



CHEMICAL COMPANY

**VIA HAND DELIVERY**

April 14, 2000



Mr. Art Riddle  
NPDES Enforcement Supervisor  
Water Division  
Arkansas Department of Environmental Quality  
8001 National Drive  
Little Rock, Arkansas 72219-8913

RE: Quarterly Report - First Quarter, 2000, CAO LIS 98-119

Dear Mr. Riddle:

Pursuant to paragraph 2(1) of Consent Administrative Order No. 98-119, enclosed please find the Quarterly Report for the First Quarter, 2000. Should you have any questions, please feel free to call Byron Smith at (870) 863-1498.

Sincerely,

A handwritten signature in cursive script that reads "John M. Carver".

John M. Carver  
Vice President Safety and  
Environmental Compliance

JMC/tlc

Enclosure

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

jgc\riddle\_00.410

**QUARTERLY REPORT  
CONSENT ADMINISTRATIVE ORDER  
LIS 98-119**

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Prepared for:

**El Dorado Chemical Company  
PO Box 1373  
Oklahoma City, OK 73101**

Prepared by:

**GBM<sup>c</sup> & Associates  
219 Brown Lane  
Bryant, AR 72022**

**April 14, 2000**

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# ATTACHMENTS

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Attachment 1      Wastewater Minimization Project Schedule

# **1.0 Background**

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## **1.1 Objectives**

The objective of this document is to provide the Arkansas Department of Environmental Quality (ADEQ) a quarterly report on the progress of the projects associated with Consent Administrative Order (CAO) LIS 98-119, Paragraph 2, dated August 14, 1998. This document is for the period from January 1, 2000 through March 31, 2000.

GBM<sup>c</sup> & Associates (GBM<sup>c</sup>) has prepared this quarterly report on behalf of El Dorado Chemical Company (EDCC). GBM<sup>c</sup> is currently providing consulting engineering services associated with the upgrade and improvements for the wastewater collection and treatment systems at the El Dorado plant.

The engineering improvements were initiated by EDCC in anticipation of the new NPDES permit limits. The existing NPDES permit is currently due for renewal and this work will be used to help establish new permit limits.

Various tasks, which will provide the groundwork for the development and implementation of subsequent activities, have already been performed. With the concurrence of ADEQ, a Wastewater Minimization/Stream Segregation (WM/SS) program has been developed and is being implemented at the present time.

This progress report presents brief outlines of the above efforts performed to date and describes the status of the activities currently in progress. A Gantt chart, which presents the overall schedule of activities, is also attached.

# **2.0 Previous Activities**

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## **2.1 Early Work**

Initial studies on EDCC's wastewater collection and treatment system were performed by URS Greiner Woodward Clyde (URSGWC) in the spring of 1997. This work indicated that the plant collection system needed improvements with regard to re-routing uncontaminated storm water away from the treatment system and segregating process and contact storm water and routing these flows to treatment. In the existing system, process wastewater, cooling tower blowdown, demineralizer backwash, contact storm water (i.e., rainwater falling within the process areas), and a significant portion of the non-contact storm water (rainwater falling outside of the process areas) are all combined and routed to the treatment system. By segregating these streams according to their characteristics, a more effective and efficient treatment system can be designed.

Cost estimates developed on the basis of this early evaluation work indicated that a new treatment system sized to handle the volumes of wastewater involved would be prohibitively expensive. It was concluded that a necessary initial step would be the development and implementation of a plant-wide stream segregation program to route each wastewater stream to its proper destination, according to its characteristics and composition, coupled with a wastewater minimization program to reduce the volume and contaminant loading of the process wastewaters generated.

The main purpose of such a Wastewater Minimization/Stream Segregation (WM/SS) Program would be to reduce flows and loadings of the wastewater which would need to be processed through the future treatment facility. With these reductions, the design flow for the new facility should be significantly less than existing flows and therefore should result in a smaller and more efficient wastewater treatment system.

The WM/SS program was intended to be completed with sufficient time remaining to perform a wastewater flow and loading characterization study by August 1, 1999. The new flows and loadings were to be incorporated into the NPDES permit renewal application. However, since the WM/SS project was not completed by July 30, 1999, some estimates of flow and loading coupled with available data were used for the permit application and Basis of Design (BOD) document for the new treatment facility.

Full implementation of the WM/SS program has been temporarily delayed pending procurement of outside funding. However, the wastewater characterization tasks which have been completed provided data for the NPDES permit application submitted to the ADEQ on July 30, 1999.

## **2.2 Identification of Wastewater and Storm Water Streams**

Following the initial studies by URSGWC, implementation of the preliminary phases of the WM/SS program commenced in late spring of 1997. EDCC appointed Mr. Kyle Wimsett, a member of the plant's operations staff, to work full time in coordination with the plant's Environmental Department, on the first phase of the WM/SS program. This phase consisted of a plant-wide, area-by-area characterization of the existing wastewater collection system, including the identification of each of the wastewater streams in the plant and the identification of each stream's point of origin and the specific route to the treatment system.

Dye studies were conducted in each operating area of the plant to develop the information on routing and to delineate the existing system. This phase of the WM/SS program continued through the spring and early summer of 1998. The information developed through these early efforts provided the foundation for defining the next phases of the WM/SS program.

## **2.3 Development of an Overall Action Plan**

The early work performed by plant personnel allowed the formulation and development of a conceptual plan for the remainder of the WM/SS project. This plan is presented in graphical form (Gantt chart in Attachment 1) and shows an overall project schedule and the duration of each specific task.

The task duration shown on the Gantt chart is given in working days (as opposed to calendar days), with the completion of the construction phase originally scheduled for July 1999. However, due to budget constraints, the construction phase of the WM/SS project has been delayed until additional funding can be secured. Estimates of wastewater flows and loadings were incorporated into the NPDES permit renewal application submitted on July 30, 1999. The estimated flows and loadings will also become a part of the Basis of Design (BOD) document for the new treatment facility.

Implementation of the WM/SS program action plan was initiated in June of 1998 and it continues at present, as the attached Gantt chart indicates.

## 3.0 Current Efforts

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### 3.1 Development of a Preliminary Design for WM/SS

The preparation of a preliminary design required several tasks, as follows:

1. **Topographic Survey.** As a necessary initial step for the definition of the overall approach to develop a WM/SS design package, the services of a surveying contractor were obtained to perform a plant-wide topographic survey with sufficient detail to provide the information that will be necessary later in the detail and layout of the containment and curbed areas, rerouting of existing drain lines or the installation of new ones, and the location and design of collection basins and sumps, pump stations and other such installations. The survey work was initiated in early July and was completed in mid-August, 1998.
2. **Existing Drawing File Search.** At the same time that the topographic survey was in progress, an effort was made to locate all of the existing drawings, documents and records which might be useful during the detail design phase of the project.
3. **Basis of Design (BOD).** A conceptual Basis of Design (BOD) for the WM/SS project has been developed to establish the scope of the project, outline the overall project approach and list the specific modifications and improvements to be developed and implemented as part of this effort.
4. **Preliminary Design.** From the BOD document a preliminary design was developed. The preliminary design was the basis for the WM/SS projects, listed below as Phase I through Phase V.

### 3.2 Current Status

This section details work accomplished since the January 15, 2000 report. The five project phases are as follows:

- Phase I: Northside Outfall Consolidation
- Phase II: Sulfuric Acid and High Density Ammonium Nitrate (AN) Prill Bulk Storage Building Area
- Phase III: Nitric Acid Area
- Phase IV: AN Prilling Areas
- Phase V: Liquid AN Tank Storage and Ammonia Storage Area

During the first quarter of 2000, EDCC continued the process of securing funds for the remaining tasks of the WM/SS project, conducting negotiations with representatives of State, City, and County industrial development funding entities. Pending the procurement of funds, the construction of Phase II improvements and the engineering design for Phases III – V has been suspended.

### 3.2.1 Detail Design

The final engineering design for modifications in the Sulfuric Acid and High Density Ammonium Nitrate (AN) Prill Bulk Storage Building Area (Phase II) has been completed and submitted to EDCC. Engineering design of the remaining WM/SS improvement phases has been temporarily delayed pending the resolution of financing issues.

### 3.2.2 Northside Outfall Consolidation

Construction was initiated during the first quarter of 1999 and completed June 1999. Due to soil conditions encountered during construction, storm water runoff from the north side of the plant was not consolidated into a single outfall, but segregated into two outfalls. Consolidation of the storm water into two outfalls instead of one does not have any impact on the future management of non-contact runoff from the facility. It simply requires maintenance and monitoring of two outfalls.

### 3.2.3 Reverse Osmosis Unit

A reverse osmosis water treatment system at the Boiler House has been installed and operational since early January 1999. The unit has significantly reduced the sulfate loading to the facility's wastewater treatment system.

### 3.2.4 Third Street Neutralization

The Third Street Sewer pH Neutralization system was completed in mid-June 1999, and is in operation.

### 3.2.5 Outfall Sampling Results

Monitoring sampling results for outfalls were included in the Final Wastewater Characterization and Water Quality Evaluation Report and the application to renew NPDES Permit No. AR0000752, both dated July 30, 1999.

## 3.3 Planned Work for Next Quarter

The following tasks are planned for the next quarter (April 1 through June 30, 2000):

1. Receive contractor bids for the sulfuric acid area and high-density ammonium nitrate prill bulk storage building WM/SS improvements. (Pending the procurement of outside funding.)
2. Complete design work for the nitric acid, AN prilling area, and liquid AN tank storage/ammonia storage area WM/SS improvements. (Pending the procurement of outside funding.)

*Comments  
11/13/20  
10/13/20  
10/13/20*

*no new bids being done  
budget can't be used*

## **Attachment 1**

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# **Wastewater Minimization Project Schedule**

