



CHEMICAL COMPANY

October 11, 2005

Mr. Dennis Benson  
Technical Assistance Manager  
NPDES Permits Section - Water Division  
Arkansas Department of Environmental Quality  
8001 National Drive  
Little Rock, Arkansas 72219-8913



*Your copy Dennis*

RE: Quarterly Report – Third Quarter 2005, CAO LIS 98-119

Dear Mr. Benson:

This letter serves as the referenced Quarterly Report. During this quarter there continued to be significant actions regarding the NPDES permit for El Dorado Chemical Company (EDCC). These actions centered on projects and studies related to compliance with our current NPDES permit as well as the continued development of the project to construct a pipeline to the Ouachita River. The following paragraphs present details regarding these activities.

1. Hydrologic Study

As related in previous quarterly reports, EDCC submitted a hydrologic study plan for the storm water outfalls. This plan was approved by ADEQ and then subsequently revised to modify the location of the background monitor for Outfalls 006 and 007. During the 3rd quarter of 2005 the level loggers continued to collect data pursuant to the approved work plan. The study will be completed within the timeframes set by the NPDES permit.

2. Retention Basin Temperature Study

Pursuant to the requirements of the final NPDES permit, EDCC submitted a temperature study plan for the purpose of determining the influence of ambient conditions on the temperature regime of the retention basin at EDCC. During the 4th quarter of 2004 ADEQ approved the study plan. As discussed in the last quarterly progress report, the study, which was initiated in the 2nd quarter of 2005 was continued during the 3rd quarter and will be completed within the timeframes set by the NPDES permit.

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### 3. Storm Water Outfall Compliance

During the 3rd quarter the following activities were accomplished to effectuate compliance with storm water discharges from Outfalls 004, 005, 006 and 007.

- GBM<sup>c</sup> provided preliminary engineering designs for storm water capture systems at Outfalls 004, 006, and 007. EDCC is evaluating alternatives including gravity diversion and source reduction to attain compliance with permit limits.
- All of the stormwater from Outfall 005, (except for the lawn and parking area in front of the Admin Building) was diverted into Lake Lee. This water is treated and eventually discharges to Outfall 001.

### 4. Source Reduction Analysis

During the 3rd quarter of 2005, there were several source reduction activities accomplished, including:

- The engineering design work has been completed on several containment projects for the Nitrate Plant area.
- Process improvements in the Nitrate Plant area were implemented to reduce waste loading to the wastewater system. This has resulted in an approximate 60% reduction in nitrate and ammonia loading compared to 2004 data.
- Repairs were made to piping and collection sumps in the Nitrate Plant area to reduce waste loading to the wastewater system.

### 5. Wastewater System

During the 3rd quarter of 2005, there were numerous activities conducted in relation to the upgrade of the wastewater treatment system. These activities focused on both Lake Lee and Lake Kildeer as listed in the following sections.

#### Wastewater/Storm Water Treatment

- GBM<sup>c</sup> prepared preliminary capital and operating cost estimates for construction of a biological treatment system.

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- Two vendors (AquaAerobics and ITT Sanitaire) presented information on sequencing batch reactors for nitrification/denitrification.
- EDCC, GBMc and Milam Construction Co. representatives visited biological treatment facilities in Morton, MS and Booneville, AR.

#### Lake Lee

- A force main to convey excess storm water to Lake Kildeer was constructed and pumps, piping and controls were ordered.
- A total of 13 aerators were added to Lake Lee to enhance ammonia removal.

#### Lake Kildeer

- Completed construction of a return pipeline from Lake Kildeer to Lake Lee to allow for recirculation and additional treatment if needed by the future biological system.

### 6. Wastewater Treatment Bioaugmentation

As discussed in previous quarterly reports, during the 3rd quarter of 2005, El Dorado Chemical Company continued implementation of the alternative wastewater treatment technology. We continue the collection of performance data to determine the efficacy of the organisms in our wastewater treatment system.

The data that EDCC has collected so far indicates that the addition of various microbes has had a positive impact on the wastewater treatment system. The biomonitoring results from Outfall 001 have steadily improved with the 3rd quarter 2005 tests passing at 100% effluent water. The concentrations of contaminants such as ammonia-nitrogen and nitrate have declined steadily as well. The vendor for the microbes will be conducting a study to improve ammonia and nitrate removal by adding additional microbes to Lake Lee, during the fourth quarter.

### 7. Ground Water Study

A report on the statistical evaluation of groundwater data was submitted to the ADEQ along with an engineering evaluation of in-situ groundwater treatment options. Laura Stuart-Leslie, Linda Hanson and Randall Whitmore (EDCC) met

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on September 30, 2005 to discuss these reports. As a result of these discussions, modifications will be made to the list of parameters analyzed in the groundwater samples. Some parameters will be removed as a result of the statistical evaluation and new parameters will be added to collect data necessary to determine the applicability of in-situ treatment and environmental risk. The additional data will be collected in the fourth quarter of 2005 and the first quarter of 2006.

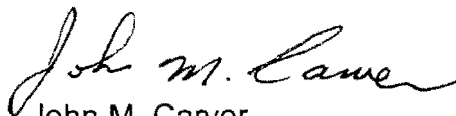
8. Joint Pipeline Activities

During the 3rd quarter of 2005, there were additional actions regarding the joint pipeline construction and permitting. These actions included meeting with the ADEQ Water Division staff to review and discuss proposed draft NPDES permit limits. In addition, there were communications regarding the proposed permit approaches of the ADEQ and the joint pipeline group provided documentation during the 3rd quarter.

Additionally, the nutrient study was initiated according to the reviewed work plan and the fieldwork completed during the 3rd quarter. The study is to be completed as scheduled.

Hopefully, this letter has adequately explained the status of our NPDES compliance efforts during the 3rd quarter of 2005. Should you have any questions, please feel free to call me at (405) 235-4546.

Sincerely,



John M. Carver  
Vice President Safety and  
Environmental Compliance

JMC/ymq

cc: Belinda Colby, Enforcement Coordinator, Hazardous Waste Division  
Keith Brown, Manager, State Permits, Water Division  
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