



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

July 20, 2016

Mr. Caleb Osborne
Associate Director – Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
Little Rock, AR 72118-5317

Re: Final submittal of *Regulation No. 2: Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas*, as amended by third party rulemaking initiated by the Southwestern Electric Power Company

Dear Mr. Osborne:

The Environmental Protection Agency (EPA) has completed its review of the revisions to *Regulation No. 2: Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas* that were made in relation to the Third Party Rulemaking process initiated by Southwestern Electric Power Company. The revisions to Regulation No. 2 were adopted by the Arkansas Pollution Control and Ecology Commission (APC&EC) on October 23, 2015 and became effective on November 5, 2015. They were submitted to the EPA for approval on December 21, 2015 by the Arkansas Department of Environmental Quality (ADEQ).

In a letter, dated May 16, 2016, EPA approved the majority of the revised provisions to Regulation 2.511 and Appendix A of Regulation No. 2, including the site-specific criteria changes for temperature and total dissolved solids (TDS) in the Little River and the removal of the domestic water supply use in the Red River. These revisions were approved pursuant to the Clean Water Act (CWA) § 303(c) and its implementing regulations at 40 CFR Part 131. However, EPA did not take action on the site-specific TDS criterion revision in the Red River at that time. After further review, EPA is now disapproving this site-specific TDS criterion revision for the Red River from its confluence with the Little River to the Arkansas-Louisiana state line. Inadequate information was submitted to demonstrate protection of the aquatic life use and this criterion is not protective of the downstream use in Louisiana. Please note that under 40 CFR § 313.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, previously approved language associated with the TDS criterion in the January 24, 2008 version of the Arkansas water quality standards remains in effect for CWA purposes.

I appreciate the APC&EC's and the ADEQ's effort in the review of these revised provisions of the State's standards and also appreciate ADEQ's assistance with coordinating meetings and correspondence with the third party. If you have any questions or concerns, please contact me at 214-665-7101, or contact Karen Kesler at 214-665-3185.

Sincerely,

A handwritten signature in black ink, appearing to read "WK Honker", written in a cursive style.

William K. Honker, P.E.
Director
Water Division

Enclosure

cc: Sarah Clem, Branch Manager
Water Division ADEQ

**TECHNICAL SUPPORT DOCUMENT:
EPA REVIEW OF SITE-SPECIFIC CRITERION REVISION TO *REGULATION 2:
REGULATION ESTABLISHING WATER QUALITY STANDARDS FOR SURFACE
WATERS OF THE STATE OF ARKANSAS* FOR THE RED RIVER, ARKANSAS**

Revision Adopted by the Arkansas Pollution Control and Ecology Commission via Minute Order
No. 15-21 for Southwestern Electric Power Company

**U.S. EPA REGION 6
WATER DIVISION
July 2016**

I. Introduction

Background

As described in § 303(c) of the Clean Water Act (CWA) and in the standards regulation within the Code of Federal Regulations (CFR) at 40 CFR § 131.20, states and authorized tribes have primary responsibility to develop and adopt water quality standards to protect their waters. State and tribal water quality standards consist of three primary components: beneficial uses, criteria to support those uses, and an antidegradation policy. In addition, CWA § 303(c)(1) and 40 CFR § 131.20 require states to hold public hearings at least once every three years to review and, as appropriate, modify and adopt standards.

Under 40 CFR § 131.21, the Environmental Protection Agency (EPA) reviews new and revised surface water quality standards that have been adopted by states and authorized tribes. Authority to approve or disapprove new and/or revised standards submitted to EPA for review has been delegated to the Water Division Director in Region 6. Tribal or state water quality standards are not considered effective under the CWA until approved by EPA.

The purpose of this Technical Support Document (TSD) is to provide the basis for the Environmental Protection Agency's disapproval of the site-specific total dissolved solids (TDS) water quality criterion revision for the Red River to Regulation No. 2: *Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas* adopted by the Arkansas Pollution Control and Ecology Commission (APC&EC) in Minute Order 15-21. This revision is further described in the subsection below titled "Summary of Revised Provisions."

Chronology of Events

September 11, 2014	A third party, Southwestern Electric Power Company (SWEPCO), filed a petition with the APC&EC to amend Regulation No. 2
September 26, 2014	The APC&EC initiated the rulemaking proceedings via Minute Order No. 14-33
October 1, 2014	Public notice of the proposed rule-making was published
November 17, 2014	Public hearing on the proposed rule-making was held in Hope, Arkansas
December 3, 2014	Public comment period ended on the proposed changes to Regulation No. 2
October 23, 2015	Becky Keogh, Director, Arkansas Department of Environmental Quality (ADEQ), signed Minute Order No. 15-21 adopting changes to Regulation No. 2

attainability analysis (UAA) of the receiving waterbodies affected by the revised site-specific criteria. The portions of the UAA that provided scientific justification for the appropriateness and protectiveness of the revised site-specific water quality criterion for TDS in the Red River from its confluence with the Little River to the AR/LA state line were considered for this action.

Site-Specific Water Quality Criterion for TDS in the Red River

Table 1. Site-specific water quality criterion revision for TDS in the Red River submitted by ADEQ to EPA for review and approval.

Reach Description	Current Criterion	Proposed Criterion
Red River from its confluence with the Little River to the AR/LA state line	500 mg/L	860 mg/L

Disapproval Justification

In its review of the SWEPCO UAA and additional submitted material, EPA determined that the documents did not sufficiently demonstrate protection of aquatic life use which is required by 40 CFR § 131.6 and also did not demonstrate protection of downstream use which is required by 40 CFR § 131.10(b).

The predominant source of evidence that was submitted to show that the aquatic life use was protected was a study completed by Buchanan et al. in 2003. This study surveyed fish that were present in the Arkansas portion of the Red River from 1995 to 2001. While the Buchanan study provides a historic reference, it only provides us with an understanding of the fish community in the Red River in 2001, not the current fish community. In addition, the Buchanan et al. 2003 study assessed presence and determined broad classifications of abundance (rare, uncommon, common, abundant). This gives us information about acute tolerances, but does not give us information about chronic tolerances. The presence of the fishes does not indicate that they are growing and reproducing at unimpaired rates. In addition, there was no discussion of the protection of the macroinvertebrate community in the Red River. Without additional information about the fish and macroinvertebrate community currently present in the Red River, EPA could not determine whether those communities are protected with the new criterion. Based on these concerns, EPA requested that additional information be submitted that demonstrated numeric tolerances of species that are found in the Red River. However, no additional data or information, only a representation of the Buchanan et al. 2003 study, was provided with which to assess the proposed criterion. Without additional supporting documentation, EPA was unable to assess whether the aquatic life use was being protected.

Downstream protection was also not demonstrated for this revised criterion. The proposed criterion is 860 mg/L and the downstream criterion in Louisiana is 780 mg/L. In the UAA submitted, the contractor reported the results of a mass-balance they performed using a 7Q-10 flow rate. These results showed predicted TDS concentrations at various spots in the Red River, including at the AR/LA state line. Also included in the UAA were the results of a second mass-balance performed by the contractor that used the same input values and model, but used a harmonic mean flow in place of a 7Q-10 flow rate. This second mass-balance was performed to justify that the proposed criterion is protective of LA uses. But the use of the harmonic mean