DOE/MT/95003--2

DEVELOPMENT OF A DATA MANAGEMENT SYSTEM FOR
ASSISTANCE IN CONDUCTING AREA OF REVIEWS (AORS) ON
CLASS II INJECTION WELLS IN OKLAHOMA

Cooperative Agreement Grant No. DE-FG22-95MT95003

Oklahoma Corporation Commission

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Reporting Period: July through September, 1995

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Project Objectives: Project objectives are to provide the resources and capabilities to permit the State of Oklahoma to conduct Area of Review (AOR) variance analysis on a statewide level including: 1) the analysis and identification of areas which may qualify for AOR variances; 2) the correlation of information from various databases and automation systems to conduct AORs in areas that do not qualify for variances; 3) the evaluation of the risk of pollution, during permitting and monitoring, using risk based data analysis; and 4) the ability to conduct spatial analysis of injection well data in conjunction with other geographically referenced information.

Summary of Technical Progress: The Oklahoma Corporation Commission began implementing the project based on the resources provided by the U. S. Department of Energy in March 1995. The resources provided were sufficient to purchase and install 17 personal computers or client workstations with the necessary software and associated hardware. This equipment was ordered on May 4, 1995, and received on May 24, 1995. The installation of the equipment began on July 10, 1995, and was completed on July 20, 1995. The equipment list was forwarded with the technical report dated September 18, 1995.

The division successfully converted its mainframe computer surety system to the new client server network and implemented it on September 29, 1995. The division currently lacks sufficient storage space to bring the existing oil and gas spatially referenced data systems in-house and fully integrate the systems for use in the determination of AORs or AOR variances. The second installment of the awarded grant allows for the purchase of the developmental server that will provide the minimum computer storage space to convert the remainder of the mainframe computer systems. The conversion is being accomplished using a software package that allows the COBOL programming to run in a client/server environment. This conversion allows the UIC Department's system to read the Surety system but not actually interact with the converted files. (The systems still need to be rewritten to allow successful completion of the project goals.) This ability allows for quicker verification of an operator's financial assurance mechanism. This ability has not been available prior to this conversion and will increase the agency's ability to verify financial assurance for UIC wells.

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Also, the division began identifying areas in Oklahoma that may potentially qualify for general variances under the developed guidelines. Dr. Don Warner, University of Missouri, Rolla, is assisting the division on this task.

In September 1995, the division met with representatives from CH2M Hill for the attainment of the Risk Based Data Management Program (RBDMS). The division discussed the some of the necessary refinements to that system for use by Oklahoma. A second meeting is scheduled for October 26, 1995 with further follow-up meetings also scheduled.

During the following quarter (October through December 1995), the division is scheduled to order additional client workstations, the development server, the development software, hire system analyst to actually start reprogramming or rewriting the systems and implement the other three converted mainframe systems. The division should receive the information from Dr. Warner as to the viability of a variance program for Oklahoma and what additional information the division may need to acquire to complete such program.

References/Publications: None

• Theses or technical journal articles: None