

EXHIBIT D

COMPLIANCE WITH ACT 143 OF 2007

MITCHELL | WILLIAMS

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June 30, 2014

Ms. Patricia Brown
Division Director
Arkansas Economic Development Commission
Arkansas Department of Economic Development
900 W. Capitol Ave.
Little Rock, AR 72201

Re: Economic Impact/Environmental Benefit Analysis
Southwestern Electric Power Company, John W. Turk, Jr. Power Plant
Third Party Rulemaking Petition before the Arkansas Pollution Control
& Ecology Commission

Dear Ms. Brown:

Southwestern Electric Power Company, John W. Turk, Jr. Power Plant intends to petition the Arkansas Pollution Control & Ecology Commission (APCEC) to amend APCEC Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas. A copy of the proposed amendment and the Economic Impact Statement of Proposed Rules or Regulations, EO 05-04: Regulatory Flexibility are attached for your review. Additional documentation, including a copies of the *Southwestern Electric Power Company Use Attainability Analysis for Dissolved Minerals in Little and Red Rivers Hempstead & Little River Counties, Arkansas* and the *Southwestern Electric Power Company Technical Justification for a Site-Specific Temperature Criterion in the Little River Hempstead & Little River Counties, Arkansas* the studies supporting the request to amend APCEC Regulation No. 2, are available for your review upon request. This is being submitted to AEDC pursuant to the requirements of Act 143 of 2007.

Southwestern Electric Power Company is not requesting a change to the actual water quality of the affected stream. Rather the water quality standards changes requested (modification total dissolved solids and temperature water quality criteria) for segments of the Little and Red Rivers—reflect current, historic and naturally occurring conditions in the affected streams.

There will be no cost to state government associated with the proposed amendment and no regulatory burden such as fees, reporting requirements, or the obtaining of any regulatory permit will be imposed on any small business because of the modification of these minerals standards. The proposed amendment will not create any barrier to entry. No additional requirements will be imposed on any small business by the proposed amendment and no small business will be required to implement any changes because of the proposed amendment. The

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requested changes will have no impact on any small business. It will impact only Southwestern Electric Power Company.

Please review the purposed amendment to APCEC Regulation No. 2, and provide your approval of same pursuant to Act 143 of 2007 as amended by Act 809 of 2009.

Should you have any questions regarding this matter or need any further information, please do not hesitate to contact me.

Sincerely,

MITCHELL, WILLIAMS, SELIG,
GATES & WOODYARD, P.L.L.C.

By 
Marcella J. Taylor

MJT:ce
Enclosures

cc: The Honorable Charles Moulton (w/encls.)

**ECONOMIC IMPACT STATEMENT
OF PROPOSED RULES OR REGULATIONS
EO 05-04: Regulatory Flexibility**

Department Southwestern Electric Power Company, John W. Turk, Jr. Power Plant **Division** none
Contact Person Marcella J. Taylor **Date** June 27, 2014
Contact Phone (501) 688-8851 **Contact Email** mtaylor@mwlaw.com

Title or Subject: Petition to Amend Arkansas Pollution Control & Ecology Commission Regulation No. 2, Arkansas Water Quality Standards

Benefits of the Proposed Rule or Regulation

1. Explain the need for the proposed change(s). Did any complaints motivate you to pursue regulatory action? If so, please explain the nature of such complaints.
 - Southwestern Electric Power Company, John W. Turk, Jr. Power Plant seeks to have certain water quality criteria in Arkansas Pollution Control & Ecology Commission (APCEC) Regulation No. 2 amended to reflect the historical and current levels of total dissolved solids and temperature in segments of the Little and Red Rivers. The facility seeks modification of the total dissolved solids (TDS) criterion and removal of the designated, but not existing, drinking water use designation for a portion of the Red River from the mouth of the Little River to the Arkansas/Louisiana state line, and modifications of the TDS and temperature water quality criteria for a portion of the Little River from Millwood Lake to the Red River.
 - No complaints motivated SWEPCO to seek amendment of APCEC Regulation No. 2.
2. What are the top three benefits of the proposed rule or regulation?
 - Revised water quality criteria which reflect actual conditions
 - Revised water quality criteria which are protective of the receiving streams and the aquatic life,
 - Compliance with the current and anticipated NPDES permit limits by the facility.
3. What, in your estimation, would be the consequence of taking no action, thereby maintaining the status quo?
 - If no action is taken to amend the water quality criteria the facility will be unable to operate as designed and the Little River from Millwood Lake to the Red River risks being placed on future Arkansas 303(d) lists as impaired for minerals and temperature.
4. Describe the market-based alternatives or voluntary standards that were considered in place of the proposed regulation and state the reason(s) for not selecting those alternatives.

The alternatives for management of effluent with elevated dissolved minerals are limited--reverse osmosis (RO), pumping the wastewater to a larger stream with the potential for dilution of the minerals, and treatment via a constructed wetland.

- Use of a constructed wetland was excluded because it would reduce only the sulfate and have no effect on the constituents of TDS.
- Building a pipeline and pumping the facility's discharges to a larger stream is impossible because the larger stream is the Red River which has historically elevated minerals concentrations due to input from natural salt springs and seeps in Oklahoma and Texas.
- Use of RO was likewise evaluated. Aside from the fact that the technology generates concentrated brine of which it is environmentally difficult and costly to dispose, RO is economically infeasible. The estimated capital cost of RO for the facility is between \$5,100,000 to \$6,900,000 with annual operating and disposal costs from \$2,660,000 to \$3,920,000.

Impact of Proposed Rule or Regulation

5. Estimate the cost to state government of collecting information, completing paperwork, filing, recordkeeping, auditing and inspecting associated with this new rule or regulation.
 - There is no cost to state government associated with this proposed new rule.
6. What types of small businesses will be required to comply with the proposed rule or regulation? Please estimate the number of small businesses affected.
 - There are no additional requirements for any small business due to this rule change. Further, any small business which could potentially be required to comply with the proposed rule or regulation is already being required to comply with the current more stringent water quality criteria for the affected stream.
7. Does the proposed regulation create barriers to entry? If so, please describe those barriers and why those barriers are necessary.
 - The proposed regulation does not create any barriers to entry.
8. Explain the additional requirements with which small business owners will have to comply and estimate the costs associated with compliance.
 - There are no additional requirements with which small business owners will have to comply.
9. State whether the proposed regulation contains different requirements for different sized entities, and explain why this is, or is not, necessary.
 - The proposed regulation does not contain different requirements for different sized entities.
10. Describe your understanding of the ability of small business owners to implement changes required by the proposed regulation.
 - No small business owners will be required to implement changes because of the proposed regulation.
11. How does this rule or regulation compare to similar rules and regulations in other states or the federal government?
 - Both federal environmental laws and the environmental laws of most, if not all, states provide for the establishment and amendment of water quality criteria, not only by the federal and state agencies, but also by third party petition. This proposed regulation amendment would therefore be comparable to water quality standards in other states.
12. Provide a summary of the input your agency has received from small business or small business advocates about the proposed rule or regulation.
 - Southwestern Electric Power Company is not an agency and has not yet received any input about the proposed rule or regulation. APCEC Regulation No. 8 and Ark. Act 143 of 2007 require the submission of this information to ADEC prior to the filing of a third-party petition to initiate the rulemaking. Public input will come about during the public comment period once the APCEC initiates the rule-making.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2

REGULATION ESTABLISHING WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF ARKANSAS

Submitted to the Arkansas Pollution Control and Ecology Commission: _____, 2014

CHAPTER 5: SPECIFIC STANDARDS

Reg. 2.501 **Applicability**

Unless otherwise indicated in this Chapter or in Appendix A, the following specific standards shall apply to all surface waters of the state at all times except during periods when flows are less than the applicable critical flow. Streams with regulated flow will be addressed on a case-by-case basis to maintain designated instream uses. These standards apply outside the applicable mixing zone. Waters may, on occasion, have natural background levels of certain substances outside the limits established by these criteria, in which case these criteria do not apply to the naturally occurring excursions.

Reg. 2.502 **Temperature**

Heat shall not be added to any waterbody in excess of the amount that will elevate the natural temperature, outside the mixing zone, by more than 5°F (2.8°C) based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) in streams, lakes or reservoirs. The following standards are applicable:

| Waterbodies | Limit °C (°F) |
|---|-------------------------|
| Streams | |
| Ozark Highlands | 29 (84.2) |
| Boston Mountains | 31 (87.8) |
| Arkansas River Valley | 31 (87.8) |
| Ouachita Mountains | 30 (86.0) |
| Springwater-influenced Gulf Coastal | 30 (86.0) |
| Typical Gulf Coastal | 30 (86.0) |
| Least-Altered Delta | 30 (86.0) |
| Channel-Altered Delta | 32 (89.6) |
| White River (Dam #1 to mouth) | 32 (89.6) |
| St. Francis River | 32 (89.6) |
| Mississippi River | 32 (89.6) |
| Arkansas River | 32 (89.6) |
| Ouachita River (L. Missouri R. to Louisiana state line) | 32 (89.6) |
| Red River | 32 (89.6) |
| <u>Little River (Millwood Lake to the Red River)</u> | <u>32 (89.6)</u> |
| Lakes and Reservoirs | 32 (89.6) |
| (applicable at 1.0 meter depth) | |
| Trout waters | 20 (68.0) |

Temperature requirements shall not apply to off-stream privately-owned reservoirs constructed primarily for industrial cooling purposes and financed in whole or in part by the entity or successor entity using the lake for cooling purposes.

| <u>Stream</u> | <u>Concentration-mg/L</u> | | |
|--|--|---|-------------------|
| | <u>Chlorides</u> (Cl ⁻) | <u>Sulfates</u> (SO ₄ ⁼²) | <u>TDS</u> |
| Dismukes Creek | 26* | ER | 157* |
| Big Creek from Dismukes to Bayou Dorcheat | 20* | ER | 200* |
| Bois d'Arc Creek from Caney Creek to Red River | 113* | 283* | 420* |
| Caney Creek | 113* | 283* | 420* |
| Bodcau Creek | 250 | 70 | 500 |
| Poston Bayou | 120 | 40 | 500 |
| Kelley Bayou | 90 | 40 | 500 |
| Red River from Oklahoma to confluence with Little River | 250 | 200 | 850 |
| <u>Red River from Little River to Louisiana</u> | 250 | 200 | <u>860</u> |
| Sulphur River | 120 | 100 | 500 |
| Days Creek | 250 | 250 | 500 |
| McKinney Bayou | 180 | 60 | 480 |
| Little River | 20 | 20 | 100 |
| <u>Little River from Millwood Lake to the Red River</u> | 20 | 20 | <u>138</u> |
| Saline River | 20 | 10 | 90 |
| Mine Creek from Hwy 27 to Millwood Lake | 90 | 65 | 700 |
| Cossatot River | 10 | 15 | 70 |
| Upper Rolling Fork | 20 | 20 | 100 |
| Rolling Fork from unnamed trib A to DeQueen Lake | 130 | 70 | 670 |
| Unnamed tribs A and A1 at Grannis | 135 | 70 | 700 |
| Mountain Fork | 20 | 20 | 110 |
| Mississippi River (Louisiana state line to Arkansas River) | 60 | 150 | 425 |
| Mississippi River (Arkansas River to Missouri state line) | 60 | 175 | 450 |

ER - ecoregion value

* - developed using background flow of 4 cfs

** - These limits shall apply to all tributaries of Bayou Meto and Bayou Two Prairie listed in Appendix A
Any modification of these values must be made in accordance with Reg. 2.306.

† Not applicable for Clean Water Act purposes until approved by EPA.

(B) Ecoregion Reference Stream Minerals Values

The following values were determined from Arkansas' least-disturbed ecoregion reference streams are considered to be the maximum naturally occurring levels. For waterbodies not listed above, any discharge which results in instream concentrations more than 1/3 higher than these values for chlorides (Cl⁻) and sulfates (SO₄⁼²) or more than 15 mg/L, whichever is greater, is considered to be a significant modification of the maximum naturally occurring values. These waterbodies should be considered as candidates for site specific criteria development in accordance with Regs. 2.306 and 2.308. Similarly, site specific criteria development should be considered if the following TDS values are exceeded after being increased by the sum of the increases to Cl and SO₄. Such criteria may be developed only in accordance with Regs. 2.306 and 2.308. The values listed in

Site Specific Designated Use Variations Supported by Use Attainability Analysis

- Loutre Creek - perennial aquatic life use, except seasonal from railroad bridge to mouth (GC-2, #1)
Unnamed tributary to Smackover Creek - no fishable/swimmable uses (GC-2, #2)
Unnamed tributary to Flat Creek - no fishable/swimmable uses (GC-2, #4)
Dodson Creek - perennial aquatic life use (GC-4, #5)
Jug Creek - perennial aquatic life use (GC-2, #6)
Lick Creek - seasonal aquatic life use; no primary contact (GC-1, #7)
Coffee Creek and Mossy Lake - no fishable/swimmable or domestic water supply uses (GC-3, #8)
Red River from Oklahoma state line to confluence with Little River - No domestic water supply use (GC-1, #9)
Bluff Creek and unnamed tributary - no domestic water supply use (GC-1, #10)
Mine Creek from Highway 27 to Millwood Lake - no domestic water supply use (GC-1, #11)
Caney Creek - no domestic or industrial water supply use (GC-1, #12)
Bois d'Arc Creek from Caney Creek to Red River - no domestic or industrial water supply use (GC-1, #13)
Town Creek below Acme tributary - no domestic water supply (GC-4, #14)
Unnamed trib. from Acme - no domestic water supply (GC-4, #14)
Gum Creek - no domestic water supply use (GC-2, #15)
Loutre Creek from Highway 15 S. to the confluence of Bayou de Loutre – no domestic water supply use (GC-2, #41)
Unnamed trib 002 (UT002) – no domestic water supply use (GC-2, #31)
Unnamed trib 003 (UT003) – no domestic water supply use (GC-2, #34)
Unnamed trib 004 (UT004) – no domestic water supply use (GC-2, #32)
Bayou de Loutre from mouth of UT004 to Louisiana state line - no domestic water supply use (GC-2, #16)
Walker Branch - no domestic water supply use (GC-2, #17)
Little Cornie Bayou from Walker Branch to Arkansas/Louisiana state line - no domestic water supply use (GC-2, #18)
Unnamed trib to Little Cornie Bayou (UTLCB-2) - no domestic water supply use (GC-2, #18)
Alcoa unnamed trib to Hurricane Creek and Hurricane Creek - no domestic water supply use (GC-4, #19)
Holly Creek - no domestic water supply use (GC-4, #20)
Dry Lost Creek and Tribs. - no domestic water supply use (GC-4, #21)
Lost Creek - no domestic water supply use (GC-4, #22)
Albemarle unnamed trib (AUT) to Horsehead Creek - no domestic water supply use (GC-2, #27)
Horsehead Creek from AUT to mouth - no domestic water supply use (GC-2, #27)
Dismukes Creek and Big Creek to Bayou Dorcheat – no domestic water supply (GC-2, #28)
Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre - no domestic water supply use (GC-2, #51)
Unnamed tributary to Flat Creek from EDCC Outfall 001 d/s to confluence with unnamed tributary A to Flat Creek - no domestic water supply use (GC-2, #37)
Unnamed tributary A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek - no domestic water supply use (GC-2, #38)
Flat Creek from mouth of UTA to confluence with Haynes Creek - no domestic water supply use (GC-2, #39)
Haynes Creek from mouth of Flat Creek to confluence with Smackover Creek - no domestic water supply use (GC-2, #40)
Red River from the mouth of the Little River to the Arkansas/Louisiana state line – no domestic drinking water supply use (GC-1, #55)

SPECIFIC STANDARDS: GULF COASTAL ECOREGION

(Plates GC-1, GC-2, GC-3, GC-4)

| | <u>Typical Streams</u> | <u>Spring Water Streams</u> | <u>Lakes and Reservoirs</u> |
|---|----------------------------|---------------------------------|---------------------------------|
| Temperature °C (°F)* | 30 (86) | 30 (86) | 32 (89.6) |
| Ouachita River (state line to Little Missouri River) | 32 (89.6) | | |
| Red River | 32 (89.6) | | |
| Little River <u>(Millwood Lake to the Red River)</u> | 32 (89.6) | | |
| Turbidity (NTU) (base/all) | 21/32 | 21/32 | 25/45 |
| Red River (base/all) | 50/150 | | |
| Minerals | see Reg. 2.511 | | see Reg. 2.511 |
| Dissolved Oxygen (mg/L) ** | <u>Pri.</u> | <u>Crit.</u> | see Reg. 2.505 |
| <10 mi ² watershed | 5 | 2 | |
| 10 mi ² - 500 mi ² | 5 | 3 | |
| >500 mi ² watershed | 5 | 5 | |
| All sizes (springwater influenced) | | 6 | 5 |
| All other standards | (same as statewide) | | |

*Increase over natural temperatures may not be more than 2.8°C (5°F).

**At water temperatures ≤10°C or during March, April and May when stream flows are 15 cfs and greater, the primary season dissolved oxygen standard will be 6.5 mg/L. When water temperatures exceed 22°C, the critical season dissolved oxygen standard may be depressed by 1 mg/L for no more than 8 hours during a 24-hour period

Site Specific Standards Variations Supported by Use Attainability Analysis

- Loutre Creek - from headwaters to railroad bridge, critical season dissolved oxygen standard - 3 mg/L; primary season - 5 mg/L; from railroad bridge to mouth, critical season dissolved oxygen - 2 mg/L (GC-2, #1)
- Unnamed tributary to Smackover Creek - headwaters to Smackover Creek, year round dissolved oxygen criteria - 2 mg/L (GC-2, #2)
- Unnamed tributary to Flat Creek - from headwaters to Flat Creek, year round dissolved oxygen criteria - 2 mg/L (GC-2, #4)
- Dodson Creek - from headwaters to confluence with Saline River, critical season dissolved oxygen standard - 3 mg/L (GC-4, #5)
- Jug Creek - from headwaters to confluence with Moro Creek, critical season dissolved oxygen standard - 3 mg/L (GC-2, #6)
- Lick Creek - from headwaters to Millwood Reservoir, critical season dissolved oxygen standard - 2 mg/L (GC-1, #7)
- Coffee Creek and Mossy Lake - exempt from Reg. 2.406 and Chapter Five (GC-3, #8)
- Red River from Oklahoma state line to confluence with Little River - total dissolved solids - 850 mg/L (GC-1, #9)
- Bluff Creek and unnamed trib. - sulfates 651 mg/L; total dissolved solids 1033 mg/L (GC-1, #10)
- Muddy Fork Little Missouri River - sulfates 250 mg/L; total dissolved solids 500 mg/L (GC-1, #24)
- Little Missouri River - sulfates 90 mg/L; total dissolved solids 180 mg/L (GC-1, #25)
- Mine Creek from Highway 27 to Millwood Lake - chlorides - 90 mg/L; sulfates - 65 mg/L; total dissolved solids - 700 mg/L (GC-1, #11)

Caney Creek - chlorides 113 mg/L; sulfates 283 mg/L; total dissolved solids 420 mg/L (GC-1,#12)

Bois d'Arc Creek from Caney Creek to Red River - chlorides 113 mg/L; sulfates 283 mg/L; total dissolved solids 420 mg/L (GC-1,#13)

Town Creek below Acme tributary - sulfates 200 mg/L; total dissolved solids 700 mg/L (GC-4,#14)

Unnamed trib. from Acme - sulfates 330 mg/L; total dissolved solids 830 mg/L (GC-4,#14)

Gum Creek - chlorides 104 mg/L; total dissolved solids 311 mg/L (GC-2,#15)

Bayou de Loutre from Gum Creek to State line - Chlorides 250 mg/L; total dissolved solids 750 mg/L (GC-2,#16)

Walker Branch - chlorides 180 mg/L; total dissolved solids 970 mg/L (GC-2,#17)

Ouachita River - from Ouachita River mile (ORM) 223 to the Arkansas-Louisiana border (ORM 221.1), site specific seasonal dissolved oxygen criteria: 3 mg/L June and July; 4.5 mg/L August; 5 mg/L September through May. These seasonal criteria may be unattainable during or following naturally occurring high flows;(i.e., river stage above 65 feet measured at the lower gauge at the Felsenthal Lock and Dam, Station No.89-o, and also for the two weeks following the recession of flood waters below 65 feet), which occurs from May through August. Naturally occurring conditions which fail to meet criteria should not be interpreted as violations of these criteria (GC-3, #26)

Alcoa unnamed trib. to Hurricane Cr. and Hurricane Cr. - see Reg. 2.511 (CG-4. #19)

Holly Creek - See Reg. 2.511 (CG-4, #20)

Saline River bifurcation - see Reg. 2.511 (GC-4, #23)

Dry Lost Creek and tributaries - see Reg. 2.511 (GC-4, #21)

Lost Creek - see Reg. 2.511 (GC-4, #22)

Albemarle unnamed trib (AUT) to Horsehead Creek - chlorides 137 mg/L; total dissolved solids 383 mg/L (GC-2, #27)

Horsehead Creek from AUT to mouth - chlorides 85 mg/L; total dissolved solids 260 mg/L(GC-2,#27)

Bayou Dorcheat - sulfates 16 mg/L (GC-2,#27)

Dismukes Creek – chlorides 26 mg/L; total dissolved solids 157 mg/L (GC-2, #28)

Big Creek from Dismukes to Bayou Dorcheat – chlorides 20 mg/L; total dissolved solids 200 mg/L (GC-2, #28)

Bayou de Loutre from Chemtura outfall to Loutre Creek – maximum water temperature 96°F (GC-2, #29)

Unnamed tributary of Lake June below Entergy Couch Plant to confluence with Lake June – maximum water temperature 95 degrees F (limitation of 5 degrees above natural temperature does not apply) (GC-1, #30).

Unnamed tributary to Flat Creek from EDCC Outfall 001 d/s to confluence with unnamed tributary A to Flat Creek
Chloride 23 mg/L, Sulfate 125 mg/L, TDS 475 mg/L, (GC-2, #37) †

Unnamed tributary A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek,
Chloride 16 mg/L, Sulfate 80 mg/L, TDS 315 mg/L, (GC-2, #38) †

Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre.
Chloride, 631mg/L; Sulfate, 63 mg/L, total dissolved solids, 1360; Selenium, 15.6 u/L

McGeorge Creek (headwaters to Willow Springs Branch) Sulfate, 250 mg/L; total dissolved solids, 432 mg/L (GC-4. #52)

Willow Springs Branch (McGeorge Creek to Little Fourche Creek) Sulfate, 112 mg/L; total dissolved solids 247 mg/L (GC-4. #53)

Little Fourche Creek (Willow Springs Branch to Fourche Creek) total dissolved solids, 179 mg/L (GC-4. #54)

Red River from mouth of the Little River to the Arkansas/Louisiana state line, TDS 860 mg/L (GC-1, #55)

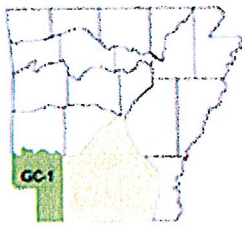
Little River from Millwood Lake to the Red River, TDS 138mg/L (GC-1, #56)

† Not applicable for clean water act purposes until approved by EPA.

Variations Supported by Environmental Improvement Project

Holly Creek; Selenium, Chronic Standard, 17µg/L (GC-4, #1)

Plate GC-1 (Gulf Coastal Plain)



LEGEND

- Extraordinary Resource Waters
- Natural and Scenic Waterways
- Variation by IAA
- Ecologically Sensitive Waterbodies
- ESW Caves, Springs, and Seeps
- Trout Waters

