

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

**IN RE: REQUEST BY GREAT LAKES)
CHEMICAL CORPORATION—)
CENTRAL FACILITY—)
TO INITIATE RULEMAKING)
TO AMEND REGULATION NO. 2) DOCKET NO. 06-008-R**

**GREAT LAKES CHEMICAL CORPORATION'S
STATEMENT OF BASIS AND PURPOSE**

Great Lakes Chemical Corporation (GLCC), for its Statement of Basis and Purpose, states:

1. The Arkansas Pollution Control and Ecology Commission (APCEC) 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 APCEC, including regulations prescribing water quality standards (WQS). 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 APCEC for an amendment of any rule or regulation. On August 31, 2006, GLCC filed its Petition to Initiate Third-Party Rulemaking to Amend APCEC Regulation No. 2. GLCC's Petition was submitted pursuant to, and in compliance with Section 2.306 of APCEC Regulation No. 2, Section 3.4 of APCEC Regulation No. 8, and the Continuing Planning Process. On September 22, 2006, the APCEC entered Minute Order No. 06-37 which granted GLCC's Petition and initiated rulemaking on the changes proposed to Regulation No. 2 by GLCC.

3. GLCC operates a bromine extraction facility south of El Dorado which produces specialty chemicals in a bromine production process. GLCC has operated the facility for over 30 years. Stormwater runoff is discharged from Outfalls 002 and 004 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 1, 2004. This NPDES Permit also authorizes the discharge from Outfall 003 of stormwater runoff and non-process water (e.g., non-contact cooling water, boiler blowdown, freeze protection, etc.). The effluent from these outfalls discharge into unnamed wet weather tributaries. Outfalls 002 and 004 each discharge to separate unnamed tributaries of Bayou de Loutre. These unnamed tributaries are referred to hereafter as UT002 and UT004. Outfall 003 discharges to an unnamed tributary of an unnamed tributary to Little Cornie Bayou. This unnamed tributary to the unnamed tributary to Little Cornie Bayou is hereafter referred to as UT003.

4. The effluent limitations for chloride, sulfate and Total Dissolved Solids (TDS) in GLCC's NPDES Permit are based upon the maintenance of the designated, but not existing, domestic water supply use for the unnamed tributaries of Bayou de Loutre and Little Cornie Bayou. The applicable Arkansas chloride, sulfate and TDS standards for the unnamed tributaries to Bayou de Loutre and Little Cornie Bayou are 14 mg/l, 31 mg/l and 123 mg/l respectively. The applicable chloride standard for Bayou de Loutre is 250 mg/L and the applicable chloride and sulfate standards for Little Cornie Bayou are 200 mg/l and 20 mg/l respectively.

5. GLCC is specifically requesting the following amendments to APCEC Regulation No. 2:

- a. modify the dissolved minerals criteria for the entire length of UT002 as follows:

TDS from 123 mg/L to 141 mg/L
sulfate from 31 mg/L to 35 mg/L
chloride from 14 mg/L to 65 mg/L

- b. modify the dissolved minerals criteria for the entire length of UT004 as follows:

TDS from 123 mg/L to 324 mg/L
chloride from 14 mg/L to 239 mg/L

- c. modify the chloride criterion for Bayou de Loutre from its the confluence with UT004 to Loutre Creek as follows:

chloride from 250 mg/L to 278 mg/L

- d. modify the dissolved minerals criteria for the entire length of UT003 as follows:

TDS from 123 mg/L to 519 mg/L
sulfate from 31 mg/L to 35 mg/L
chloride from 14 mg/L to 538 mg/L

- e. modify the dissolved minerals criteria for the unnamed tributary of Little Cornie Bayou from its confluence with UT003 to its mouth as follows:

TDS from 123 mg/L to 325 mg/L
chloride from 14 mg/L to 305 mg/L

- f. modify the dissolved minerals criteria for Little Cornie Bayou from its confluence with the unnamed tributary to the Arkansas/Louisiana state line as follows:

sulfate from 20 mg/L to 25 mg/L
chloride from 200 mg/L to 215 mg/L

- g. remove the Domestic Water Supply use designation for the entire length of UT002.
- h. remove the Domestic Water Supply use designation for the entire length of UT004.
- i. remove the Domestic Water Supply use designation for the Bayou de Loutre from its confluence with UT004 to the mouth of Loutre Creek.
- j. remove the Domestic Water Supply use designation for the entire length of UT003.
- k. remove the Domestic Water Supply use designation for the unnamed tributary to Little Cornie Bayou from its confluence with UT003 to its mouth.

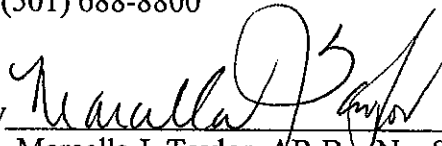
6. On June 28, 2006, GLCC submitted to ADEQ a document entitled *Section 2.306 Site Specific Water Quality Study for Cl, SO₄ and TDS* in support of this Petition (hereinafter "the Study"). This document fully satisfied the information requirements of Section 2.306 of APCEC Regulation No. 2 for Site Specific Criteria for amending Regulation No. 2.

7. GLCC's Petition is supported by the following facts:

- The domestic water supply use designations for UT002, UT004, Bayou de Loutre from its confluence with UT004 to Loutre Creek, UT003, and the unnamed tributary to Little Cornie Bayou from its confluence with UT003 to its mouth were assigned by default, are not existing uses, and are not attainable uses because the natural, ephemeral and low flow conditions prevent the attainment of the use;
- The aquatic life field studies conducted in April and May of 2005 show that despite the fact that the watercourses are seasonal wet weather tributaries with small watersheds which limit the development of biotic communities, the designated aquatic life use and the biological integrity of the watercourses is being maintained downstream of the discharges;
- The existing discharges pass the WET testing requirements of the NPDES permit. Toxicity testing in 100% whole effluent from Outfalls 002 and 004 and WET testing of the Outfall 003 demonstrate no toxicity as a result of the dissolved mineral concentrations;
- Current discharge concentrations have been reduced from historic concentrations through facility upgrades to Best Management Practices and spill control containment and cleanup;
- There is no current economically feasible treatment technology for the removal of chloride, sulfate, or TDS. Ion exchange and reverse osmosis treatment technologies do exist; however, these methods are not cost effective on a large scale basis, are prohibitively expensive, and generate a concentrated brine which is environmentally difficult to dispose of. Such treatment technology is not required to meet the existing uses and would not add any significant environmental protection.

Respectfully submitted,

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By 

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**Attorneys for Great Lakes Chemical
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CERTIFICATE OF SERVICE

I, Marcella J. Taylor, state that I have, on this 10th day of January, 2007, mailed a copy of the foregoing Statement of Basis and Purpose to Ms. Ellen Carpenter, Arkansas Department of Environmental Quality, 8001 National Drive, Little Rock, AR 72219.



Marcella J. Taylor