

**BEFORE THE ARKANSAS COMMISSION ON
POLLUTION CONTROL & ECOLOGY**

IN RE: REQUEST BY THE GREAT LAKES)
CHEMICAL COMPANY — CENTRAL)
FACILITY FOR THIRD-PARTY) DOCKET NO. _____
RULEMAKING TO AMEND)
REGULATION NO. 2)

**PETITION TO INITIATE THIRD-PARTY
RULEMAKING TO AMEND REGULATION NO. 2**

Petitioner, Great Lakes Chemical Company — Central Facility (“GLCC”), for its Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2 (“Petition”) states:

1. This Petition is submitted pursuant to Section 2.308 of Regulation No. 2 and Section 3.4 of Regulation No. 8. GLCC is requesting that a site specific protective temperature criterion of 96°F be promulgated for a reach of Bayou de Loutre in Union County, Arkansas.

2. GLCC operates an industrial facility south of El Dorado which produces specialty chemicals in a bromine production process. GLCC has operated the facility for over 30 years. All wastewater from the bromine production process is dispositioned via deep well injection. Non-contact wastewater which is not directly associated with the bromine production process is discharged into Bayou de Loutre from Outfall 001 as authorized by the Arkansas Department of Environmental Quality (ADEQ) under National Pollutant Discharge Elimination System (NPDES) Permit No. AR0001171 which was effective on January 1998.

3. The upper headwater reach of Bayou de Loutre is designated as a Seasonal Gulf Coastal Fishery and has an associated ecoregion water quality criterion for temperature of 86°F (30°C).

4. The water discharged through Outfall 001 consists mainly of non-contact cooling water and includes smaller volumes associated with roof drains, boiler blowdown, steam condensate,

air conditioning drains, reactor jacket water, and the sanitary system. The originating source of the non-contact cooling water is ground water from the Sparta Aquifer.

5. The Sparta Aquifer has been designated as a critical ground water withdrawal area by the Arkansas Soil and Water Conservation Commission.

6. Historically the discharge from Outfall 001 was continuous at a volume of approximately 2.2 million gallons per day (mgd). In an effort to be responsive to the permit limitation on temperature of 86°F and to assist in the conservation of the Sparta Aquifer, GLCC developed and implemented a project to transfer the Outfall 001 discharge to Lion Oil for reuse. This transfer project became fully operational during January, 2000. The transfer project provides Lion Oil with water which reduces the amount of water which Lion Oil must pump from the Sparta Aquifer. In addition, the transfer project has significantly reduced the frequency and volume of the flow from Outfall 001. The outfall now discharges approximately 58% of the time. When these discharges occur they are less than 2,500 gallons (.0025 mgd) 85% of the time.

7. While the transfer project has eliminated the majority of the discharge from Outfall 001, there are still occasions when the transfer to Lion Oil cannot be accomplished. These occasions include, but are not limited to, electrical outages, pump malfunction, shut down of the Lion Oil facility. GLCC, therefore, must maintain its ability to discharge through Outfall 001 on an intermittent basis. Although the current discharges are, on the average, very small compared to historical volumes, at times they can reach historical levels.

8. The waterbody segment at issue in this Petition is the 0.5 mile reach of Bayou de Loutre from the existing GLCC Outfall 001 downstream to the confluence with Loutre Creek.

9. Through this Petition, GLCC is requesting that a site specific protective temperature criterion of 96°F be promulgated for Bayou de Loutre from the point where GLCC's Outfall 001 discharges to the confluence with Loutre Creek.

10. GLCC is not requesting any change in designated use for the stream segment. The Seasonal Gulf Coastal fishery is maintained.

11. This Petition to amend Regulation No. 2 is supported by the following: (a) the facility has been operating for over 30 years and the thermal discharge predates the ecoregion-based temperature criterion by many years; (b) the water temperature of Bayou de Loutre exceeds the ecoregion criterion up-stream of the GLCC Outfall 001 during the critical low flow high temperature season; (c) there are no feasible cooling technologies available because of the wide fluctuation of Outfall 001 flow volumes after the transfer project; (d) the aquatic life field survey demonstrates that a Seasonal Gulf Coastal Fishery is maintained by current temperature; (e) the transfer of the effluent from GLCC to Lion Oil reduces the frequency and magnitude of criterion exceedances in Bayou de Loutre, moderates the temperature exceedances in near field reaches of Bayou de Loutre, and has little measurable effect on the water temperature of Loutre Creek and Bayou de Loutre in downstream far field monitoring locations; and, (f) the requested temperature criterion of 96°F is derived using the same statistical approach as ADEQ used to develop the current ecoregion-based criterion.

12. On November 27, 2001, GLCC submitted to ADEQ the documentation in support of this Petition. Subsequent to that submittal, ADEQ requested changes which have been made to that documentation. The supporting documentation is attached hereto as Exhibit "A." This

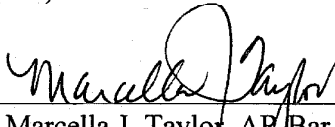
document fully satisfies the information requirements of Section 2.308 of Regulation No. 2 for Site Specific Criteria for amending Regulation No. 2.

13. A black-lined version of the specific change which is requested to Regulation No. 2 is attached hereto as Exhibit "B" and is incorporated herein.

WHEREFORE, Great Lakes Chemical Company requests that the Commission initiate a rulemaking to amend Regulation No. 2 in the manner requested in Paragraph 9 above.

Respectfully submitted,

**MITCHELL, WILLIAMS, SELIG
GATES & WOODYARD, P.L.L.C.**
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(501) 688-8800

By 

Marcella J. Taylor, AR Bar No. 82156

**Attorneys for Great Lakes Chemical
Company**

CERTIFICATE OF SERVICE

I, Marcella J. Taylor, state that I have on this 5th day of March, 2002, mailed a copy of the foregoing Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2 to Mr. Al Eckart, Arkansas Department of Environmental Quality, 8001 National Drive, Little Rock, AR 72219.



Marcella J. Taylor

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)		
Turbidity (NTU)	21	21	25
Red River	50		
Minerals	see §2.511	see §2.511	
Dissolved Oxygen** (mg/l)	<u>Pri.</u> <u>Crit.</u>	<u>Pri.</u> <u>Crit.</u>	see §2.505
<10 mi ² watershed	5 2		
10 mi ² - 500 mi ²	5 3		
>500 mi ² watershed	5 5		
All sizes		6 5	
All other standards	(same as statewide)		

Variations Supported by UAA

- Lourea Creek - from headwaters to railroad bridge, critical season D.O. standard - 3 mg/l; primary season - 5 mg/l; from railroad bridge to mouth, critical season D.O. - 2 mg/l (GC-2, #1)
- Unnamed tributary to Smackover Creek - headwaters to Smackover Creek, year round D.O. criteria - 2 mg/l (GC-2, #2)
- Unnamed tributary to Flat Creek - from headwaters to Flat Creek, year round D.O. criteria - 2 mg/l (GC-2, #4)
- Dodson Creek - from headwaters to confluence with Saline River, critical season D.O. standard - 3 mg/l (GC-4, #5)
- Jug Creek - from headwaters to confluence with Moro Creek, critical season D.O. standard - 3 mg/l (GC-2, #6)
- Lick Creek - from headwaters to Millwood Reservoir, critical season D.O. standard - 2 mg/l (GC-1, #7)
- Coffee Creek and Mossy Lake - exempt from §2.406 and Chapter Five (GC-3, #8)
- Red River from Oklahoma 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; TDS - 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; dissolved solids 420 mg/l (GC-1, #13)
- Town Creek below Acme tributary - sulfates 200 mg/l; TDS 700 mg/l (GC-4, #14)
- Unnamed trib. from Acme - sulfates 330 mg/l; TDS 830 mg/l (GC-4, #14)
- Gum Creek - chlorides 104 mg/l; TDS 311 mg/l (GC-2, #15)
- Bayou de Lourea from Gum Creek to State line - Chlorides 250 mg/l; TDS 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 D.O. 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 Sec 2.511 (CG-4, #19)
- Holly Creek - See Sec. 2.511 (CG-4, #20)
- Saline River bifurcation - see Sec. 2.511 (GC-4, #23)
- Dry Lost Creek and tributaries - see Sec. 2.511 (GC-4, #21)
- Lost Creek - see Sec. 2.511 (GC-4, #22)
- Albemarle unnamed trib (AUT) to Horsehead Creek - chlorides 137 mg/l; TDS 383 mg/l (GC-2, #27)
- Horsehead Creek from AUT to mouth - chlorides 85 mg/l; TDS 260 mg/l (GC-2, #27)
- Bayou Dorcheat - sulfates 16 mg/l (GC-2, #27)
- Bayou de Lourea from GLCC Central to Lourea Creek - Temperature Criterion 96°F (GC-2, #28)

* 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 D.O. standard will be 6.5 mg/l. When water temperatures exceed 22°C, the critical season D.O. standard may be depressed by 1 mg/l for no more than 8 hours during a 24-hour period.

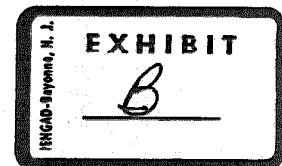


Plate GC-2 (Gulf Coastal Plain)

