment system, which system is identified in the attached Exhibit I. The abandoned Coffee Creek channel contains no flow except from runoff during and following rains. Further illustration that natural flow does not occur during protracted periods is furnished by the enclosed photographs of the old channel taken on October 2, 1979 (Exhibit II).

Flow measurements taken during an approximate two week period of no rainfall in early September, 1979, shows a flow of 45.8 mgd at the discharge from the aerated lagoon (see Exhibit I). During the same period, flows from Mossy Lake (see Exhibit I) averaged 42.7 mgd, indicating a net flow loss on the stream between these two points. Plant wastewater flow during August averaged 47.6 mgd and during September 48.5 mgd. This

data indicates a continually decreasing flow throughout the length of the creek, and indicates that the natural flow of the creek is intermittent or ephemeral.

Historically, Georgia Pacific has relied on oxidation occurring in Mossy Lake and at other points between the discharge point R-1 and the mouth of Coffee Creek as part of the overall wastewater treatment process (see Exhibit I). EPA, however, has recently directed that the existing standards applicable to Coffee Creek require that compliance with the standards be measured at the point of discharge at R-1, taking into account normal deviations within a mixing zone. Georgia Pacific represents that the absence of continuous flow in Coffee Creek, other than the treated wastewater, precludes mixing in any area of the creek and that the mixing zone should appropriately be designated as some area contiguous to the mouth of said creek.

Georgia Pacific has acknowledged its responsibility to meet the Water Quality Standards applicable to the Ouachita River.

The water quality of Coffee Creek has not experienced degradation during the recent past. In fact, available water quality data, as shown in Exhibit III, indicates definite improvements over the past five years.

In view of the foregoing, the Department has made the following determination:

- (1) The flow of Coffee Creek, except for treated wastewater, is intermittent or ephemeral in nature.
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- (2) The water quality of Coffee Creek has improved over the past five years.
 - (3) That uses associated with a Class B stream were not being attained at the time Coffee Creek was so classified, have not been attained in the interim, and can not be attained in the future by any technology currently available. Coffee Creek has never been suitable for use for secondary contact recreation or for use as a raw water source for public water supply and would not be suitable for such uses if the stream was allowed to revert to natural flow conditions. A balanced aquatic community is not now supported in Coffee Creek and could not be supported if Coffee Creek was allowed to revert to natural flow conditions.
 - (4) The granting of an exception to, or the reclassification of, the Arkansas Water Quality Standards will not create a condition which will interfere with or become injurious to existing instream uses, provided that the criteria and requirements set forth in Paragraph (6) are made applicable to Coffee Creek and discharges thereto; such requirements assuring improved water quality and, consequently, assuring enhanced use potentials for Coffee Creek.
 - (5) The existing Arkansas Water Quality Standards do not now provide for a use classification lower than Class B and, consequently, a reclassification of Coffee Creek to a lower use is precluded at this time.
 - (6) The following criteria and requirements should be made applicable to Coffee Creek and discharges thereto in lieu of all general criteria and those specific criteria in the Water Quality Standards relating to Class B streams.
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- (a) Coffee Creek shall be defined for purposes hereof as extending from the point of discharge at R-1 to the point where Coffee Creek enters the Ouachita River.
- (b) Wastewater discharged at the point R-1 shall be treated to a level not less than secondary or equivalent, including Best Practicable Technology Control currently available as specified in Section 301(b)(1)(A) of the Federal Water Pollution Control Act, as amended.
- (c) Irrespective of the treatment required at point R-1, water quality within Coffee Creek shall not create a condition which interferes with or becomes injurious to existing instream uses of Coffee Creek and the Ouachita River.
- (d) Georgia-Pacific shall provide such data as the Commission deems appropriate to assure that Coffee Creek is not contributing to the contamination of groundwater.
- (e) There shall be no discharge to Coffee Creek which will result in the violation of the following criteria, which criteria are necessary to protect the beneficial instream water uses of industrial and agricultural raw water supplies.

(i) Nuisance

No discharge to Coffee Creek shall contain substances which will create a nuisance or a potential public health hazard.

(ii) Taste and Odor

No discharge to Coffee Creek shall contain odor-producing and taste-producing substances in such amounts that will unreasonably interfere with existing instream uses.

(iii) Solids, Floating Material, and Deposits

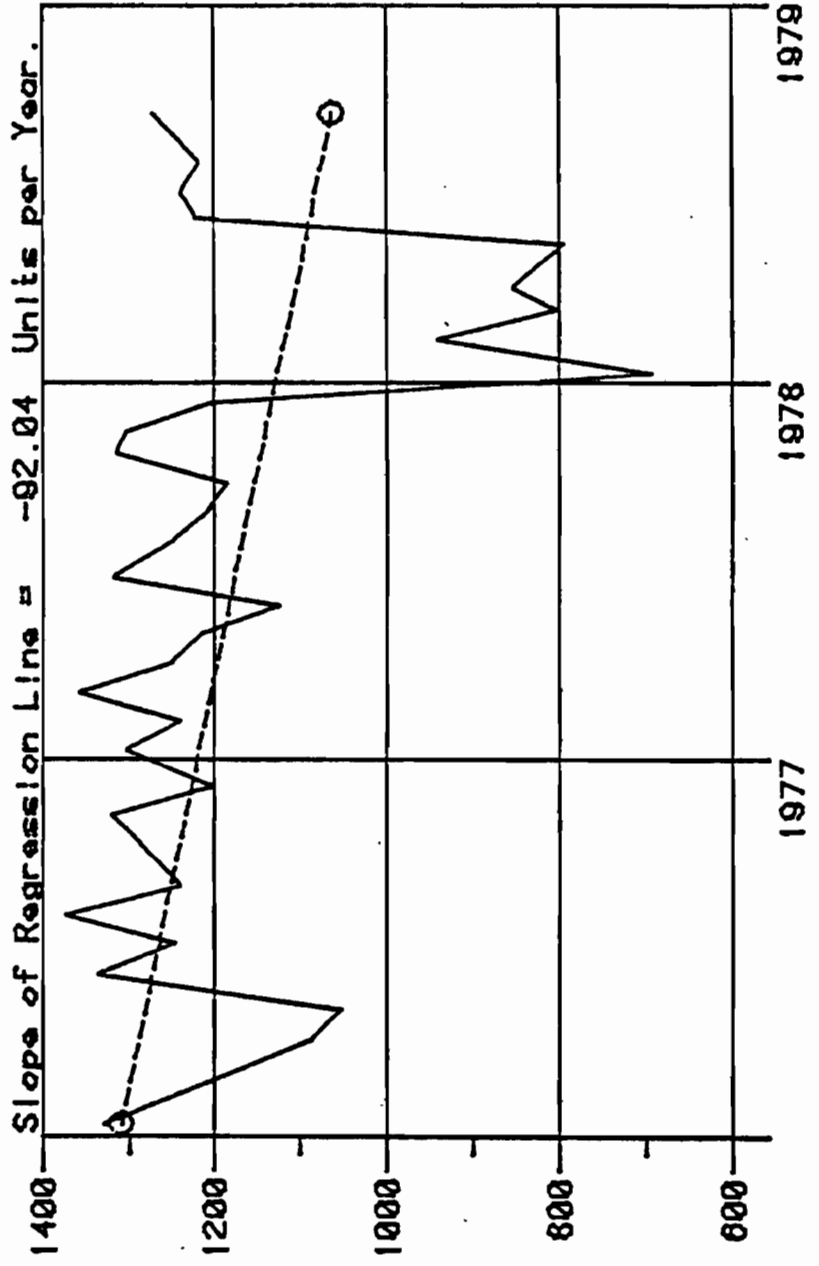
No discharge to Coffee Creek shall contain solids, floating material and deposits of a persistent nature, and oil, grease or petrochemical substances, attributable to municipal, industrial or other waste discharge except in such amounts that will not unreasonably interfere with the existing uses of Coffee Creek.

(iv) Toxic Substances

Toxic concentrations of metals or other substances attributable to municipal, industrial, or other waste discharges shall not be present in the receiving water in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with normal propagation of aquatic life.

EXHIBIT III

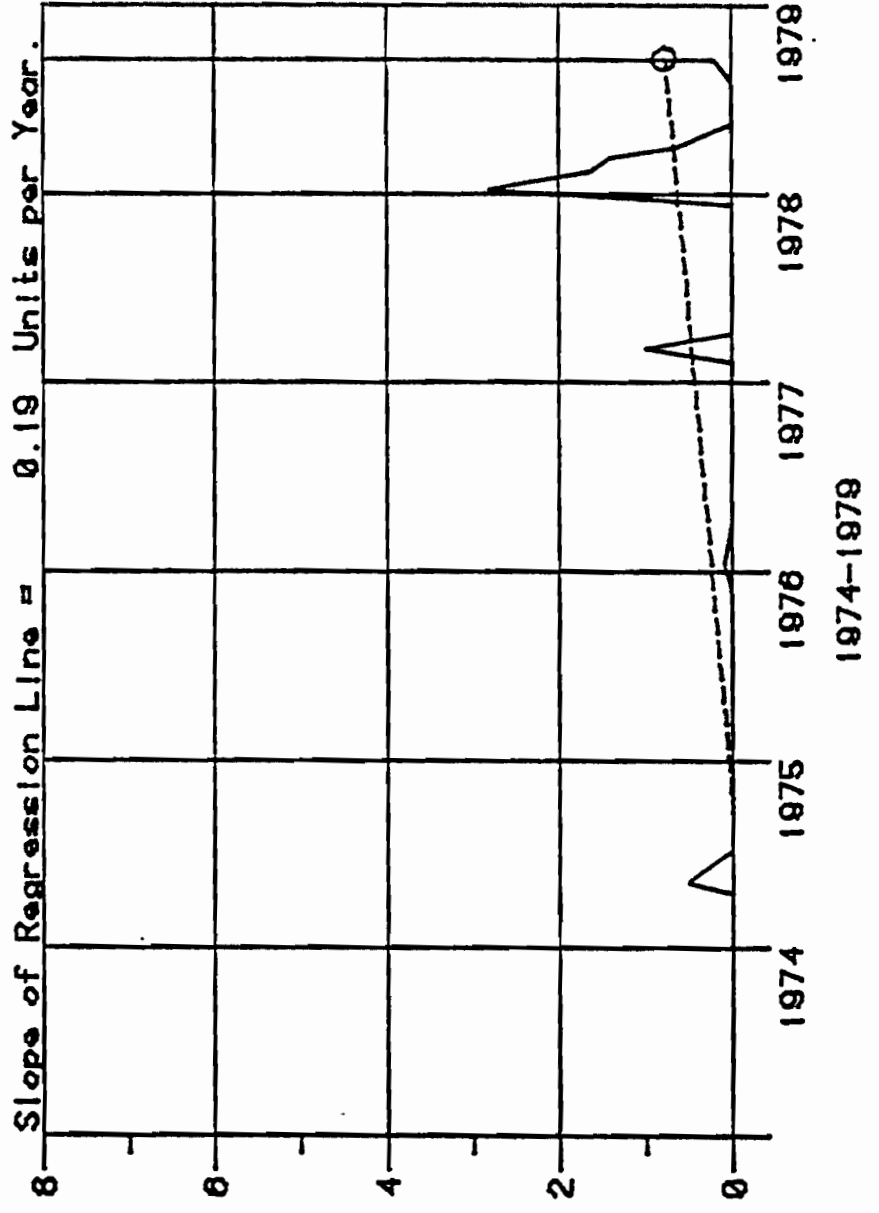
1116APCC 050095 OUA11A 33 06 29.0 092 01 54.0
COFFEE CREEK NR CROSSETT ARK 07364088 05003 ARKANSAS
OUACHITA RIV. 70300 RESIDUE DISS-180 C MG/L SW LOWER MISSISSIPPI



1977-1979

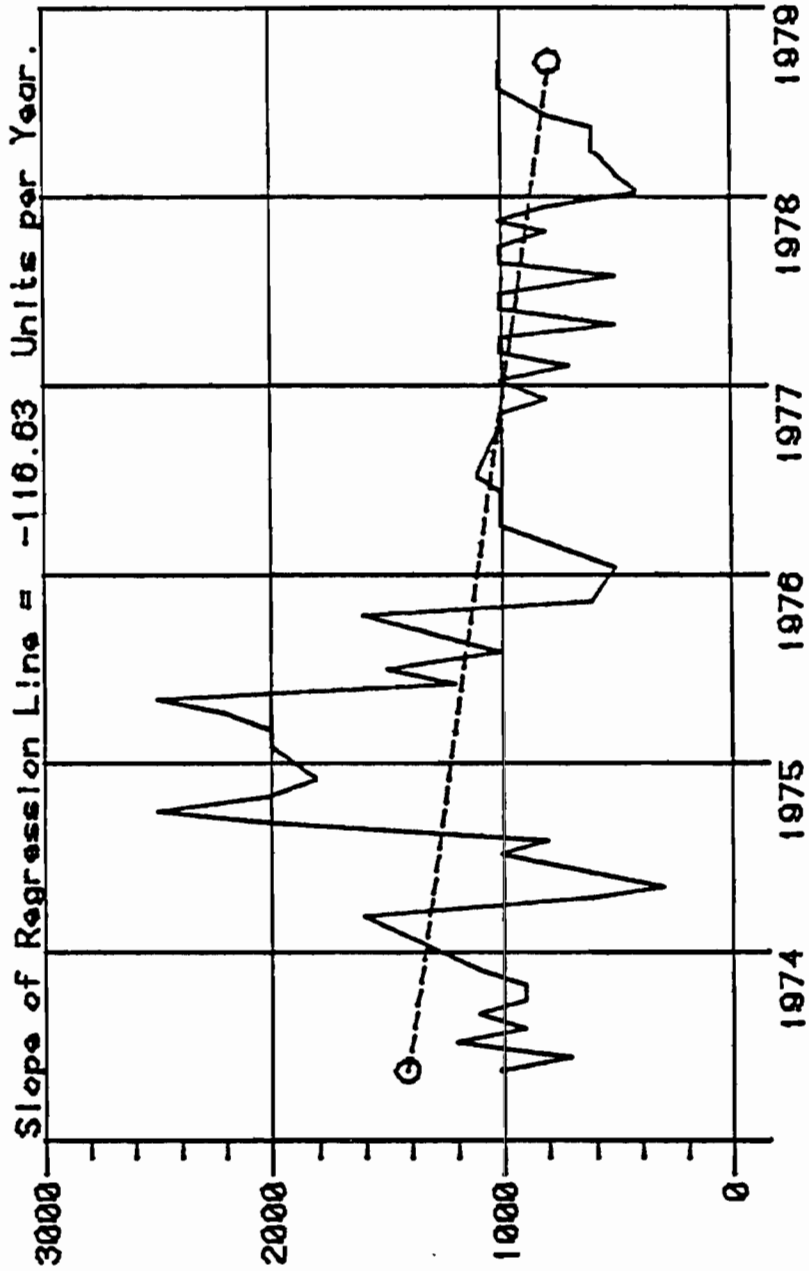
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 COFFEE CREEK NR CROSSETT ARK 05003 ARKANSAS
 OUACHITA RIV. SW LOWER MISSISSIPPI

300 DO MG/L



1116APCC 050095 OUA11A 33 06 29.0 092 01 54.0
 COFFEE CREEK NR CROSSETT ARK 07364088 05003 ARKANSAS
 OUACHITA RIV. SW LOWER MISSISSIPPI

80 COLOR PT-CO UNITS



1974-1979

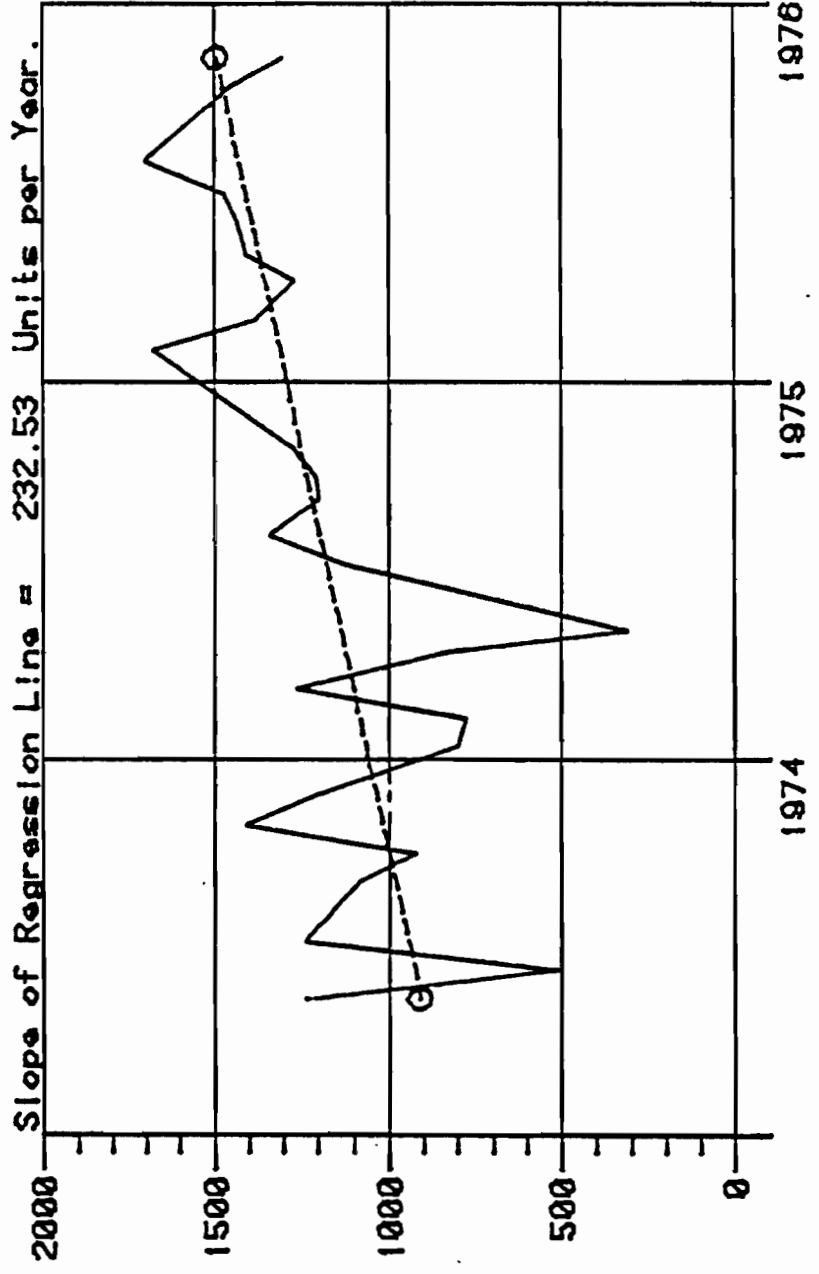
1116APCC 050095
COFFEE CREEK NR CROSSETT ARK
OUACHITA RIV.

OUA11A

07364088

33 06 29.0 092 01 54.0
05003 ARKANSAS
SW LOWER MISSISSIPPI

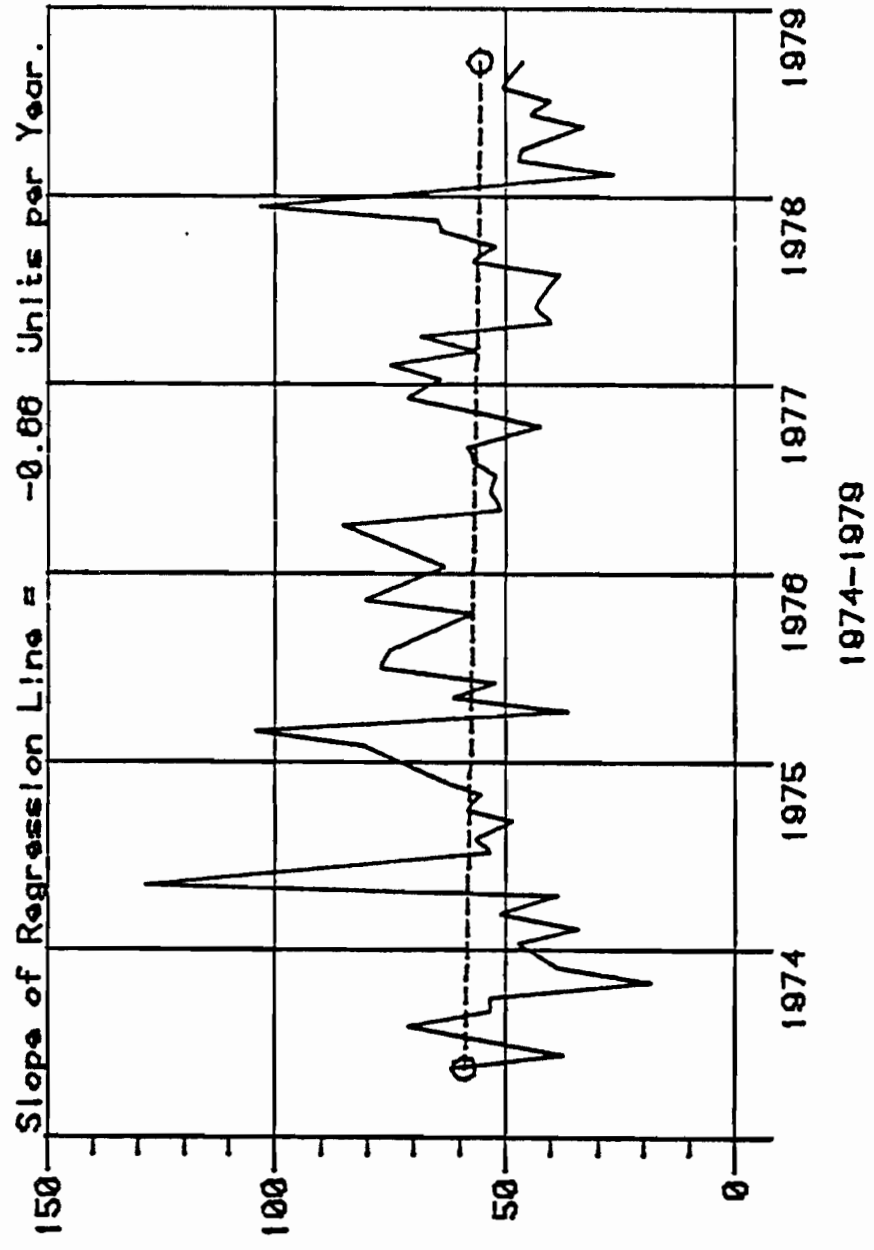
515 RESIDUE DISS-105 C MG/L



1974-1976

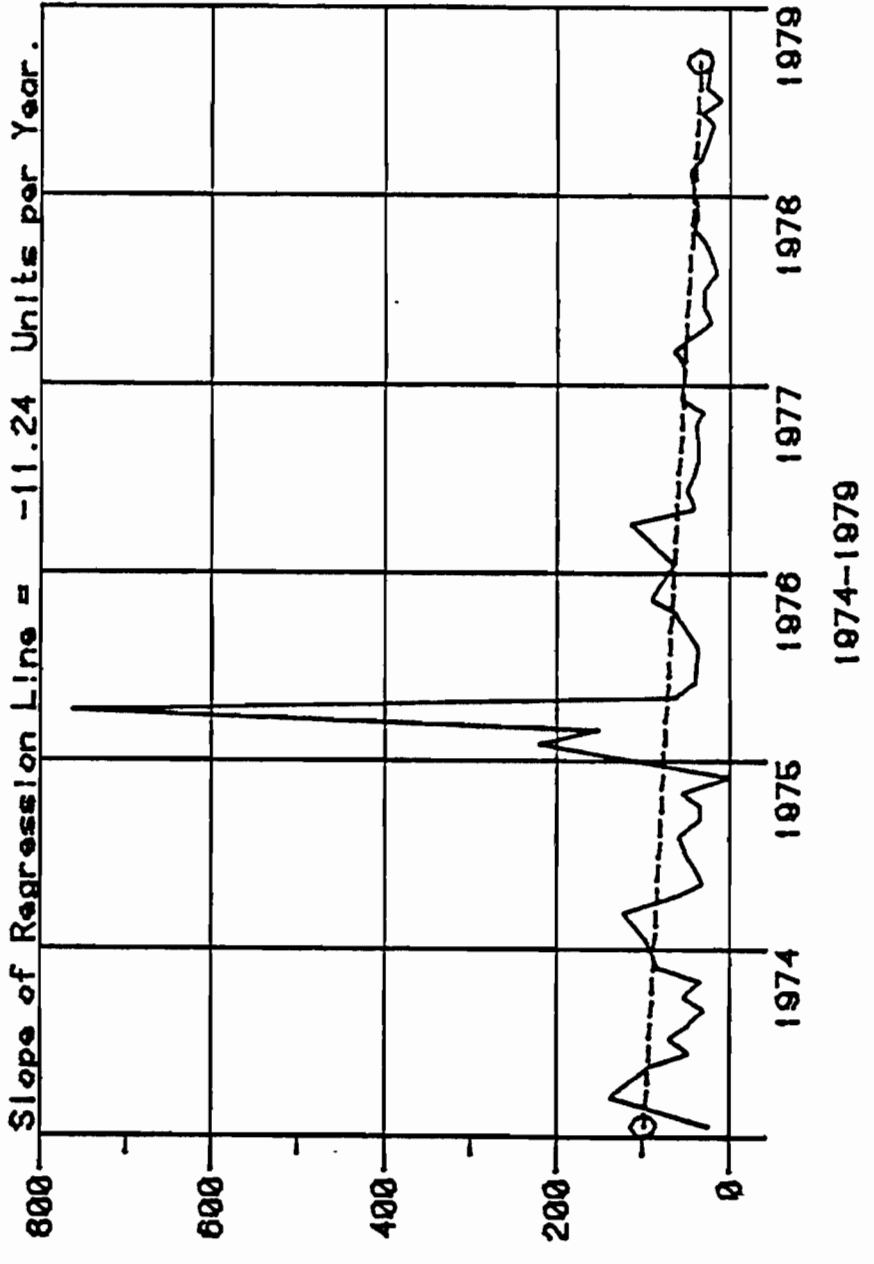
1116APCC 050095 0UA11A 07364088 33 06 29.0 092 01 54.0
 COFFEE CREEK NR CROSSETT ARK 05003 ARKANSAS
 OUACHITA RIV. SW LOWER MISSISSIPPI

530 RESIDUE TOT NFLT MG/L



1116APCC 050095 OUA11A 07364088 33 06 29.0 092 01 54.0
COFFEE CREEK NR CROSSETT ARK 05003 ARKANSAS
OUACHITA RIV. SW LOWER MISSISSIPPI

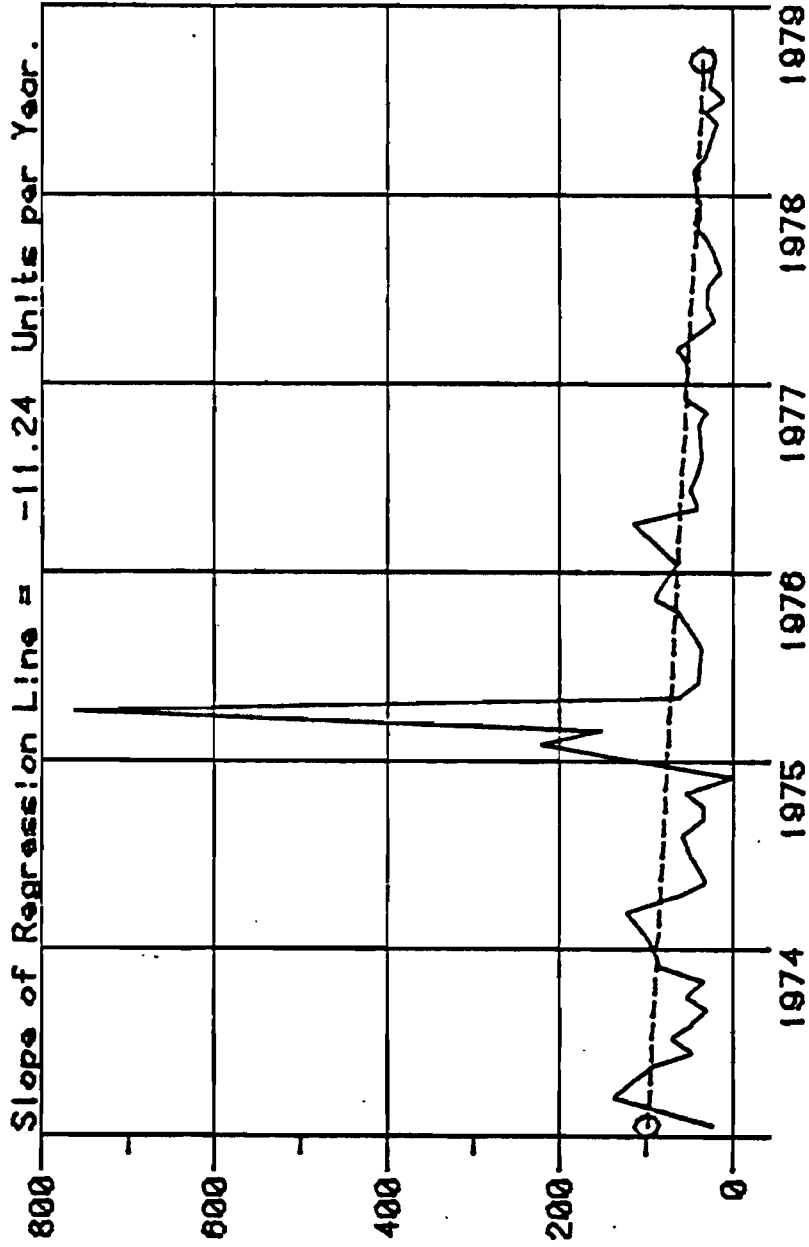
310 BOD 5 DAY MG/L



1116APCC 050095 OUA11A 33 06 29.0 092 01 54.0
COFFEE CREEK NR CROSSETT ARK 05003 ARKANSAS
OUACHITA RIV. SW LOWER MISSISSIPPI

07364088

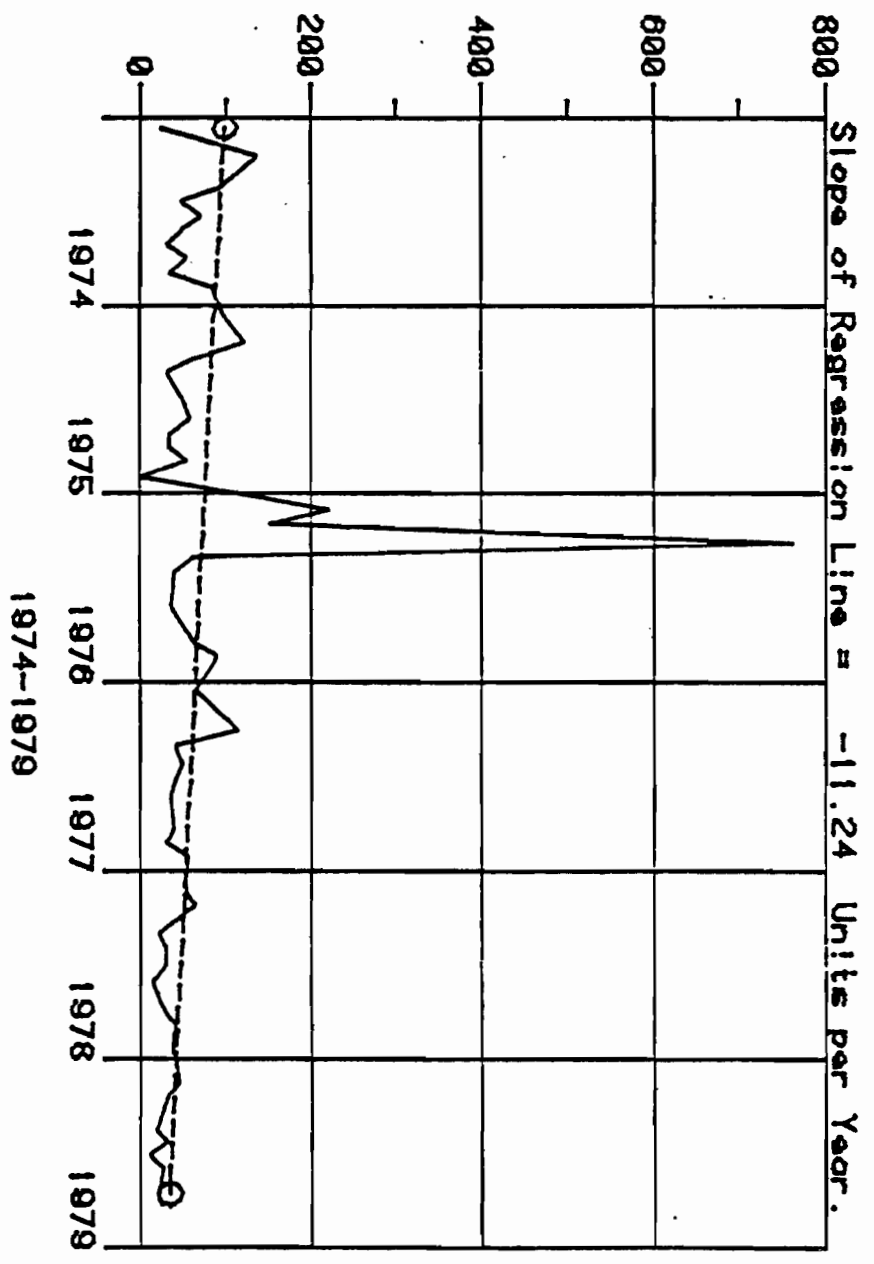
310 BOD 5 DAY MG/L



1974-1979

1116APCC 050095 OUA11A 07364088 33 06 29.0 092 01 54.0
COFFEE CREEK NR CROSSETT ARK 05003 ARKANSAS
OUACHITA RIV. SW LOWER MISSISSIPPI

310 BOD 5 DAY MG/L



ATTACHMENT III

Amend Section 5. (k) to add the following paragraph:

For the substances listed, the following criteria shall apply:

PCB's	0.001 ug/l
Aldrin/dieldrin	0.003 ug/l
DDT	0.001 ug/l
Endrin	0.004 ug/l
Toxaphene	0.05 ug/l
Benzidine	0.1 ug/l
Chlordane	0.001 ug/l

(NOTE: These values represent detection limits.)

Amend Section 4 by deleting existing subsection (c) and substituting the following:

- "(c) The following provisions apply to all intermittent and ephemeral streams and drainage ditches which may be defined as waters of the United States pursuant to the provision of 40 CFR 122.3(t) and which are not specifically named in Appendix A of the Arkansas Water Quality Standards. (The provisions of Section 4(b)-(d) and Section 5 shall not apply to these streams.)
- "(1) No intermittent stream, ephemeral stream or drainage ditch shall contain substances or materials, including floating debris, oil, scum and other matter, originating from man-made point or nonpoint sources in the amount or concentration which, taking into account the existing instream water uses of such stream or ditch, would:
- "(A) form objectionable deposits; or
 - "(B) create nuisances; or
 - "(C) produce objectionable color, taste, odor or turbidity; or
 - "(D) produce undesirable aquatic life or result in a dominance of nuisance species; or
 - "(E) cause injuries to, be toxic to, or produce adverse physiological responses in humans, animals or plants; or
 - "(F) interfere with or become injurious to existing uses of downstream waters.
- "(2) Effluents from point sources shall be treated to a degree equal to secondary or equivalent unless higher degrees of treatment are determined by the Commission to be necessary to:
- "(A) protect the existing instream uses of the receiving stream and of downstream waters;
 - "(B) protect groundwater or subsurface formation;
 - "(C) maintain the criteria of subsection (c)(1); and
 - "(D) prevent a public health hazard.
- "(3) The Commission, in the administration of the provisions of this subsection, shall take into account the following:
- "(A) Where there is insufficient quantity or flow of water other than treated effluent to support instream recreational uses and balanced aquatic communities, the existing instream uses shall be assumed to be raw water supplies for industry or agriculture and the beneficial uses for such streams shall be so designated.
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- "(B) No discharge shall be required to maintain a flow rate of treated effluent or to treat effluent beyond the level of secondary or equivalent to provide, support, protect or maintain an instream use which would not exist except for the flow of such discharge.
- "(C) Existing instream uses are (i) those beneficial and demonstrable uses of a stream which are currently being attained or which have been attained during the preceding five years, or (ii) those which are assumed under subsection (c)(3)(A) above, and includes such uses as a raw water source for public, industrial or agricultural water supplies; primary or secondary contact recreation; and protection and propagation of fish, shellfish and wildlife.
- "(D) The criteria of subsection (c)(1) shall be applicable throughout all portions of an intermittent stream, ephemeral stream or drainage ditch and at all times including that area of downstream receiving waters where mixing occurs provided, however, that the Commission may require additional treatment of discharges to intermittent streams, ephemeral streams or drainage ditches as necessary to protect existing instream uses of downstream waters."

Amend Appendix A, page i, Note section, by striking period at end of first sentence and adding "Unless such streams are intermittent, ephemeral or drainage ditches, the applicable standards for which are listed in Section 4(c) herein."