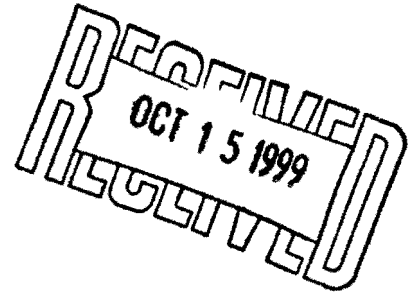




VIA HAND DELIVERY

October 14, 1999

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



RE: Quarterly Report - Third Quarter, 1999, 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 Third Quarter, 1999. 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

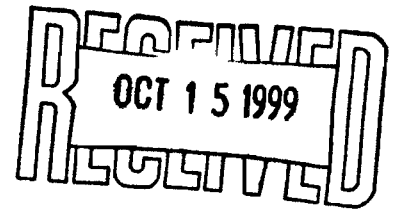
JMC/tlc

Enclosure

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

jgc\riddle_99.1014

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



Prepared for:

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

Prepared by:

**GBM^c & Associates
219 Brown Lane
Bryant, AR 72022**

October 15, 1999

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ATTACHMENTS

Attachment 1 Wastewater Minimization Project Schedule

1.0 Background

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 July 1, 1999 through September 30, 1999.

GBM^c & Associates (GBM^c) has prepared this quarterly report on behalf of El Dorado Chemical Company (EDCC). GBM^c 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

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 duration shown on the second column of 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

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 approach to develop a WM/SS design package, the services of a surveyor were obtained to perform a plant-wide topographic survey with the information that will be necessary later in the detail and curbed areas, rerouting of existing drain lines or the installation and design of collection basins and sumps, pump installations. The survey work was initiated in early July and August, 1998. *done as 7/14/99 report*
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 July 14, 1999 report. The preliminary design is complete and some phases of the detail design are in progress. The detail design was divided into five phases according to location in the plant. The purpose of developing five design packages was to expedite construction activities for the WM/SS project (i.e., for design activities for one phase to be on-going during construction for another phase). The five detail design 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

The WM/SS project schedule is included as Attachment 1.

3.2.1 Detail Design

Design work is continuing on the WM/SS improvements. 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 was submitted to EDCC during the second quarter of 1999. Engineering design of the remaining WM/SS improvement phases has been temporarily delayed due to budget constraints.

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

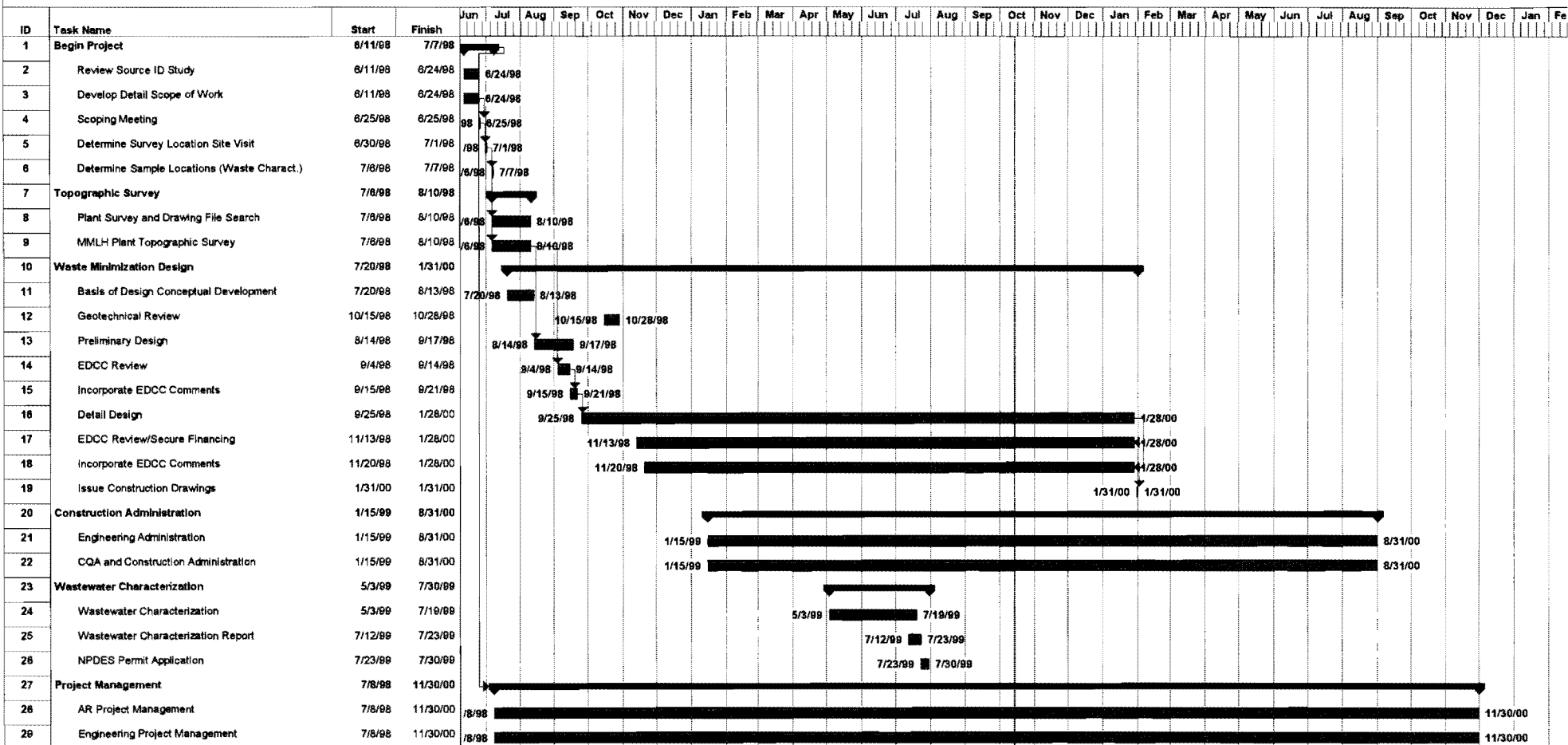
The following tasks are planned for the next quarter (October 1 through December 31, 1999):

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 outside funding.)

planned work is same as above proposed in 7/14/99 report has engineering next year done

Attachment 1

Wastewater Minimization Project Schedule



Project: WWSS
Date: 10/14/99

Task Milestone Rolled Up Task Rolled Up Progress
 Progress Summary Rolled Up Milestone