



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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AUG 22 2011

Ref: 8P-W-GW

Mr. Thomas Richmond, Administrator  
Montana Board of Oil and Gas Conservation  
2535 St. Johns Avenue  
Billings, Montana 59102

Re: Montana Board of Oil and Gas Conservation  
Underground Injection Control (UIC)  
1425 Program  
FY2011 Mid-Year Review

Dear Mr. Richmond:

The U.S. Environmental Protection Agency, Region 8 conducted a FY2011 mid-year review of the MBOGC UIC 1425 Program on July 26, 2011.

The mid-year review consisted of discussions of the overall MBOGC UIC 1425 Program, work plan accomplishments, grant status, up-coming activities and other related topics. The primary participants involved in the mid-year review were George Hudak, MBOGC, and Douglas Minter, Tom Aalto and Stephanie Vuong of the EPA. The EPA appreciated the efforts of George Hudak throughout the review process. The EPA also appreciated your participation in portions of the mid-year meeting and teleconference. A mid-year review document, which includes general background information, has been prepared by the EPA in consultation with George Hudak and is enclosed.

If you have any questions or comments regarding the mid-year review, please feel free to contact me at (303)312-6575 or contact Tom Aalto of my staff at (303)312-6949.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven J. Pratt".

Steven J. Pratt, P.E., CAPM (inactive)  
Director, Ground Water Program

Enclosure: FY2011 Mid-Year Review

cc: George Hudak, MBOGC



**U.S. EPA Region 8**  
**Underground Injection Control Program**

**FY2011 Mid-Year Review**  
**of**  
**Montana Board of Oil and Gas Conservation (MBOGC)**  
**Underground Injection Control (UIC) 1425 Program**

**August 2011**

**Introduction**

A MBOGC UIC 1425 program FY11 mid-year review was conducted by the EPA Region 8 in the offices of MBOGC in Billings, Montana on July 25 and 26. This report focuses on MBOGC Class II UIC program implementation during the first half of FY11 (October 1 to March 31), and includes additional selected activities conducted by MBOGC to date. As part of the review, a close-out teleconference was also held during the afternoon of July 26.

The primary participants involved in the review were George Hudak, MBOGC UIC Director, and Tom Aalto, the EPA Technical Project Officer and lead reviewer. Participants in the close-out teleconference were: Tom Richmond, MBOGC Administrator, George Hudak, Tom Aalto and, by teleconference, Douglas Minter, EPA UIC Team Leader and Stephanie Vuong, the EPA Grants Project Officer.

Topics discussed between George Hudak and Tom Aalto during the review included various aspects of program implementation related to the FY11 work plan, including permitting, Board hearings, inspections, reporting, grant status, primacy for Class VI wells and microbial methane farming. A review of MBOGC files was also conducted by the EPA. There were no follow-up issues from FY10. The results of the FY11 mid-year review are discussed below with references to supporting information.

**Background**

The MBOGC regulates oil and gas development activities, including the UIC 1425 program, exclusive of Indian Lands. The Board's General Rules and Regulations are contained in Title 36, Chapter 22 of the Administrative Rules of Montana, which were established to help protect Underground Sources of Drinking Water (USDWs). The program Memorandum of Agreement between the EPA and the MBOGC was signed by the Acting EPA Regional Administrator on June 9, 1996. Notice of approval of the Class II UIC program was published in the November 19, 1996 Federal Register. The federal regulations are found at 40 CFR Part 147, Subpart BB.

The MBOGC UIC Program has a Board hearing process. The Board meets frequently throughout the year to address program-related issues.

Each year the EPA and MBOGC negotiate a UIC 1425 Program Work Plan to be implemented by MBOGC in the up-coming fiscal year. The FY11 Work Plan and associated Grant form the framework for this review. [The MBOGC UIC work plan and grant are based on the federal fiscal year: October 1 to September 30. The state fiscal year is July 1 to June 30.]

## **Personnel**

The MBOGC board is comprised of seven members appointed by the governor for staggered four year terms. The MBOGC is administratively attached to the Montana Division of Natural Resources (DNR), and maintains three offices in the state. The Division Office is located in Helena, and is staffed with an Administrative Officer and one clerical position. The Technical and Southern Field Office is located in Billings. The Administrator, UIC Director, Petroleum Geologist, Chief Field Inspector and three support staff are located in this office, as are the well files, maps and logs. The Northern District office is located in Shelby, and is staffed with two inspectors and one clerical position. Four other inspectors operate from their residences in Glendive, Plentywood, Sidney and Roundup. Legal services continue to be provided by a DNR staff attorney. This arrangement has provided a cost benefit and has been effective at meeting the legal needs.

## **UIC Program Work Plan/Funding/Budget**

George Hudak (MBOGC) stated that he prepares the work plan for each fiscal year. He also stated that he does that in consultation with Terri Perrigo, MBOGC, Administrative Officer, Helena, Montana office who prepares the grant application. George Hudak then implements the work plan and Terri Perrigo allocates the grant dollars.

Stephanie Vuong (EPA) provided the following grant-related information during the teleconference:

- The FY10 grant has been closed out
- The FY11 grant has been awarded \$111,000
- The FY11 grant drawdowns as of 7/20/11 are \$18,800 (partial award amount)
- The remaining funds for FY11 are \$92,200 (MBOGC plans to draw-down the remaining FY11 funds by September 30, 2011)

For FY12, there are new grant application forms on the EPA website. There are no tentative allotments yet for FY12. However, the FY12 work plan and grant applications should be submitted by mid-August 2011, if possible. Stephanie Vuong recommended that MBOGC round up the amount requested to minimize the administrative steps necessary to process the request if additional funding is available. [Note: Danette Quick, EPA Grants Specialist, Helena, Montana works with Stephanie Vuong on the MBOGC grant.]

## **Permits**

Class II salt water disposal (SWD) and enhanced oil recovery (EOR) Injection well permit applications and any associated aquifer exemptions are reviewed by the UIC Director. Technical and policy advice are provided by the staff Petroleum Geologist, Chief Field Inspector and Program Administrator. Permits are approved by Board Orders which are signed by the Board members. The

permit files include the permit applications, Board Orders, and Sundry Notice stipulations (special requirements for each well) which are signed by George Hudak. Bonding is typically set at \$10,000 for each injection well (but may vary depending on well depth). There is currently no permit backlog. However, according to George Hudak, the amount of permitting activity has increased recently, and a minor backlog could temporarily arise. A total of nine (9) permit files were reviewed by EPA. There is no permit backlog. No problems were found with MBOGC permitting.

Selected UIC National Database Numbers:

-Total number of permits issued during the reporting period: 7 (5 SWD, and 2 EOR wells)

### **Aquifer Exemption Requests**

Aquifer exemption requests are reviewed as part of the permitting process. There were no aquifer exemption applications or reviews conducted during the first half of FY11. Three aquifer exemption requests were received in FY11 and granted in May 2011 (Citation Oil & Gas Corp.). One additional aquifer exemption request is expected during FY11. The EPA reviews all Class II aquifer exemption requests in close coordination with MBOGC. As the MBOGC has program primacy, the EPA is in a concurrence role for all Class II aquifer exemption requests.

### **Inspections and Plugging and Abandonment**

The Chief Field Inspector, Steve Sasaki, is stationed at the Billings office and has over 21 years of experience. The other six (6) inspectors are located in the field offices, and have varying levels of experience. The inspectors individually decide which operators to inspect. As there are approximately 1,000 Class II injection wells in the state, the inspection workload is significant.

Salt water disposal wells are inspected at least once per year, and enhanced recovery wells are inspected at least once every five (5) years. Most inspections are conducted in the warm weather months. A total of five (5) inspection reports were reviewed by the EPA. No problems were identified with respect to MBOGC inspections.

Completed inspection forms are kept in the well files along with the permit, other correspondence, board orders and other relevant documentation. Mechanical integrity tests (MITs) are conducted separately from, and in addition to, routine UIC well inspections. Operators are allowed to conduct pre-testing prior to the test run during the inspection.

In addition, Steve Sasaki, Chief Field Inspector, oversees plugging for all injection wells (as well as plugbacks), approves plans, witnesses selected field activities and reviews other permit related actions. [Note: Plugging and Abandonment Plans are required at the time the operator plans to plug and abandon a well(s).]

Selected UIC National Database Numbers:

-Total number of inspections: 272

### **Compliance and Enforcement**

UIC enforcement actions are the responsibility of the MBOGC UIC Director, in consultation with the field inspectors, technical staff and the Administrator. Most of the current enforcement cases involve overdue or failed mechanical integrity tests. About half of the cases are discovered by inspectors. The remainder of the cases is typically reported by operators. Most operators return to compliance voluntarily but some are brought before the Board for resolution (for example, at a "Show Cause" Hearing). Maximum allowable injection pressure exceedances have been occurring at a frequency of about six (6) times per year. Operators are required to observe the wells weekly and report monthly (maximum pressure and average reading). There are no significant ongoing enforcement cases. Also, no significant issues were reported or discovered concerning enforcement of UIC Rules and Regulations by MBOGC.

Selected UIC National Database Numbers:

-Total number of violations: 30

-Total number of enforcement actions: 30

-Number of wells with SNC: 0

-Percentage of MIT violations resolved within 90 days: 62%

-Number of cases of alleged contamination of a USDW: 0

### **Data Management**

MBOGC uses the Risk Based Data Management System (RBDMS) software for data management and reporting. Permit information and well inventory information is entered into the system. Due dates for mechanical integrity tests are also tracked in the system. With respect to the UIC National Database, Montana submitted their data electronically to the EPA Headquarters. The 7520 reporting forms were also provided to the EPA in hardcopy.

### **Technical Assistance and Training**

The MBOGC UIC Program Director attended the EPA sponsored UIC Class VI training in January 2011, in Denver, Colorado. No other MBOGC personnel attended the EPA sponsored training during the first half of the fiscal year. This was due primarily to budget constraints and due to a state "hold" on travel outside of Montana for MBOGC staff. The MBOGC is interested in attending technical training including UIC Inspector training in the near future if funding allows and if the hold on state agency personnel travel outside of the state is lifted. MBOGC expressed interest in attending the EPA technical training including UIC Inspector Training in FY12 if possible.

## **MBOGC Board Hearings**

The MBOGC held three Board meetings during the first half of FY11. These hearings were held in October 2010, December 2010 and February 2011.

## **MBOGC Building Improvements**

The MBOGC has completed construction work on enlarging and improving its building facilities. The \$1.8 million dollar construction project began in September 2009 and includes expanded office and file storage space, as well as a new public meeting room where Board hearings are held. The major portion of the move into the new space was completed in late 2010. Also, approximately 90% of the files have now been transferred to the new rolling file system.

All UIC permit files had been moved to the basement when the Board offices were being remodeled in 2010. These files are now being moved back to the main floor to the new file-storage area. As they are being moved, the UIC Director is performing a file review on each one and, in general, cleaning up the files by removing duplicate or unnecessary materials, etc. In addition, old EPA permit files and other UIC related materials will all be moved out of storage and to the new filing area, due to the increase in filing space made available during the remodel.

## **Geologic Sequestration of Carbon Dioxide / Class VI Primacy Application**

The Montana legislature has tasked MBOGC with developing and implementing Class VI regulations related to Geologic Sequestration of carbon dioxide. Montana intends to publish the GS Class VI regulations after obtaining primary enforcement authority or “primacy” from the EPA. An important step in the process was accomplished recently when the Montana legislature enacted a 50-year Post Injection Site Care (PISC) requirement for Class VI operators. The entire primacy application process is expected to take several more years. As mentioned by Douglas Minter during the teleconference, there is an ongoing discussion in the EPA concerning potential Class V or Class VI classification for some types of experimental CO2 GS wells. As mentioned by MBOGC, the industry and MBOGC is strongly inclined to see such experimental projects as falling under Class V requirements.

Potential Class VI Projects in Montana:

- Kevin Dome, Big Sky/DOE Project, north central Montana
- Porcupine Dome, C12 Project, eastern Montana

## **Bell Creek EOR Project**

There is a notable Class II EOR project underway in the Bell Creek Field in Southeastern Montana that plans to use a carbon dioxide flood. Currently, the reservoir in the Bell Creek Field is being filled with water in preparation for planned injection of carbon dioxide. The former operator was Encore and is now Denbury. Also, at the Bell Creek project site, the “Plains CO2 Reduction Partnership” plans to install a monitoring well as part of the project (similar to a Class VI project monitoring well).

## **Accomplishments / Progress Toward Meeting FY11 Goals**

MBOGC UIC 1425 Program accomplishments for the first half of FY11 were input into the UIC Federal Reporting System (UIC National Database) by MBOGC. As shown in the database, the MBOGC has made a number of accomplishments related to implementation of the 1425 Program so far this year.

## **FY-12 Planning**

MBOGC is in the process of planning for FY12. No major changes are expected for FY12.

## **Areas of Concerns/ Other Issues**

No significant areas of concern were identified by the EPA.

Two other issues of interest are:

- 1) Potential MBOGC Rules related to hydraulic fracturing (planned for August 2011), and
- 2) Newly enacted legislation which gives MBOGC the authority to regulate microbial methane farming as a Class II activity (April 2011). [Note: As mentioned by Douglas Minter during the teleconference, there is an on-going discussion in Region 8 regarding potential Class II or Class V classification for these types of wells.]

## **EPA Findings**

MBOGC continues to have a strong, well organized and responsive UIC program that effectively protects USDWs. MBOGC had a number of accomplishments during the first half of FY11, and no significant issues were identified by the EPA. In addition, MBOGC continues to coordinate and collaborate well with the EPA.

## **Major Supporting Documentation**

- Approved FY11 UIC 1425 Program Grant Application and Work Plan
- UIC National Database Information

## **EPA Contact Information**

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