

UIC – 2

**UIC PROGRAM
REVISION**

**CODIFICATION OF
NEW STATE UIC
PROGRAM REGS**

**PART 1: 12/28/1993
Application**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

OIL CONSERVATION DIVISION
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'94 JAN 3 AM 8 46

December 28, 1993

REPLY TO: (6W-SU)

Mr. Prentiss Childs
UIC Administrator
Oil Conservation Division
New Mexico Energy, Minerals, and
Natural Resources Department
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Application for Codification of new State Underground
Injection Control (UIC) Program Regulations

Dear Mr. Childs:

In fiscal year (FY) 1994, Region 6 began an effort to update all State UIC program primacy documents codified in Title 40 of the Code of Federal Regulations (40 CFR) and, incorporate by reference any new documents. Procedures for revisions of State programs are outlined in §145.32 of the 40 CFR. This section requires the State to submit any documents EPA deems necessary to accomplish the revision.

The OCD was requested through meetings and the FY 1994 workplan to submit an application by December 31, 1993 for the purpose of codifying all new State UIC regulations not identified in §147.1600 of the 40 CFR. Other existing documents identified in the 40 CFR such as the Memorandum of Understanding (MOU), the Attorney General's Statement, etc. will also need to be included if changes have occurred.

The application should contain two official copies of all documents to be codified. In addition, a "crosswalk" comparison is required for all significant changes. If the change alters existing codified documents, a comparison should be made specifically identifying the differences to the existing program as presently codified. If a document was adopted as an equivalent to new federal regulations, the crosswalk comparison should be with those federal regulations. Minor changes such as typographical corrections need not be identified.

Please advise us of the progress on your program revision efforts. If you have any questions, please contact David Abshire at (214) 655-7188.

Sincerely yours,

Mac Weaver, P. E.
Chief
UIC State Programs Section (6W-SU)



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OIL CONSERVATION DIVISION
RECEIVED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1445 ROSS AVENUE, SUITE 1220
DALLAS, TEXAS 75202-2733

December 3, 1993

MEMORANDUM

SUBJECT: Quality Assurance Program Plan for the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department

FROM: Alva L. Smith, P.E. *Alva*
Chief
Office of Quality Assurance (6E-Q)

THROUGH: O. Thomas Love
Chief
Water Supply Branch (6W-S)

TO: Mac Weaver
Chief
UIC State Programs (6W-SU)

Subject Quality Assurance Program Plan (QAPgP) has been reviewed and cannot be approved until significant revisions have been made. Reviewers comments are enclosed to assist the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals and Natural Resources Department in their revision effort. This disapproval, in accordance with the Region 6 Quality Management Plan (QMP), enclosed, precludes approval of any Quality Assurance Project Plans (QAPPs) that OCD submits for the UIC Program.

The Region 6 QMP also states that it is Regional Policy that all QMPs will be written to comply with EPA Requirements for Quality Management Plans EPA QA/R-2, enclosed. This document is in the format of the older Interim Guidelines and Specifications for Preparing Quality Assurance Program Plans QAMS-004/80. We are willing to accept a revised QAPgP from OCD in the older format, but due to the significant revision required highly recommend consideration be given to using the newer EPA QA/R-2 format, as it will be required for next FY's submission.

The Region 6 QMP also requires that QAPPs be in the format of EPA Requirements for Quality Assurance Project Plans EPA QA/R-5, enclosed, and this requirement is reiterated in the subject plan. However, the format described in the subject plan is that for the older Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans QAMS-005/80. We must insist that there be consistency in using either the newer guidance or the older

guidance for all QA plans, as the plans are linked in their structure. The mixing of plans developed under old and new guidance documents is not acceptable. If there is an existing QAPjP for UIC projects in New Mexico I encourage your office to take the necessary steps to initiate revocation of any previous approval by EPA, and cease any grant payments until approved QA Plans are in existence.

I appreciate the level of concern shown by David Abshire in this matter, and his initiative to schedule a briefing of the Project Officers of 6W-SU on December 2nd to allow us to inform them of these policy changes. My staff will provide necessary assistance to OCD or 6W-SU to move this on to a rapid conclusion. While it is a responsibility of 6W to review and approve QAPPs, we continue our open invitation to assist with the review of a QAPP on a one-on-one basis with a Project Officer, followed by a detailed walk through of the same QAPP with the rest of the staff as a training exercise. This can be coordinated with Charles Ritchey at x8344 if it is desired.

It is recommended that the QA Officer for OCD consider taking the existing EPA QA training courses, Orientation to Quality Assurance Management and Data Quality Objectives, next scheduled for presentation February 9-10, 1994 in Dallas. A more in depth course that will focus on writing and reviewing QAPPs is under development and will be initially presented in the spring.

Please contact me at x8347 or Don Johnson at x8343 if there are any questions or assistance required on this matter.

Attachments

cc: Kathy M. Brown
QA Officer, OCD

Handwritten: V 10/1/94
M. (Name) 10/1/94

COMMENTS

Section 1. Submitted plan does not have a concurrence signature for the responsible Quality Assurance Officer as required by Guidelines and Specifications for Preparing Quality Assurance Program Plans, QAMS-004-80 (hereafter referred to as QAMS-004-80). While the cover letter is signed by Kathy Brown, the QA Officer, the Quality Assurance Program Plan (QAPgP) is a stand alone document and must be approved and concurred as stated in QAMS-004-80. There is no document control number assigned this QAPgP, which is also a requirement. Normally this document control number is referenced in any Quality Assurance Project Plan (QAPjP) developed under this QAPgP, and is a traceability link.

Section 2. In the first paragraph a brief description of the efforts of OCD would provide some background information on the mission of the organization. The second paragraph may address the purpose of this QAPgP, but is far too vague. Not once is Underground Injection Control mentioned in the section, nor are the classes of UIC wells covered. The "methods and techniques to measure the quality of the data" are not clearly defined or mentioned in generality. It appears that from wording in the last paragraph there may only be QA requirements on projects that are EPA funded. If this is the case, and there are less stringent data quality requirements on projects funded solely by OCD the reasons for any differences need to be stated, and assurances that any data from these projects not be utilized by or for EPA. Normally we expect an organization to do all things the same way, this appears to indicate two co-existing QA systems. Recommend review of section 2.0 of QAMS-004/80 to assure all required areas have been addressed.

Section 3. Introduction should include some policy statement regarding how the data user, or decision maker, interfaces during the planning stage of a project to assure the data will allow a decision to be made with a comfortable (as defined by the decision maker) confidence level. Stated goal b. touches on this, but does not define or specify how this occurs. EPA Order 5360.1 (enclosed), places requirements on the EPA Regions to assure that there is "data quality acceptance criteria for all projects" in paragraph 4.c.(3). Regional policy requires the use of the structured seven step Data Quality Objectives (DQO) Process on all projects.

Goal d. must be revised to clarify the commitment to performing QA, not caveated by "Where appropriate,". If a project can not be adequately funded to perform the necessary QA to assure the data is of known quality, the project should not be done. Federal law, and EPA policy requires QA Plans be written, and implemented on each project that involves environmentally related measurements. It is always "appropriate". QAMS-004 states "Policy is to be directed towards a formal commitment of time and resources necessary to ensure that data are as precise and accurate and as complete and

representative as required."

In general this section should specify what the QA policies are for OCD, and define how this policy is flowed down to the projects by delegation through the QAPPs. It is lacking on the delegation and requirements for QAPPs.

Section 4.1. This section should be expanded to include a discussion of the relationship between EPA and OCD for Quality Assurance matters. If there are functional units or subunits that generate data or manage data within OCD their relationship, at least in QA management/oversight, with OCD QA Officer must be delineated. The same relationship between QA Officer and contract laboratories must be defined also.

Section 4.2.a. Recommend revision to indicate level of autonomy the QA Officer functions under.

Section 4.2.b. Question the meaning of the word "Coordination", and offer for consideration the word "Management" as possibly a better choice of words.

Section 4.2.c. Indicates that projects that include EPA funding support must produce data of "acceptable quality", but does not specify a method to define the needed data quality level. It is EPA region 6 policy that the seven step structured process known as the Data Quality Objectives (DQOs) process be utilized on all projects that involve data generation, where the data is eventually used to make a decision. A one day training course is taught quarterly in Dallas on the DQO process, and the prerequisite course, Orientation to Quality Assurance Management, is always taught the day prior. Next presentation is scheduled for February 9-10, 1994, in Dallas, and grantees are welcome to attend the training free of charge.

Section 4.2.d. Revise to be more specific on approval of QAPjPs. While it is essential the QA Officer participate in the approval process, it must be indicated what the total review, concurrence, and approval process consists of, to include that ultimate approval authority lies with EPA. The statement about recommending modifications must be expanded to define the process by which these modifications are reviewed and approved.

Section 4.2.e. Section not included.

Section 4.2.f. Question the meaning of the word "Coordination", and offer for consideration the word "Management" as possibly a better choice of words. Regardless of the semantics, the functions listed are essential to a QA Program, and OCD is commended for their inclusion and use. What must be done is to state, or cite and append the SOPs for each of the functions, the criteria for these items, the frequency they are performed (include in section 11), and the documentation, evaluation and reporting to management, and possibly EPA, of the results should be specifically covered in

section 4.3.

Section 4.3 Organizational chart for OCD locates the QA Officer as reporting to both the Environmental Bureau Chief and the UIC Director. A clearer reporting line should be established, strictly on QA responsibilities, in this chart. Comments to Section 7.4 below lists our concerns with UIC Director appearing as a higher level manager above the QA Officer, but having the responsibility for QAPjPs which are approved by a subordinate QA Officer. This appears, in the wording and on the organizational chart, as though the QA Officer lacks independence, with a potential for conflict of interest. Section 4.3 of QAMS-004/80 requires the external flow of QA information and reports to be shown on an organizational chart, this should include EPA, OCD, and any organizations involved in data activities by contracts and/or pass through of grant funds to other state or local government agencies. A complete organizational chart of OCD is also requested, in conjunction with the QA specific chart. It needs to identify all positions by position title, incumbent in that position, and any vacant positions.

Section 5. This section does have some specific requirements regarding the necessary education, training and experience for personnel. What is lacking, that must be addressed, is by what method is it assured that all personnel do actually meet the stated criteria. The plan does not stipulate its applicability to QAPPs, which should be addressed. The QA Officer portion of this section states the requirements in an excellent manner. We recommend that a resume for the QA Officer be attached along with the revised plan. The plan fails to address the role of the QA Officer to the project specific QA functions. The Technical Personnel portion does not address any certification program. We recommend, but not require, that this area be scrutinized for the potential value that could be added by having a specifically trained, and certified workforce capable of performing their assigned duties in a standardized manner. This certainly adds to the quality of the data, and to its potential defensibility in litigation or enforcement actions. The portion of this section addressing training programs is not specific. It states, or at least implies, that training is targeted toward individuals that are deficient in their job skills. There is no mention of what skills are needed, as would be the case in a certification program, or how this lack (or presence) of skills was determined. There is no mention of training to keep pace with technological change, or organizational improvement through individual development. There is non-specific discussion of a "24 hours of OJT" for new hires and "8 hours per year" for incumbents. No mention of what areas of training are covered in either. The training courses, if they train in how to collect, interpret, or generate environmentally related measurements should be standardized and documented, and approved by the OCD QA Officer, as they will have a tremendous impact on the quality of the data. The Region 6 Office of Quality Assurance taught two QA courses in Santa Fe and Albuquerque last year, and teach them once a quarter here in the Region Office. There may be

individuals in OCD that could benefit from these courses. Regarding documentation of training, the organizational element and individual (by job title) with this responsibility should be identified in the plan.

Section 6. In general this section of QAMS-004/80 should be revisited when reviewing the comments below. All areas of concern stated in by QAMS-004/80 must be addressed.

First paragraph states a requirement to annually inspect laboratories but cites only minimal criteria for this inspection. A schedule for these inspections must be included in section 11. The inspection criteria must be specifically stated in this section, or if delineated in an SOP can be cited and appended to the QAPgP. Recommend consideration be given to using an SOP in conjunction with the QAPjP as material to develop an inspection checklist from. This would lead to a consistent inspection regardless of who performs the inspection. The results of the inspection should be documented, and if there are findings, corrective action should be required that would preclude recurrence. The inspection should cover all areas addressed by the QAPjP, not just those stated in this paragraph. It is deemed essential that a laboratory inspection (audit, evaluation) be conducted of any laboratory prior to the issuance of any contract for analytical services. How this inspection, evaluation and eventual approval of an analytical source occurs must be specifically documented as it has , potentially, a tremendous effect on data quality.

Second paragraph indicates the QA Officer makes a determination of potential data quality by inspection and evaluation of the quantity of field equipment. Normally each QAPjP would have a sampling plan, and the required sampling equipment listed that was necessary to perform the task. This is usually a rigid requirement, and cannot be deviated from without approval. Any deviation, in effect, constitutes a change to an approved plan, which would require revision and resubmission of the plan, prior to the change being actually implemented. Recommend a significant revision of this paragraph. QA Officer has a role in this area, most commonly it is of oversight and enforcement of correct implementation, not of granting on the spot deviations to plans represented to EPA as being followed fully. Whatever role the QA Officer plays should be defined fully.

Third paragraph is non-specific on who performs the maintenance, i.e., service agreement by factory representatives or OCD employees. Including an example page of the documentation of maintenance is commonly done, and more specifics than "responsible party" is required for effective management oversight. QA Officer role in this process must be stated.

Section 7.1 This section is almost a verbatim restatement of section 7.1 of Interim Guidelines and Specifications for Preparing Quality Assurance Program Plans, QAMS-004/80, which is in the

process of being replaced by EPA Requirements for Quality Management Plans, EPA QA/R-2 (copy enclosed). At the end of section 7.1 there is a statement that all project plans must conform to EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, EPA QA/R-5, yet all the information provided is in the format of Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80, which is in the process of being replaced by EPA QA/R-5. There are two sets of documents, one for QA Project Plans, and the other for QA Program or Management Plans. There must be consistency in these requirements/guidance documents, as they cannot be mixed. If the OCD is going to use this QAPgP as the policy document for QA, then the older QAMS-004/80 and QAMS-005/80 documents should be cited and used. If the OCD wishes to use the EPA QA/R-5 document, then this entire section must be revised to reflect the elements of that document, and EPA QA/R-2 must be used for the format for this document, and the document completely revised to follow that format. This decision must be determined jointly by OCD and the EPA Region 6 Water Management Division staff, and specified in this document.

Regarding what is otherwise covered in this section the following comments are offered:

Discussion on page 9 about section 4: an organizational chart is not just desirable, but essential. This is discussed in detail in section 5.4 of QAMS-005/80.

Section 5 discussion, same page: this section must address comparability and representativeness, as discussed in detail in section 5.5 of QAMS-005/80.

Section 14 discussion, same page: replace "provision" with "precision".

Discussion on page 10 about what must be included in SOPs or QAPjP, 12th item states "collocated samples" where QAMS-004/80 states "collocated samplers". Clarification is needed.

Same area, 19th item states "...provision...", replace with "precision".

Section 7.2 This section must specify the responsibility for preparation, review and approval of SOPs. The cycle for revalidation of existing SOPs, format for SOPs, maintenance of distribution lists for SOPs, and any other management roles in SOP promulgation and maintenance. Role of the QA Officer in reviewing/approving SOPs must be defined.

Section 7.3 Section 7.3 lists a variety of commendable actions that indeed can improve the quality of data. Where it stops short is to only list them and not require any of them. Recommend that the list be reviewed, and those that will most improve quality of the data, within the needs of the data user, be required for

QAPjPs. Participation by OCD personnel and contractor personnel should be identified, as some functions may be inherently governmental functions. Role of the QA Officer in planning and design must be identified.

Section 7.4 Question the naming of David Catanach as being responsible for the QA Project Plans. On the Signature Page and Organizational Chart he is named as the Director of UIC, and shown as having the Quality Assurance function under his supervisory control. While this may be unavoidable, the potential exists within this organizational setup for possible interference with the independence of the QA function. The independence of the QA function must be assured and addressed if this organizational design is to be used by OCD. The QA Officer has a responsibility and a requirement to participate in the approval process of any QAPjPs under this QAPgP which must be addressed either here or in another area of the QAPgP.

Section 8.1 This section must be expanded to include examples of the checks to be used in QAPjPs. If there is a common or preferred method it should be cited here. The method by which the QA Officer assures the quality of data collection must be addressed.

Section 8.2 This section defines "data validation" differently than QAMS-004/80 by including the term "filtered". Since this term is not defined, or this process specifically stated we have to require that the EPA definition of data validation be used, and followed or the OCD term and process for "data filtering" be specifically stated for evaluation of its effectiveness. Normally data is either acceptable or not acceptable, and the entire data validation process should be more specifically addressed, especially in the area of general policy guidance for OCD. Role of QA Officer in data validation and/or data filtering must specifically addressed.

Section 8.3 This section should state the OCD policy for data storage, in general, and specifically state how data are stored in the OCD offices. Role of QA Officer in assuring compliance to data storage requirements must be addressed.

Section 8.4 This section is in general a restatement of section 8.4 of QAMS-004/80, and really should be looked at to see if the examples cited are accurate, and applicable to OCD. The role of the QA Officer in verification of data accuracy must be stated.

Section 8.5 Section does not cite how the Quality of the data reduction process is assured, and the role of the QA Officer in that process.

Section 9. QAMS-004/80, section 9.0, requires that the "QA program plan must describe how all data generated will be assessed ...". This does not describe how such a process occurs, and must be addressed in general terms, with guidelines for accuracy, precision, completeness, representativeness and comparability.

The requirement that all data must be accompanied by a calculation of precision and accuracy is not addressed, nor is any OCD policy stated for requiring statements on completeness, representativeness and comparability. These areas must be addressed. Procedures must also be specified for documentation of the data quality assessment process, and for dealing with a situation that could arise if the assessment of data quality indicates the data quality requirements specified were not met. This last area should tie into the section on corrective action. The QA Officers responsibilities must also be defined for data quality assessment, beyond giving advice. The role of assuring the data is of the quality specified must be specifically be assigned, at least from a policy standpoint.

Section 10. In the first paragraph of this section it states "The Quality Assurance Officer will be informed of any major corrective action and of any changes in procedure or loss of data resulting." The method by which this informing occurs is not specified, and no responsibility or criteria for informing is stated. These must be specifically addressed. Regarding the informing of upper management of problems and overall status, there is again no method defined by which this informing occurs, and no responsibility or criteria for informing is stated. These also must be specifically addressed.

In the second paragraph a starting point for corrective action is defined as beginning at the data collection level. Corrective action is a process by which measures are taken to rectify conditions adverse to quality and to preclude recurrence. Normally an initial step of corrective action is to identify the root cause of a problem, and then attempt to make a determination if it is a systemic problem, a random occurrence, a repetition, a generic or unique problem, etc. There is also a requirement stated in this paragraph that an OCD QA staff member will audit, at least annually, the laboratory used for analytical work. No criteria is specified for conduct of this audit, but due to the location of this requirement it is assumed this audit would be to verify the effectiveness of a corrective action system to see if they were instituted and their effectiveness. This is required in QAMS-004/80, section 10.0, first paragraph, and should be specifically addressed. This should also be reflected in Section 4 of this document as a QA responsibility.

In the third paragraph there is a reference to "future" contracts. This document must accurately describe in this section the current corrective action process and can also, if desired, discuss future goals. Revise to reflect current contractual requirements for corrective action, and be prepared to provide copies of the contracts on request. This section discusses a possibility of subcontractors and we applaud the requirement that corrective action followup is the responsibility of the prime contractor. What is needed is the process by which OCD assures the prime contractor is performing this function adequately. The mention of subcontracting indicates that it probably occurs, but it does not seem to be mentioned in any other section. If subcontracting

occurs it must be specifically defined in this QAPgP as to what is done in all phases of the work to assure data quality by the prime and sub contractors, and the role played by OCD to verify or audit these efforts. How to successfully delegate QA requirements to a vendor or subcontractor through a prime contractor is often a problematic area which can have a tremendous impact on data quality. It is felt the timeframes listed for the corrective action process is excessive. There must be a statement regarding the responsibility of OCD to deny payment for data that does not meet required quality specifications.

Recommend revision of this section until it more closely addresses the requirements of QAMS-004/80.

Section 11. The indicated schedule failed to take into consideration that before any QAPjP can be written, there must be an approved QAPgP in place. Revise schedule to reflect this change.

Definitions. Definitions that differ significantly from those in EPA requirements documents (QAMS-004/80 or EPA QA/R-2) cannot be used for any programs or projects in which EPA funding is utilized. Revise (or cite) definitions to match those of EPA requirements documents. While this QAPgP is in the format of QAMS-004/80 it is recommended, but not required, that the definitions in Appendix A of EPA QA/R-2 be reviewed as being appropriate for inclusion, especially for such terms as Corrective Action, Quality Assurance, Quality Control. Several terms are used in this plan that are not defined by EPA or OCD such as Performance Audits, Systems Audits that must either be defined or if the function is defined by EPA but under a different name the term changed.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION




BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

TO: David Catanach
Roger Anderson

FROM: Prentiss Childs 

SUBJECT: UIC Program Revisions due December 31

DATE: November 17, 1993

As you know, we are committed to providing David Abshire with copies of all the changes in our UIC program since primacy. This is due December 31. I could not see anything to include by going through the primacy application. However, David, you have said there are some changes which you can identify by going through the Rule Book, and, Roger, I know you have quite a number in your area.

Just a reminder of the approaching deadline.

**CODIFICATION IN 40 CFR §147
July 28, 1993**

**TO: ROGER ANDERSON - DAVID CATANACH - PRENTISS CHILDS
NMED UIC**

**FROM: David Abshire
EPA UIC Section**

UIC Programs codification update

- 1) We (EPA UIC) requests, through the workplans, the States to submit for the Regional Administrator's approval, a package including at least two (2) official copies of each new amendment/document effecting the UIC program.
- 2) We would evaluate the package and determine what changes are substantial/non-substantial (see attached). We then send a draft of our determinations for headquarter's review and approval.
- 3) Following headquarters approval, we send headquarters an official letter transmitting the States' request and one (1) copy of each official document. We also send an approval letter from the Regional Administrator to the State on all non-substantial changes (with cc: headquarters).
- 4) Headquarters reviews/approves the substantial changes, notifies the State and submits to the Office of Federal Register for publication.

[NOTE: there is no difference in the process for
"1422" or "1425" programs.]

| | | |
|--|------------------------|-----------------|
| Post-It™ brand fax transmittal memo 7671 | | # of pages > 10 |
| To ROGER ANDERSON | From DAVID ABSHIRE | |
| Co. NMED | Co. EPA | |
| Dept. | Phone # (214) 655-7188 | |
| Fax # (505) 827-5741 | Fax # (214) 655-2191 | |

40 CFR Ch. I (7-1-91 Edition)

(2) Indicate when and where the State's proposed program submission may be reviewed by the public;

(3) Indicate the cost of obtaining a copy of the submission;

(4) Provide for a comment period of not less than 30 days during which interested persons may comment on the proposed UIC program;

(5) Schedule a public hearing on the State program for no less than 30 days after notice of the hearing is published;

(6) Briefly outline the fundamental aspects of the State UIC program; and

(7) Identify a person that an interested member of the public may contact for further information.

(b) After complying with the requirements of paragraph (a) of this section any State may submit a proposed UIC program under section 1422 of SDWA and § 145.22 of this part to EPA for approval. Such a submission shall include a showing of compliance with paragraph (a) of this section; copies of all written comments received by the State; a transcript, recording or summary of any public hearing which was held by the State; and a responsiveness summary which identifies the public participation activities conducted, describes the matters presented to the public, summarizes significant comments received, and responds to these comments. A copy of the responsiveness summary shall be sent to those who testified at the hearing, and others upon request.

(c) After determining that a State's submission for UIC program approval is complete the Administrator shall issue public notice of the submission in the FEDERAL REGISTER and in accordance with paragraph (a)(1) of this section. Such notice shall:

(1) Indicate that a public hearing will be held by EPA no earlier than 30 days after notice of the hearing. The notice may require persons wishing to present testimony to file a request with the Regional Administrator, who may cancel the public hearing if sufficient public interest in a hearing is not expressed;

(2) Afford the public 30 days after the notice to comment on the State's submission; and

Environmental Protection Agency

§ 145.33

(3) Note the availability of the State submission for inspection and copying by the public.

(d) The Administrator shall approve State programs which conform to the applicable requirements of this part.

(e) Within 90 days of the receipt of a complete submission (as provided in § 145.22) or material amendment thereto, the Administrator shall by rule either fully approve, disapprove, or approve in part the State's UIC program taking into account any comments submitted. The Administrator shall give notice of this rule in the FEDERAL REGISTER and in accordance with paragraph (a)(1) of this section. If the Administrator determines not to approve the State program or to approve it only in part, the notice shall include a concise statement of the reasons for this determination. A responsiveness summary shall be prepared by the Regional Office which identifies the public participation activities conducted, describes the matters presented to the public, summarizes significant comments received, and explains the Agency's response to these comments. The responsiveness summary shall be sent to those who testified at the public hearing, and to others upon request.

§ 145.32 Procedures for revision of State programs.

(a) Either EPA or the approved State may initiate program revision. Program revision may be necessary when the controlling Federal or State statutory or regulatory authority is modified or supplemented. The state shall keep EPA fully informed of any proposed modifications to its basic statutory or regulatory authority, its forms, procedures, or priorities.

(b) Revision of a State program shall be accomplished as follows:

(1) The State shall submit a modified program description, Attorney General's statement, Memorandum of Agreement, or such other documents as EPA determines to be necessary under the circumstances.

(2) Whenever EPA determines that the proposed program revision is substantial, EPA shall issue public notice and provide an opportunity to comment for a period of at least 30 days.

The public notice shall be mailed to interested persons and shall be published in the FEDERAL REGISTER and in enough of the largest newspapers in the State to provide Statewide coverage. The public notice shall summarize the proposed revisions and provide for the opportunity to request a public hearing. Such a hearing will be held if there is significant public interest based on requests received.

(3) The Administrator shall approve or disapprove program revisions based on the requirements of this part and of the Safe Drinking Water Act.

(4) A program revision shall become effective upon the approval of the Administrator. Notice of approval of any substantial revision shall be published in the FEDERAL REGISTER. Notice of approval of non-substantial program revisions may be given by a letter from the Administrator to the State Governor or his designee.

(c) States with approved programs shall notify EPA whenever they propose to transfer all or part of any program from the approved State agency to any other State agency, and shall identify any new division of responsibilities among the agencies involved. The new agency is not authorized to administer the program until approval by the Administrator under paragraph (b) of this section. Organizational charts required under § 145.23(b) shall be revised and resubmitted.

(d) Whenever the Administrator has reason to believe that circumstances have changed with respect to a State program, he may request, and the State shall provide, a supplemental Attorney General's statement, program description, or such other documents or information as are necessary.

(e) The State shall submit the information required under paragraph (b)(1) of this section within 270 days of any amendment to this part or 40 CFR part 144, 146, or 124 which revises or adds any requirement respecting an approved UIC program.

§ 145.33 Criteria for withdrawal of State programs.

(a) The Administrator may withdraw program approval when a State program no longer complies with the



DEC 1 1984

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DEC 10 1984
EPA
SAWS
REGION VI

MEMORANDUM

SUBJECT: Guidance for Review and Approval of State
Underground Injection Control (UIC) Programs and
Revisions to Approved State Programs.
CWPB Guidance #34

FROM: Victor J. Kimm, Director
Office of Drinking Water (WH-550)

TO: Water Division Directors
Regions I - X

PURPOSE

The purpose of this document is to provide guidance to EPA Regional Offices on the revised process for the approval of State primacy applications and the process for approving modifications in delegated programs, including aquifer exemptions.

BACKGROUND

On January 9, 1984, the Deputy Administrator announced an Agency policy for a State program approval process placing the responsibility on Regional Administrators to recommend UIC program approval to the Administrator and making Regional Administrators clearly responsible for assuring that "good, timely decisions are made." At the same time, we are reaching a point in the UIC program where States are beginning to make revisions to approved programs and we are promulgating amendments to the minimum requirements that the States must adopt within 270 days. We have reviewed the existing approval process and this Guidance spells out the adjustments necessary to comply with the Agency's policy. This new process will take effect on July 5, 1984, and applies to approval of primacy applications and "substantial" program revisions, which are both rulemaking and cannot be delegated by the Administrator under the Safe Drinking Water Act. This guidance also addresses review and approval of non-substantial program revisions which are the responsibility of the Regional Administrator.

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I. REVIEW AND APPROVAL OF APPLICATIONS

REGIONAL ROLE

The effect of the new Agency policy is to give Regions greater responsibility for managing the delegation of EPA programs. The FY 1984 Office of Water Guidance suggests that Regions develop State-by-State delegation strategies, although formal schedules for submittal and approval of State applications are not required after FY 1984. Regions are to work with States to develop approvable applications. They are to solicit and resolve Headquarters comments, "keep the clock" on the formal review period, recommend approval to the Administrator, and are responsible for timely approvals. In this process, the Regions speak for the Agency on approval matters but are advised not to make commitments regarding unresolved major issues raised by Headquarters Offices.

Draft applications

The Regions are responsible for working with the States and getting them to submit draft applications so that problems can be identified and resolved in the early stages. The draft applications should be submitted as early as possible to Headquarters for comments, and Headquarters comments discussed with the States. (Guidelines on resolving recurring problems in State applications are included as Attachment 1.)

Final applications

Upon receipt of a final application the Regions will:

1. determine whether the application is complete, and if it is;
2. send copies of the final application to Headquarters for review, accompanied by a staff memorandum explaining how issues raised on the draft application have been resolved; (This should be done as early as possible so that Headquarters comments can be received before the public hearing.)
3. take care of the public participation process including: selecting a date for the public hearing, making the necessary arrangements for holding the hearing and publishing notice in the Federal Register;

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4. work with the State to resolve all remaining issues identified either during the public participation process or by Headquarters;
5. when all issues have been resolved, prepare and transmit to Headquarters an Action Memorandum signed by the Regional Administrator recommending approval, explaining the major issues and their resolution, a Federal Register notice of the Administrator's decision, and a staff memorandum explaining how all issues have been resolved.

HEADQUARTERS ROLE

The policy specifies that program Assistant Administrators, the General Counsel, and the Assistant Administrator for Enforcement and Compliance Monitoring have the authority to raise issues which must be resolved prior to the approval of the State program. The policy also states that the process should include time limits for completion of reviews by all offices, that new issues should not be raised or old issues reopened unless there are material changes in the application, and that there should be some distinction between major objections which must be resolved before program approval and comments of a more advisory nature. We believe that for the sake of expeditious and consistent reviews, ODW should retain the role of coordinating Headquarters comments.

Draft applications, Final applications.

These and any other material for review by Headquarters should be sent to the Director, State Programs Division (SPD). The SPD will coordinate the review process with Office of General Counsel, Office of Enforcement and Compliance Monitoring and internally within the Office of Water. The Regions will be advised of the issues raised by the Review Team by a conference call between the Review Team and Regional staff. Written comments distinguishing major issues and advisory comments (if necessary) will be sent within 15 working days unless there is voluminous material to be xeroxed, in which case the review period will be extended to 20 working days. (The Region will be notified if such extension is necessary.) Written comments will be signed by the Director, State Programs Division.

Action memorandum and Federal Register Notice of Approval

These should be sent to SPD which will be responsible for obtaining the proper concurrences from all AAs involved and sending the package to AX for signature. The staff memorandum explaining resolution of all issues will be reviewed at the Review Team level within 5 working days. Assuming that all issues have been taken care of the process for obtaining all necessary signatures will take between 30 and 45 days.

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II. PROGRAM REVISIONS

INTRODUCTION

Following EPA approval of a State UIC program, the State will from time to time make program changes which will constitute revisions to the approved program. The UIC regulations address procedures for revision of State programs at 40 CFR §145.32. These regulations direct the State to "keep the Environmental Protection Agency (EPA) fully informed of any proposed modification to its basic statutory or regulatory authority, its forms, procedures, or priorities." The regulations differentiate between "substantial" revisions which are rulemaking and must be approved by the Administrator and "non-substantial" revisions which can be approved by a letter to the Governor.

To date EPA has encountered the following types of revisions to approved State programs:

- Aquifer exemptions;
- Minor changes to the delegation memorandum of agreement;
- Regulatory and statutory changes which resulted in a more stringent program;
- NO - Revisions to State forms which were part of the approved program;
- NO - Transfer of authority from one State agency to another;
- NO - Alternative mechanical integrity tests.

While providing a basic framework for program revisions, the regulations are not specific in defining "substantial" and "non-substantial" program revisions. These categories are defined below.

Definition of Program Revisions

Revisions to State UIC programs require EPA approval or disapproval actions only if they are within the scope of the Federal UIC program. Aspects of the program which are beyond the scope of the Federal UIC regulations are not considered program revisions under §145.32. For example, if a State

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modifies permitting requirements for Class V wells, this would not be considered a program revision as long as the modified requirement was at least as stringent as the Federal UIC regulations, since the regulations do not require specific permitting of Class V wells.

"Substantial" versus "Non-substantial" Revisions

The wide range of possible program revisions and varying situations from State to State makes it impossible to establish a firm definition of what constitutes a "substantial" program revision. However, as a general rule, the following types of program revisions will be considered "substantial":

1. Modifications to the State's basic statutory or regulatory authority which may affect the State's authority or ability to administer the program;
2. A transfer of all or part of any program from the approved State agency to any other State agency;
3. Proposed changes which would make the program less stringent than the Federal requirements under the UIC regulations (or the Safe Drinking Water Act, for Section 1425 programs); and
4. Proposed exemptions of an aquifer containing water of less than 3,000 mg/l TDS which is: (a) related to any Class I well; or (b) not related to action on a permit, except in the case of enhanced recovery operations authorized by rule.

Any program revision which requires action by EPA, but which is not considered "substantial", will be a "non-substantial" revision.

REGIONAL ROLE

Substantial Program Revisions

Upon determining that a program revision is substantial, the Regions will:

1. send copies of the proposed revision to SPD;
2. take care of the public participation process;
3. work with the State to resolve problems, if any;
4. prepare an Action Memorandum and a Federal Register notice of Administrator's approval.

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Non-substantial Revisions

The authority for approval of non-substantial revisions is delegated to the Regional Administrator. The Regions will forward a copy of the approval letter and of the approved revision to the State Programs Division.

Disapproval of Program Revisions

Disapproval of a proposed State program revision may be accomplished by a letter from the Regional Administrator to the State Governor or his designee.

For all aquifer exemptions, the Region should fill out and send to the SPD an Aquifer Exemption Summary Sheet (Attachment 2). If the exemption constitutes a substantial program revision or requires ODW concurrence, as much of the supporting material as feasible should be sent along. (Large maps and logs are difficult to reproduce and may be omitted.) Aquifer exemptions that constitute substantial revisions will be handled as described above. Where ODW concurrence is necessary it will be in the nature of a telephone call from the Director, SPD, because of the potential for short approval timeframes. Approval will be confirmed later by a memorandum. Guidelines for review of aquifer exemptions are included as Attachment 3.

Alternative Mechanical Integrity Tests

The authority to approve alternative mechanical integrity tests has been delegated to the Director, Office of Drinking Water. Therefore, such proposals and appropriate supporting documents should be submitted to the State Programs Division. The SPD will transmit them to the UIC technical Committee for review. If the Committee supports approval of the test, the Director of ODW will inform the Regions and approve the test as a "non-substantial" program revision.

III. RESOLUTION OF DIFFERENCES

The major effect of the Agency policy should be to speed up the resolution of issues. The policy states that senior managers are responsible for assuring that early consultation takes place so that issues can be identified and resolved internally as early as possible. Regional

Administrators are responsible for elevating to top managers those issues upon which there is internal disagreement. Differences can arise within Headquarters and between Headquarters and Regions. They will be handled as follows for both program approvals and substantial program modifications.

Within the HQ review team

If the Headquarters Review Team cannot agree on whether an issue should be raised, the Review Team memorandum will reflect the majority comments. The dissenting office may send a memorandum signed by its Office Director or equivalent to the Water Division Director explaining its issue. If the Region agrees, it will raise the issue with the State. If not, the issue will be resolved using the process outlined below.

Between Headquarters and Region

1. The first step should be a Regional appeal to the "Bridge Team" (Office Directors). This can be accomplished within 10 working days. The Region should notify SPD by telephone that there is disagreement on a given issue. A Bridge Team meeting will be scheduled within 7 to 10 working days. The Region can attend the meeting, send a memorandum explaining its position, or rely on the SPD to present the Region's position. The decision of the Bridge Team will be communicated to the Region by telephone as soon as it is made, and confirmed, for the record, in a memorandum signed by the ODW Office Director with concurrence from other offices involved.
2. If this fails the Agency's "Decision-Brokering" Process should be invoked. This process is explained in detail in a February 1, 1984, memorandum from Sam Schulof. (Attachment 4)

IV. IMPLEMENTATION

This Guidance takes effect on July 1, 1984. We realize that many applications are now in the review process. For the sake of simplicity and clarity this process will only apply to those pending applications for which a public hearing has not been held or announced by that date.

Attachments

Guidelines for Resolving Recurring Problems in UIC Applications
Aquifer Exemption Summary Sheet
Guidelines for Reviewing Aquifer Exemption Requests
Sam Schulhof Memorandum of February 1, 1984



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OIL CONSERVATION DIVISION
RECEIVED

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

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June 2, 1994

Mr. Prentiss Childs, UIC Administrator
Oil Conservation Division
New Mexico Energy, Minerals, and
Natural Resources Department
Post Office Box 2088
Sante Fe, New Mexico 87504-2088

Dear Mr. Childs:

In fiscal year (FY) 1994, Region 6 began an effort to update all State UIC program primacy documents codified in Title 40 of the Code of Federal Regulations (40 CFR) and, incorporate by reference any new documents. This correspondence acknowledges the receipt of initial program changes submitted by NMOCD. These documents are currently under review by UIC State Programs personnel and the EPA Region 6 Office of Regional Counsel.

In cases where current State regulations differ from those approved by EPA at primacy, a comparison will be done between the two sets of regulations and a determination made as to their consistency with current Federal regulations. Also, the Region will make a determination as to whether the regulation changes will require approval as either "substantial" or "non-substantial" program modifications. In the event that the changes are considered to be "substantial" modifications, the State may be asked to submit all, or part, of the following:

- (a) Modified program description
- (b) Attorney General's Statement
- (c) Memorandum of Agreement
- (d) Other documents deemed necessary by EPA

If you have any questions, please call Kathy Ketcher at (214) 655-7196.

Sincerely yours,

Bernadine Gordon
for O. Thomas Love, Jr., Chief
Water Supply Branch, 6W-S





STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



January 13, 1994

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Mr. David Abshire, Program Manager
Water Division (6W-SU)
U. S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear David:

Enclosed, please find a listing of Rule Changes the Division has made since New Mexico was granted primacy for the UIC program in 1982. These changes do not materially affect the program. UIC Director David Catanach prepared the listing.

Environmental Bureau Chief Roger Anderson has reviewed the Water Quality Control Commission regulations which govern the regulation of most Class V wells, and Class III and non-hazardous Class I wells. He found that no changes had been made which affect the program since primacy for those classes of wells was granted in 1983. The Division's Geothermal Rules governing geothermal injection wells have not been changed since primacy.

There have been no changes which would require amendments to the Memorandum of Agreement or the statement of legal authority.

Roger Anderson will send you a copy of the Quality Assurance Management Plan which he is completing. He is sending the original to the Quality Assurance Officer in Dallas.

When the QMP is received, I assume there will be no further barriers to New Mexico's receiving the final part of our FY 1994 grant at the earliest possible date. If this is not the case, please let me know immediately.

Thank you very much for your help.

Sincerely,

Prentiss Childs
UIC Program Administrator

cc: Johnson
Catanach
Anderson

SUMMARY OF DIVISION RULE CHANGES

PREVIOUS RULE NUMBER AND TITLE:

RULE 201. NOTICE
RULE 202. PLUGGING AND ABANDONMENT
RULE 203. WELLS TO BE USED FOR FRESH WATER
RULE 204. LIABILITY
RULE 704. TESTING AND MONITORING
RULE 1204. METHOD OF GIVING LEGAL NOTICE OF HEARING
RULE 1206. PERSONAL SERVICE OF NOTICE
RULE 1207. PREPARATION OF NOTICES
RULE 1223. CHANGES IN FORMS AND REPORTS

CURRENT RULE NUMBER AND TITLE

RULE 201. WELLS TO BE PROPERLY ABANDONED
RULE 202. PLUGGING AND PERMANENT ABANDONMENT
RULE 203. TEMPORARY ABANDONMENT
RULE 204. WELLS TO BE USED FOR FRESH WATER
RULE 704. TESTING, MONITORING, STEP RATE TESTS, NOTICE TO THE
DIVISION, REQUESTS FOR PRESSURE INCREASES
RULE 1204. PUBLICATION OF NOTICE OF HEARING
RULE 1206. THIS RULE HAS BEEN REPEALED
RULE 1207. ADDITIONAL NOTICE REQUIREMENTS
RULE 1223. THIS RULE HAS BEEN REPEALED

DISCUSSION

Rule Nos. 201, 202 and 203, which previously concerned notice, plugging and abandonment, temporary abandonment and wells to be used for fresh water were amended to basically strengthen and add time limits. Plugging rules were amended to require that within one year of plugging a well that: pits be filled, location leveled, and location cleaned of all junk and restored prior to the release of any plugging bond on the well. Temporary abandonment rules were amended to allow temporary abandonment of wells for a period of up to five years, however, such abandonment is contingent upon a demonstration that the well has mechanical integrity as demonstrated by a casing pressure test or other test prescribed by the Division. New Rule 204 basically replaces old Rule 203. These rule changes have little, if any, impact on UIC Regulations inasmuch as injection wells are not generally temporarily abandoned because a six month period of non-injection cancels the injection permit.

Rule No. 704 was amended to require that injection wells be tested for mechanical integrity at commencement of injection operations and any time the tubing is pulled and packer reseated. It was also

amended to list the pressure and duration of the MIT test and to require the use of a pressure recorder for the MIT test.

It was further amended to include provisions and procedures to be utilized in applying for a pressure increase on injection wells. The previous rule had no such reference to pressure increases. The amendment of this rule probably represents the most significant program change in that it requires an MIT test any time the tubing is pulled or packer reseated. The pressure and duration of the MIT test, were simply listed in a Rule for the first time, and did not change from the primacy application. The procedures for pressure increases were simply listed as a rule for the first time and did not change from the primacy application.

Rule Nos. 1204, 1206 and 1207 were amended to strengthen and clarify the procedures for providing notice for a hearing before the Division. The amendment of these rules has virtually no impact on UIC regulations inasmuch as the Form C-108, Application to Inject, contains its own notice provisions.

Rule 1223 was repealed in order that the Division be able to change forms or reports without the necessity for hearings.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 201. NOTICE

Notice of intention to plug must be filed with the Division by the owner or his agent prior to the commencement of plugging operations on Form C-103, Sundry Notice and Reports on Wells, which notice shall state the name and location of the well and the name of the operator. In the case of a newly completed dry hole, the operator may commence plugging by securing the approval of the Division as to the method of plugging and the time plugging operations are to begin. He shall, however, file the regular notification form.

CURRENT VERSION

RULE 201. - WELLS TO BE PROPERLY ABANDONED

A. The operator of any well drilled for oil, gas or injection; for seismic, core or other exploration, or for a service well, whether cased or uncased, shall be responsible for the plugging thereof.

B. A well shall be either properly plugged and abandoned or temporarily abandoned in accordance with these rules within ninety (90) days after:

- (1) A sixty (60) day period following suspension of drilling operations, or
- (2) A determination that a well is no longer usable for beneficial purposes, or
- (3) A period of one (1) year in which a well has been continuously inactive.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 202. PLUGGING AND ABANDONMENT

Before any well is abandoned, it shall be plugged in a manner which will permanently confine all oil, gas and water in the separate strata originally containing them. This operation shall be accomplished by the use of mud-laden fluid, cement and plugs, used singly or in combination as may be approved by the Division. The exact location of abandoned wells shall be shown by a steel marker at least four inches in diameter set in concrete, and extending at least four feet above mean ground level. The name and number of the well and its location (unit letter, section, township and range) shall be welded, stamped or otherwise permanently engraved into the metal of the marker. Seismic, core or other exploratory holes drilled to or below sands containing fresh water shall be plugged and abandoned in accordance with the applicable provisions recited above. Permanent markers are not required on seismic holes.

Within 30 days following the completion of plugging operations on any well, a record of the work done shall be filed with the Division in TRIPLICATE, on Form C-103. Such report shall be filed by the owner of the well and shall include the date the plugging operations were begun along with the date the work was completed; a detailed account of the manner in which the work was performed; the depths and lengths of the various plugs set; the nature and quantities of materials employed in plugging operations; the amount size and depth of all casing left in the hole and the weight of mud employed in plugging the well and any other pertinent information. No plugging report submitted on Form C-103 shall be approved by the Division unless such report specifically states that pits have been filled and the location levelled and cleared of junk. The filing of Form C-105, Well Completion or Recompletion Report and Log is also necessary to obtain Division approval of a plugging report.

It shall be the responsibility of the owner of the plugged well to contact the appropriate District Office of the Division to arrange for an inspection of the plugged well and the location by a Division representative.

B. TEMPORARY ABANDONMENT

No well in the state shall be temporarily abandoned for a period in excess of six months unless a permit for such temporary abandonment has been approved by the Division. Such permit shall be for a period not to exceed one year and shall be requested from the appropriate District Office of the Division by filing Form C-103 in triplicate. No such permit shall be approved unless evidence is furnished that the condition of the well is such as to prevent damage to the producing zone, migration of hydrocarbons or

water, the contamination of fresh water or other natural resources, or the leakage of any substance at the surface.

The District Supervisor of the appropriate District Office of the Division shall have the authority to grant one extension to the permit for temporary abandonment. Such extension shall not exceed one year and shall be requested in the same manner as the original permit for temporary abandonment. No extension shall be approved unless good cause therefor is shown, and evidence is furnished that the continued condition of the well is as described above.

Upon expiration of the permit for temporary abandonment and any extension thereto, the well shall be put to beneficial use or shall be permanently plugged and abandoned, unless it can be shown to the Division after notice and hearing that good cause exists why the well should not be plugged and abandoned, and a further extension to the temporary abandonment permit should be issued. Prior to issuing such "further extension," the Division may at its option require the operator of the well to post with the Division a one well plugging bond for the well, in an amount determined by the Division to be satisfactory to meet the particular requirements of the well.

The Division Director shall have the authority to waive the above requirement for notice and hearing and grant further extension to a permit for temporary abandonment in the case of:

(1) a remote and unconnected commercial gas well or a presently non-commercial gas well which may reasonably be expected to be commercial within the foreseeable future; or

(2) a well in an oil pool in which secondary operations have, by actual performance, been shown to be commercially feasible, and which well may, with reasonable certainty, be expected to be included in a bona fide secondary recovery project within the foreseeable future.

Prior to issuing such further extension, the Division Director may at his option require the operator of the well to post with the Division a one well plugging bond for the well, in an amount determined by the Director to be satisfactory to meet the particular requirements of the well.

No "further extension," whether issued by the Division or by the Division Director, shall be of more than two years duration, but may be renewed if circumstances warrant.

C. DRILLING WELLS

When drilling operations on a well have been suspended for 60 days, the well shall be plugged and abandoned unless a permit for temporary abandonment has been obtained for the well in accordance with Section B. above.

CURRENT VERSION

RULE 202. - PLUGGING AND PERMANENT ABANDONMENT

A. NOTICE OF PLUGGING

(1) Notice of intention to plug must be filed with the Division on Form C-103, Sundry Notices and Reports on Wells, by the operator prior to the commencement of plugging operations, which notice must provide all of the information required by Rule 1103 including operator and well identification and proposed procedures for plugging said well, and in addition the operator shall provide a well-bore diagram showing the proposed plugging procedure. Twenty-four hours notice shall be given prior to commencing any plugging operations. In the case of a newly drilled dry hole, the operator may obtain verbal approval from the appropriate District Supervisor or his representative of the method of plugging and time operations are to begin. Written notice in accordance with this rule shall be filed with the Division ten (10) days after such verbal approval has been given.

B. PLUGGING

(1) Before any well is abandoned, it shall be plugged in a manner which will permanently confine all oil, gas and water in the separate strata in which they are originally found. This may be accomplished by using mud-laden fluid, cement and plugs singly or in combination as approved by the Division on the notice of intention to plug.

(2) The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches (4") in diameter set in cement and extending a least four feet (4') above mean ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, shall be welded, stamped or otherwise permanently engraved into the metal of the marker.

(3) As soon as practical but no later than one year after the completion of plugging operations, the operator shall:

- (a) fill all pits;
- (b) level the location;
- (c) remove deadmen and all other junk; and
- (d) take such other measures as are necessary or required by the Division to restore the location to a safe and clean condition.

(4) Upon completion of plugging and clean up restoration operations as required, the operator shall contact the appropriate district office to arrange for an inspection of the well and location.

C. Reports

(1) The operator shall file Form C-105, Well Completion or Recompletion Report and Log as provided in Rule 1105.

(2) Within thirty (30) days after completing all required restoration work, the operator shall file with the Division, in TRIPLICATE, a record of the work done on Form C-103 as provided in Rule 1103.

(3) The Division shall not approve the record of plugging or release any bonds until all necessary reports have been file and the location has been

inspected and approved by the Division.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 203. WELLS TO BE USED FOR FRESH WATER

When the well to be plugged may safely be used as a fresh water well and such utilization is desired by the landowner, the well need not be filled above sealing plug set below the fresh water formation, provided that written agreement for such use shall be secured from the landowner and filed with the Division.

CURRENT VERSION

RULE 203 - TEMPORARY ABANDONMENT

A. WELLS WHICH MAY BE TEMPORARILY ABANDONED

(1) The Division may permit any well which is required to be properly abandoned under these rules but which has potential for future beneficial use for enhanced recovery or injection, and any other well for which an operator requests temporary abandonment, to be temporarily abandoned for a period of up to five (5) years. Prior to the expiration of any approved temporary abandonment the operator shall return the well to beneficial use under a plan approved by the Division, permanently plug and abandon said well or apply for a new approval to temporarily abandon the well.

B. REQUEST FOR APPROVAL AND PERMIT

(1) Any operator seeking approval for temporary abandonment shall submit on Form C-103, Sundry Notices and Reports on Wells, a notice of intent to temporarily abandon the well describing the proposed temporary abandonment procedure to be used. No work shall be commenced until approved by the Division and the operator shall give 24 hours notice to the appropriate District office of the Division before work actually begins.

(2) No temporary abandonment shall be approved unless evidence is furnished to show that the casing of such well is mechanically sound and in such condition as to prevent:

- (a) damage to the producing zone;
- (b) migration of hydrocarbons or water;
- (c) the contamination of fresh water or other natural resources; and
- (d) the leakage of any substance at the surface.

(3) If the well fails the mechanical integrity test required herein, the well shall be plugged and abandoned in accordance with these rules or the casing problem corrected and the casing retested within ninety (90) days.

(4) Upon successful completion of the work on the temporarily abandoned well, the operator will submit a request for Temporary Abandonment to the appropriate district office on Form C-103 together with such other information as is required by Rule 1103 E.(1).

(5) The Division may require the operator to post with the Division

a one-well plugging bond for the well in an amount to be determined by the Division to be satisfactory to meet the particular requirements of the well.

(6) The Division shall specify the expiration date of the permit, which shall be not more than five (5) years from the date of approval.

C. TESTS REQUIRED

(1) The following methods of demonstrating casing integrity may be approved for temporarily abandoning a well:

- (a) A cast iron bridge plug will be set within one hundred (100) feet of uppermost perforations or production casing shoe and the casing loaded with inert fluid and pressure tested to 500 pounds per square inch with a pressure drop of not more than 10% for thirty (30) minutes; or
- (b) A retrievable bridge plug or packer will be run to within one hundred (100) feet of uppermost perforations or production casing shoe and the well tested to 500 pounds per square inch for thirty minutes with a pressure drop of not greater than 10% for thirty (30) minutes; or
- (c) For a gas well in southeast New Mexico completed above the San Andres formation, if the operator can demonstrate that the fluid level is below the base of the salt and that a Bradenhead test shows no casing leaks, the Division may exempt the well from the requirement for a bridge plug or packer; or
- (d) a casing inspection log confirming the mechanical integrity of the production casing may be submitted.

(2) Any such test which is submitted must have been conducted within the previous twelve (12) months.

(3) The Division may approve other casing tests submitted on Form C-103 on an individual basis.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 204. LIABILITY

The owner of any well drilled for oil or gas or for injection, or any seismic, core or other exploratory hole, whether cased or uncased, shall be responsible for the plugging thereof.

CURRENT VERSION

RULE 204 - WELLS TO BE USED FOR FRESH WATER

A. When a well to be plugged may safely be used as a fresh water well and the landowner agrees to take over said well for such purpose, the well need not be plugged above the sealing plug set below the fresh water formation.

B. The operator must comply with all other requirements contained in Rule 202 regarding plugging, including surface restoration and reporting requirements.

C. Upon completion of plugging operations, the operator must file with the Division a written agreement signed by the landowner whereby the landowner agrees to assume responsibility for such well. Upon the filing of this agreement and approval by the Division of well abandonment operations, the operator shall no longer be responsible for such well, and any bonds thereon may be released.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 704. - TESTING AND MONITORING

A. Testing

Prior to commencement of injection, wells shall be tested to assure the initial integrity of the casing and the tubing and packer, if used, including pressure testing of the casing-tubing annulus.

At least once every five years thereafter, injection wells shall be tested to assure their continued mechanical integrity. Tests demonstrating continued mechanical integrity shall include the following:

- (a) measurement of annular pressures in wells injecting at positive pressure under a packer or a balanced fluid seal;
- (b) pressure testing of the casing-tubing annulus for wells injecting under vacuum conditions; and,
- (c) such other tests which are demonstrably effective and which may be approved for use by the Division.

Notwithstanding the test procedures outlined above, the Division may require more comprehensive testing of the injection wells when deemed advisable, including the use of tracer surveys, noise logs, temperature logs, or other test procedures or devices.

In addition, the Division may order special tests to be conducted prior to the expiration of five years if conditions are believed to so warrant. Any such special test which demonstrates continued mechanical integrity of a well shall be considered the equivalent of an initial test for test scheduling purposes, and the regular five-year testing schedule shall be applicable thereafter.

The injection well operator shall advise the Division of the date and time any initial, 5-year, or special tests are to be commenced in order that such tests may be witnessed.

B. Monitoring

Injection wells shall be so equipped that the injection pressure and annular pressure may be determined at the wellhead and the injected volume may be determined at least monthly.

Injection wells used for storage shall be so equipped that both injected and produced volumes may be determined at any time.

CURRENT VERSION

RULE 704. - TESTING, MONITORING, STEP-RATE TESTS,
NOTICE TO THE DIVISION, REQUESTS FOR
PRESSURE INCREASES

A. Testing

(1) Prior to commencement of injection and any time tubing is pulled or the packer is reseated, wells shall be tested to assure the integrity of the casing and the tubing and packer, if used, including pressure testing of the casing-tubing annulus to a minimum of 300 psi for 30 minutes or such other pressure and/or time as may be approved by the appropriate district supervisor. A pressure recorder shall be used and copies of the chart shall be submitted to the appropriate Division district office within 30 days following the test date.

(2) At least once every five years thereafter, injection wells shall be tested to assure their continued mechanical integrity. Tests demonstrating continued mechanical integrity shall include the following:

- (a) measurement of annular pressures in wells injecting at positive pressure under a packer or a balanced fluid seal; or,
- (b) pressure testing of the casing-tubing annulus for wells injecting under vacuum conditions; or,
- (c) such other tests which are demonstrably effective and which may be approved for use by the Division.

(3) Notwithstanding the test procedures outlined above, the Division may require more comprehensive testing of the injection wells when deemed advisable, including the use of tracer surveys, noise logs, temperature logs, or other test procedures or devices.

(4) In addition, the Division may order special tests to be conducted prior to the expiration of five years if conditions are believed to so warrant. Any such special test which demonstrates continued mechanical integrity of a well shall be considered the equivalent of an initial test for test scheduling purposes, and the regular five-year testing schedule shall be applicable thereafter.

(5) The injection well operator shall advise the Division of the date and time any initial, five-year, or special tests are to be commenced in order that such tests may be witnessed.

B. Monitoring

(1) Injection wells shall be so equipped that the injection pressure and annular pressure may be determined at the wellhead and the injected volume may be determined at least monthly.

C. Step-Rate Tests, Notice to the Division, Requests for Injection Pressure Limit Increases

(1) Whenever an operator shall conduct a step-rate test for the purpose of increasing an authorized injection or disposal well pressure limit, notice of the date and time of such test shall be given in advance to the appropriate Division district office.

(2) Copies of all injection or disposal well pressure-limit increase applications and supporting documentation shall be submitted to the Division Director and to the appropriate district office.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 1204. METHOD OF GIVING LEGAL NOTICE FOR HEARING

Notice of each hearing before the Commission and notice of each hearing before a Division Examiner shall be given by personal service on the person affected or by publication once in a newspaper of general circulation published at Santa Fe, New Mexico, and once in a newspaper of general circulation published in the county or each of the counties, if there be more than one, in which any land, oil, or gas, or other property which may be affected is situated.

CURRENT VERSION

RULE 1204. PUBLICATION OF NOTICE OF HEARING

Notice of each hearing before the Commission and before a Division Examiner shall be by publication once in accordance with the requirements of Chapter 14, Article 11, N.M.S.A. 1978, in a newspaper of general circulation in the county, or each of the counties if there be more than one, in which any land, oil, gas, or other property which is affected may be situated.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 1206. PERSONAL SERVICE OF NOTICE

Personal service of the notice of hearing may be made by any agent of the Division or by any person over the age of 18 years in the same manner as is provided by law for the service of summons in civil actions in the district courts of this state. Such service shall be complete at the time of such personal service or on the date of publication, as the case may be. Proof of service shall be by the affidavit of the person making personal service or of the publisher of the newspaper in which publication is had. Service of the notice shall be made at least 10 days before the hearing.

CURRENT VERSION

RULE 1206.

THIS RULE HAS BEEN REPEALED

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 1207. PREPARATION OF NOTICES

After a motion or application is filed with the Division the notice or notices required shall be prepared by the Division and service and publication thereof shall be taken care of by the Division without cost to the applicant.

CURRENT VERSION

RULE 1207. - ADDITIONAL NOTICE REQUIREMENTS

A. Each applicant for hearing before the Division or Commission shall give additional notice as set forth below:

(1) In cases of applications filed for compulsory pooling under Section 70-2-17 NMSA 1978, as amended, or statutory unitization under Section 70-7-1, et. seq. NMSA 1978, as amended: Actual notice shall be given to each known individual owning an uncommitted leasehold interest, an unleased and uncommitted mineral interest, or royalty interest not subject to a pooling or unitization clause in the lands affected by such application which interest must be committed and has not been voluntarily committed to the area proposed to be pooled or unitized. Such individual notice in compulsory pooling or statutory unitization cases shall be by certified mail (return receipt requested).

(2) When an application for compulsory pooling is known to be unopposed, the applicant may file under the following alternate procedure:

- (a) Actual notice shall be given as required in (1) above. The application for hearing shall state that no opposition for hearing is expected and shall include the following:
 - (i) a map outlining the spacing unit(s) to be pooled showing the nature and percentage of the ownership interests therein and location of the proposed well;
 - (ii) a listing showing the name and last known address of all parties to be pooled and the nature and percent of their interest;
 - (iii) the name of the formations and/or pools to be pooled (Note: The Division cannot pool a spacing unit larger in size than provided in the General Rules or appropriate special pool rules);
 - (iv) a statement as to whether the pooled unit is for gas and/or oil production as appropriate (see note under (iii) above);
 - (v) written evidence of attempts made to gain voluntary agreement including but not limited to copies of appropriate correspondence;
 - (vi) appropriate geological map(s) of the formation(s)

to be tested and a geological and/or engineering assessment of the risk involved in the drilling of the well and a proposed risk penalty to be assessed against any owner who chooses not to pay his share of estimated well costs;

- (vii) proposed overhead charges (combined fixed rates) to be applied during drilling and production operations along with a demonstration that such charges are reasonable;
- (viii) the location and proposed depth of the well to be drilled on the pooled units(s); and,
- (ix) a copy of the AFE (Authorization for Expenditure) to be submitted to the interest owners in the well.

(3) All submittals required under this paragraph shall be accompanied by statements (sworn and notarized) by those persons who prepared the same attesting that the information is true and complete to the best of their knowledge and belief.

(4) All unopposed pooling applications will be set for hearing. If the Division review of such application finds them acceptable, the information submitted above will be incorporated as the record in the case and an order will be written thereon. At the request of any interested party or upon the Division's own initiative, any pooling application submitted under paragraph (2) of this rule shall be set for full hearing with oral testimony by the applicant.

(5) In cases of applications for approval of unorthodox well locations:

- (a) If the proposed location is unorthodox by virtue of being located closer to the outer boundary of the spacing unit, than permitted by rule, actual notice shall be given to any operator of a spacing unit or owner of an undrilled lease which adjoins the applicant's spacing unit on one or more of the two sides or the single corner closest to the proposed well.
- (b) If the proposed location is unorthodox by virtue of its proximity to another well or wells within the same spacing unit, actual notice shall be given to offsetting operators or owners of undrilled leases bordering applicant's spacing unit on a common boundary or unit corner.
- (c) If the proposed location is unorthodox by virtue of being located in a different quarter-quarter section or quarter section than provided in special pool rules, actual notice shall be given to offsetting operators or owners of undrilled leases bordering applicant's spacing unit on a common boundary or unit corner.
- (d) All such notices shall be given by certified mail (return receipt requested).

(6) In the case of applications for the approval of any non-standard proration unit:

- (a) Actual notice shall be given to all operators owning a leasehold interest to be excluded from the proration unit in the quarter-quarter section (for 40-acre pools or formations), the quarter section (for 160-acre pools or formations), the half section (for 320-acre pools or formations), or in the section (for 640-acre pools or

formations) in which the non-standard unit is located and to each operator on any proration unit, or owner of an undrilled tract, which unit or tract adjoins or corners such quarter-quarter, quarter, half, or whole section. Such notice shall be by certified mail (return receipt requested).

(7) In the case of applications for adoption of, or amendment of, special pool rules:

(a) Actual notice shall be given to all operators of wells and each unleased mineral owner within the existing or proposed pool boundaries and all operators of wells within one (1) mile of such boundaries. Such notice may be provided by regular mail.

(8) In the case of applications to amend special rules of any Division designated potash area, actual notice shall be given to each potash owner, each oil or gas operator, and each unleased mineral owner within the designated area. Such notice shall be provided by certified mail (return receipt requested).

(9) In the case of applications for approval of downhole commingling of the product of multiple formations:

(a) Actual notice shall be given to all offset operators. Such notice shall be provided by regular mail.

(10) In cases of applications for exceptions to rules or orders controlling surface disposition of produced water or other fluids:

(a) Actual notice shall be given to any surface owner within one-half mile of the site for which the exception is sought. Such notice shall be provided by certified mail (return receipt requested).

(11) In cases of applications not listed above, the outcome of which may affect a property interest of other individuals or entities:

(a) Actual notice shall be given to such individuals or entities by certified mail (return receipt requested).

B. Any notice required by this rule shall be to the last known address of the party to whom notice is to be given at least 20 days prior to the date of hearing of the application and shall apprise such party of the nature and pendency of such action and the means by which protests may be made.

C. At each hearing, the applicant shall cause to be made a record, either by testimony at the hearing or by an affidavit signed by the applicant or its authorized representative, that the notice provisions of this Rule 1207 have been complied with, that applicant has conducted a good-faith diligent effort to find the correct address of all interested persons entitled to receive notice, and that pursuant to Rule 1207, notice has been given at that correct address as provided by rule. In addition, such certificate shall contain the name and address of each interested person to whom such notice was sent and, where proof of receipt is available, a copy of same.

D. Evidence of failure to provide notice as provided in this rule may, upon a proper showing be considered cause for reopening the case.

VERSION CONTAINED WITHIN PRIMACY APPLICATION

RULE 1223. CHANGES IN FORMS AND REPORTS

Any change in the forms and reports or rules relating to such forms and reports shall be made only by order of the Commission or Division issued after due notice and hearing.

CURRENT VERSION

RULE 1223.

THIS RULE HAS BEEN REPEALED



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

January 31, 1994

Mr. David Abshire, Program Manager
Water Division (6W-SU)
U. S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733


Dear David:

Enclosed please find the following documents:

A copy of Division Statutes in effect at the time of primacy;
A 1987 Replacement Pamphlet
A 1993 Cumulative Supplement
A copy of the latest Water Quality Act

I trust this is all the information you will need to determine any changes in the statutes which have occurred since primacy.

If you should need anything further, or assistance, please contact Prentiss or myself.

Sincerely,

David Catanach
UIC Director

cc: W. J. LeMay
P. Childs
R. Anderson

January 26, 1994

David Abshire
UIC State Programs Section (6W-SU)
EPA Region 6
1445 Ross Avenue
Suite 1200
Dallas, TX 75202-2733



STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

Re: Proposed Additions to the New Mexico Water Quality
Control Commission Regulations for UIC Class I
Hazardous Waste Injection Wells

Dear Mr. Abshire:

Enclosed for your review, please find a draft copy of the
proposed additions to the New Mexico Water Quality Control
Commission (WQCC) regulations for the regulation of Class
I hazardous waste injection wells in the State of New
Mexico.

These proposed additions are submitted as required in the
Memorandum of Agreement (MOA) between the State of New
Mexico and the U.S. Environmental Protection Agency (EPA)
for New Mexico's Underground Injection Control (UIC) primacy
program.

The proposed additions incorporate the July 26, 1988
additions to the Code of Federal Regulations (CFR) for Class
I hazardous waste injection wells which are found in the
following sections: 40 CFR Parts 144.3, 144.39, 144.52, 144
Subpart F, and 146 Subpart G.

Your prompt review and comments are requested. The
Department would like to go before the WQCC with these
proposed additions at their March, 1994 meeting.


Bruce King
Governor

If you have any questions please call me at 505-827-0219.

Judith M. Espinosa
Secretary

Sincerely,

Ron Curry
Deputy Secretary


Richard Ohrbom
Geologist
Ground Water Section

Enclosures

cc w/encl: Susan McMichael, Office of General Counsel
Prentiss Childs, OCD, Santa Fe
Dale Doremus, HPM, Ground Water Section

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PROPOSED ADDITIONS TO THE NEW MEXICO WATER QUALITY

CONTROL COMMISSION (WQCC) REGULATIONS

RELATING TO

THE UNDERGROUND INJECTION CONTROL (UIC) PRIMACY PROGRAM

The following definitions are proposed for Section 1-101 of the WQCC regulations. (These are proposed for Part 1 of the WQCC reg. because they are applicable to both Class 1 and Class 5 wells)

JJJ. "Application" means the documentation provided by the applicant in support of discharge plan approval, including the forms provided by the Department and additional information as required.

KKK. "Aquifer" means a geological "formation," group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

LLL. "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.

MMM. "Formation" means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

NNN. "Indian Lands" means "Indian Country" and is defined as:

a) All land within the limits of any Indian Reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation:

b) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and

c) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

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OOO. "Manifest" means the shipping document originated and signed by the "generator" which lists the material being transported, received, stored, and/or disposed.

PPP. "Permit" means discharge plan as defined in Section 1-101.P.

QQQ. "Project" means a group of wells in a single operation.

RRR. "Schedule of compliance" means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements leading to compliance with the "appropriate Act and regulations."

SSS. "SDWA" means the Safe Water Drinking Act.

TTT. "Site" means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

UUU. "Stratum" means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

VVV. "Underground source of drinking water (USDW)" means an aquifer or its portion which:

1. Supplies any public water system; or
2. Contains a sufficient quantity of groundwater to supply a public water system; and
 - a. Currently supplies drinking water for human consumption; or
 - b. Contains fewer than 10,000 mg/l total dissolved solids; and
3. Is not an exempted aquifer.

WWW. "USDW" means "underground source of drinking water."

The following are proposed additions (**in bold**) to part 5 of the WQCC regulations. (These definitions are purposed for

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Part 5 of the WQCC regulations because they relate more to Class 1 and 3 UIC wells, which are regulated primarily under Part 5 of the WQCC regulations, than to Class 5 UIC wells which are regulated primarily under Parts 1 and 3 of the WQCC regulations).

5-100. REGULATIONS FOR EFFLUENT DISPOSAL AND IN SITU
EXTRACTION WELLS.

A. Definitions

1. "Approved State program" means a State UIC program administered by the State that has been given primacy by the EPA.

2. "Class I Injection Well" means a well which injects hazardous and non-hazardous wastes beneath the lowest Underground Source of Drinking Water (USDW).

3. "Cone of influence" means that area around the well within which increased injection zone pressure caused by injection would be sufficient to drive fluids into an USDW.

4. "Drilling mud" means a heavy suspension used in drilling an "injection well," introduced down the drill pipe and through the drill bit.

5. "Environmental Protection Agency" ("EPA") means the United States "Environmental Protection Agency".

6. "Exempted aquifer" means designated aquifer as defined in Section 5-103.

7. "Existing injection well" means an "injection well" which was authorized prior to August 25, 1988 by an approved State program or an EPA administered program.

8. "Facility or activity" means any UIC "injection well," or an other facility or activity that is subject to regulation under the UIC program.

9. "Fault" means a fracture, joint or any break in the strata, along which movement may or may not have occurred, which may allow communication of fluids between formations.

10. "Formation Fluid" means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as "drilling mud".

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11. "Generator" means any person, by site location, whose act or process produces hazardous waste.

12. "Hazardous Waste" means a hazardous waste as defined in 40 CFR 261.3.

13. "Hazardous waste management facility" ("HWM facility") means all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units.

14. "Injection well" means a "well" into which "fluids" are being injected.

15. "Major facility" means any UIC "facility or activity" classified as such by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director.

16. "State/EPA agreement" means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs.

17. "UIC" means the Underground Injection Control program.

18. "Underground injection" means a "well injection."

19. "Well injection" means the subsurface emplacement of "fluids" through a bored, drilled, or driven "well," or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

5-101.J.3. A determination that the permitted activity may cause a hazard to public health or undue risk to property and can only be regulated to acceptable levels by discharge plan modification or termination.

4. When there are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance.

5. If the Director receives information which was not available at the time of permit issuance.

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6. When the standards or regulations on which the permit was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit was issued.

7. When the Director determines good cause exists for modification due to an act of God, strike, flood or materials shortage or other events which the permittee has little or no control.

8. The Director receives notification of a proposed transfer of the permit.

9. A determination that the waste being injected is a hazardous waste either because the definition has been revised, or because a previous determination has been changed.

10. If new information or standards indicate that the siting is a threat to human health or the environment.

11. Noncompliance by the permittee of any condition of the permit.

12. The permittee's failure to disclose fully all relevant facts or the permittee's misrepresentation of any facts.

5-101.K. The Director shall follow the applicable procedures in 40 CFR Section 124 in terminating any permit under this section.

L. Permit conditions

1. In addition to conditions required in Part 5 of these regulations, the Director shall impose on a case by case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.

5-203.A

1. For wells that the Director determines are improperly plugged, completed, or abandoned, or for which plugging or completion information is unavailable, the applicant shall submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluids into or between USDWs.

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5-203.C.7. Hydraulic connections with waters having 10,000 mg/l or less TDS.

8. Any other factors which might affect the movement of fluids into or between USDWs.

5-204.B.2.(a)

(i) A radioactive tracer survey.

(ii) Any other test required by the director.

D.submitted since the previous evaluation.

E. For Class I Hazardous Waste wells, periodic mechanical integrity testing shall be as described in 40 CFR §146.68.(d) through §146.68.(f).

5-205.A.1.(a) Effluent disposal wells will not cause or allow movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 5-103+ and:

(i) Permit the use of appropriate testing devices and workover tools.

(ii) Permit continuous monitoring of injection tubing and casing/tubing annulus and,

(iii) All well materials must be compatible with fluids with which the materials may be expected to come into contact.

5-205.A.4.(b).(ii) (C) A cement bond ~~er~~ and variable density log, and a temperature log after the casing is set and cemented.

(D) The Director may allow the use of an alternative to the above logs when an alternative will provide equivalent or better information.

5-205.B.1.pursuant to Section 5-103.

(a) The siting of Class I hazardous waste injection wells shall be limited to areas that are geologically suitable. The Director shall determine geologic suitability based upon:

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(1) An analysis of the structural and stratigraphic geology, the hydrogeology, and seismicity of the region;

(2) An analysis of the local geology and hydrogeology of the well site, including at a minimum, detailed information regarding stratigraphy, structure and rock properties, aquifer hydrodynamics and mineral resources and

(3) A determination that the geology of the area can be described confidently and that limits of waste fate and transport can be accurately predicted through the use of models.

(b) Class I hazardous waste injection wells shall be sited such that the following information may be obtained and/or verified:

(1) The injection zone:

(i) Verify that the injection zone has sufficient permeability, porosity, thickness and areal extent to allow the proposed injection volume for the expected life of the well by one or more of the following tests as required by the Director:

(ii) Permeability tests on whole cores or sidewall cores obtained from the injection zone(s)

(iii) Pump tests and/or injectivity tests in the injection zone.

(iv) Record the fluid temperature, pH, conductivity, pressure and static fluid level.

(v) Determine the fracture pressure.

(vi) Physical and chemical characteristics of the formation fluids.

(vii) Within the area of review, the piezometer surface of the fluid in the injection zone is less than the piezometric surface of the lowermost USDW, considering density effects, injection pressures and any significant pumping in the overlying USDW; or

(viii) There is no USDW present

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(2) The confining zone:

(i) Is laterally continuous and free of transecting, transmissive faults or fractures over an area sufficient to prevent the movement of fluids from the injection zone into a USDW; and

(ii) Contains at least one formation of sufficient thickness and with lithologic characteristics capable of preventing vertical propagation of fractures.

(iii) The confining zone is separated from the base of the lowermost USDW by at least one sequence of permeable strata that will provide an added layer of protection for the USDW in the event of fluid movement in an unlocated borehole or transmissive fault.

5-205.B.2. All effluent disposal wells shall be cased and cemented by circulating cement to the surface, using a minimum of 120 % of the calculated volume necessary to fill the casing-borehole annulus.

(a) One surface casing string shall, at a minimum, extend into the confining bed below the lowest formation that contains a USDW and be cemented by circulating cement to the surface.

(b) At least one long string casing, using a sufficient number of centralizers, shall extend to the injection zone and shall be cemented by circulating cement to the surface.

(c) Cement and cement additives must be of a sufficient quality to withstand the maximum operating pressure and maintain integrity over the design life of the well, including the post-closure care period.

(d) Depth to and interval of injection zone.

(e) Injection pressure, external pressure, internal pressure and axial loading.

(f) Hole size.

(g) Size and grade of all casing strings including casing connections which must be of sufficient strength to withstand for the life of the well:

(i) Maximum burst and collapse pressures which may be experienced during the construction, operation

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and closure of the well; and

(ii) The maximum tensile stress which may be experienced at any point along the length of the casing during the construction, operation and closure of the well.

(h) Corrosiveness of injected fluid, formation fluids and temperature.

(i) Lithology of injection and confining zones.

(j) Type and grade of cement.

(k) Quantity and chemical composition of the injected fluid.

5-205.B.3.(b)(vi) Size of casing.

(vii) Tubing tensile, burst, and collapse strengths.

5-206.B.2. Unless an alternative to a packer has been approved under Subsection 5-205.B.3.(a), the annulus between the tubing and the long string of casing shall be filled with a fluid approved by the director and a pressure, also approved by the director shall be maintained on the annulus which is greater than the operating injection pressure.

3. permit requirements for owners or operators of hazardous waste wells which inject wastes which have the potential to react with the injection formation shall include:

(a) Conditions limiting the temperature, pH or acidity of the injected waste; and

(b) Procedures necessary to assure that pressure imbalances which might cause a backflow or blowout do not occur.

(c) Automatic alarm and automatic shut-off systems designed to sound and shut-in the well when pressures and flow rates exceed those approved by the director.

5-207.B.1. The discharger shall provide analyses of the injected fluids at least quarterly or, if necessary, more frequently to yield data representative of their characteristics.

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(a) Corrosive injectate will require continuous corrosion monitoring of the construction materials used in the well by:

(i) Placing coupons of the well materials in constant contact with the injectate under operating temperatures, pressures and pH conditions of the operating well.

(ii) The well materials shall be monitored for loss of mass, thickness, cracking, pitting and other signs of corrosion on a quarterly basis to ensure that the well components meet the minimum standards for material strength and performance.

(b) Monitoring of the injected waste

(1) The owner or operator shall submit for approval a written waste analysis plan that describes the procedures to be carried out to obtain a detailed chemical and physical analysis of a representative sample of the waste, including the quality assurance procedures used. At a minimum the plan shall specify:

(i) the parameters for which the waste will be analyzed and the rationale for the selection of these parameters.

(ii) The test methods that will be used to test for these parameters; and

(iii) The sampling method that will be used to obtain a representative sample.

(2) The owner or operator shall sample and analyze the waste at frequencies determined by the Director.

2. Continuous monitoring devices shall be used to provide a record of injection pressure, **pressure buildup in the injection zone**, flow rate, flow volume, and pressure on the annulus between the tubing and the long string of casing.

5-208.A.2.(b) Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure~~7~~ and volume; and

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(d) Any changes within the area of review which might impact subsurface conditions.

(e) Report to the director within 24 hours a description of any event that exceeds operating parameters for annulus pressure or injection pressure, mechanical integrity, triggers an alarm or shut-in device or any other warning device as specified in the permit.

(i) Reporting shall be as described in §1-203 of the New Mexico Water Quality Control Commission regulations and 40 CFR §146.67.(f) through (j).

(f) For Class I Hazardous Waste injection wells reporting requirements shall, at a minimum, include the requirements of 40 CFR §146.69.

5-209.F The discharger shall retain all monitoring records and records concerning the nature and composition of injected fluids until five years after completion of any plugging and abandonment procedures.

5-210.15 Contingency plans to cope with all shut-ins or well failures so as to prevent movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 5-103.

(a) For Class I Hazardous Injection wells, the applicant shall submit information to the Director demonstrating that, to a reasonable degree of certainty, there will be no migration of hazardous constituents from the injection zone for as long as the waste remains hazardous. This demonstration requires in part that:

(i) The hydrological and geochemical conditions at the injection site and the physiochemical nature of the waste stream(s) are such that reliable predictions can be made.

(ii) The injected fluid will not migrate from the injection zone for 10,000 years.

(iii) Before the injected fluids migrate out of the injection zone or to a point of discharge or interface with USDW, the fluid will no longer be hazardous.

5-210.B.17 The ability of the discharger to undertake measures necessary to prevent contamination of ground water having 10,000 mg/l or less TDS after cessation of operation,

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including the proper closing, plugging and abandonment of a well, ground water restoration if applicable, and any post-operational monitoring as may be needed. Methods by which the discharger shall demonstrate the ability to undertake these measures shall include submission of a surety bond or other adequate assurances, such as financial statements or other materials acceptable to the director, such as: (1) a surety bond; (2) a trust fund with a New Mexico bank in the name of the State of New Mexico, with the State as beneficiary; (3) a non-renewable letter of credit made out to the State of New Mexico; (4) liability insurance specifically covering the contingencies listed in this paragraph; or (5) a performance bond, generally in conjunction with another type of financial assurance. Such bond or materials shall be approved and executed prior to discharge plan approval and shall become effective upon commencement of construction. If an adequate bond is posted by the discharger to a federal or another state agency, and this bond covers all of the measures referred to above, the director shall consider this bond as satisfying the bonding requirements of these regulations wholly or in part, depending upon the extent to which such bond is adequate to ensure that the discharger will fully perform the measures required hereinabove.

18. For Class I Hazardous waste injection wells, New Mexico's financial requirements for plugging and abandonment, remediation and post closure monitoring may be used by the operator if the EPA Regional Director determines that the State's requirements are equal to, or more stringent than, those required by 40 CFR §144 Subpart F "Financial Responsibility: Class I Hazardous Waste Injection Wells".

19. In addition to Parts A through B.18 of this section, the application for a new Class I hazardous waste injection well shall include the information required in 40 CFR §146.70.

C. Closure Plan

1. The owner or operator of a Class I hazardous waste injection well shall prepare, maintain, and comply with a plan for closure of the well that meets the requirements of 40 CFR §146.71.

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D. Post-closure Plan

1. The owner or operator of a Class I hazardous waste injection well shall prepare, maintain, and comply with a plan for post-closure care that meets the requirements of 40 CFR §147.72.