

GREAT LAKES CHEMICAL COMPANY
(GLCC), El Dorado, Arkansas
Petition to Amend Regulation No. 2
Docket No. 02-004-R

STATEMENT OF BASIS AND PURPOSE

1. The Arkansas Commission on Pollution Control and Ecology (ACPCE) is given the power and duty to promulgate rules and regulations implementing and effectuating the powers and duties of the Arkansas Department of Environmental Quality (ADEQ) and ACPCE, including regulations prescribing water quality standards. Ark. Code Ann. § 8-4-202(a) and (b).

2. Ark. Code Ann. § 8-4-202(c) provides that any person has the right to petition the ACPCE for an amendment of any rule or regulation. On March 5, 2002, Great Lakes Chemical Company (GLCC) filed its Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2. GLCC's Petition was submitted pursuant to, and in compliance with Regulation No. 8, § 3.4 and Regulation No. 2, § 2.308. On March 22, 2002, the ACPCE entered Minute Order No. 02-06 which granted GLCC's Petition and initiated rulemaking on the proposed changes to Regulation No. 2.

3. 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. 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 ADEQ under NPDES Permit No. AR0001171 which was effective on January 1998. 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.

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

5. The originating source of the water discharged through GLCC's Outfall 0001 is ground water from the Sparta Aquifer. 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. 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 because of events such as electrical outages, pump malfunction, and 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, they can, at times, reach historical levels.

7. The waterbody segment at issue in GLCC's Petition is the 0.5 mile reach of

Bayou de Loutre from the existing GLCC Outfall 001 downstream to the confluence with Loutre Creek.

8. GLCC's Petition requested that the ACPCE amend Regulation No. 2 to promulgate a site specific protective temperature criterion of 96°F for Bayou de Loutre from the point where GLCC's Outfall 001 discharges to the confluence with Loutre Creek. GLCC did not request any change in designated use for the stream segment. The Seasonal Gulf Coastal fishery is maintained.

9. GLCC submitted documentation supporting the requested amendment which documentation is in accordance with, and satisfies the requirements of, Section 2.308 of Regulation No. 2 for Site Specific Criteria for amending Regulation No. 2.

10. GLCC's 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 upstream 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 statistical methods acceptable to the ADEQ.