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REGULATIONS

BRINE WELL WORK GROUP KANSAS, TEXAS & NEW MEXICO

3/26/09 - Present

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TITLE 16 ECONOMIC REGULATION
PART 1 RAILROAD COMMISSION OF TEXAS
CHAPTER 3 OIL AND GAS DIVISION
RULE §3.81 **Brine Mining Injection Wells**

(a) Definitions. The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Affected person--A person who, as a result of the activity sought to be permitted, has suffered or may suffer actual injury or economic damage other than as a member of the general public.

(2) Brine mining facility or facility--The brine mining injection well, and the pits, tanks, fresh water wells, pumps, and other structures and equipment that are or will be used in conjunction with the brine mining injection well.

(3) Brine mining injection well--A well used to inject fluid for the purpose of extracting brine by the solution of a subsurface salt formation. The term "brine mining injection well" does not include a well used to inject fluid for the purpose of leaching a cavern for the underground storage of hydrocarbons or the disposal of waste, or a well used to inject fluid for the purpose of extracting sulphur by the thermofluid mining process.

(4) Commission--The Railroad Commission of Texas.

(5) Director--The director of the Oil and Gas Division or a staff delegate designated in writing by the director of the Oil and Gas Division or the commission.

(6) Existing brine mining injection well--A brine mining injection well in which injection operations began prior to the effective date of this section.

(7) Fresh water--Water having bacteriological, physical, and chemical properties that make it suitable and feasible for beneficial use for any lawful purpose.

(8) New brine mining injection well--A brine mining injection well in which injection operations begin on or after the effective date of this section.

(9) Permit--A written authorization issued by the commission under this section for the operation of a brine mining injection well.

(10) Person--A natural person, corporation, organization, government or governmental subdivision or agency, business trust, estate, trust partnership, association, or any other legal entity.

(11) Pollution--The alteration of the physical, chemical, or biological quality of, or the contamination of, water that makes it harmful, detrimental, or injurious to humans, animal life, vegetation or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(b) Prohibitions.

(1) Unauthorized injection. No person may operate a brine mining injection well without obtaining a permit from the commission under this section. No person may begin constructing a new brine mining injection well until the commission has issued a permit to operate the well under this section and a permit to drill, deepen, plug back, or reenter the well under §3.5 of this title (relating to Application to Drill, Deepen, Reenter, or Plug Back) (Statewide Rule 5).

(2) Fluid migration. No person may operate a brine mining injection well in a manner that allow fluids to escape from the permitted injection zone. If fluids are migrating from the permitted injection zone, the operator shall immediately cease injection operations.

(3) Falsifying documents and tampering with gauges. No person may knowingly make any false statement, representation, or certification in any application, report, record, or other document submitted or required to be maintained under this section or under any permit issued pursuant to this section, or falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under this section or under any permit issued pursuant to this section.

(c) Standards for permit issuance. A permit may be issued only if the commission determines that the operation of the brine mining injection well will not result in the pollution of fresh water. All permits issued under this section will contain the conditions required by subsections (f) and (g) of this section, and all other conditions reasonably necessary to prevent the pollution of fresh water.

(d) Permit application.

(1) Duty to apply. Any person who operates or proposes to operate a brine mining injection well shall file a permit application with the commission in Austin within the time provided in paragraph (2) of this subsection. The applicant shall mail or deliver a copy of the application to the appropriate district office on the same day the application is mailed or delivered to the commission in Austin. A permit application will be considered filed with the commission on the date it is received by the commission in Austin.

(2) Time to apply.

(A) Any person who proposes to operate a new brine mining injection well shall file a permit application at least 180 days before the date on which injection is to begin, unless a later date has been authorized by the director.

(B) Any person who is operating an existing brine injection well shall file a permit application within 90 days of the effective date of this section.

(C) Any person who has obtained a permit under this section and who wishes to continue to operate the brine mining injection well after the permit expires shall file an application for new permit at least 180 days before the existing permit expires, unless a later date has been authorized by the director.

(3) Who applies. When a brine mining facility is owned by one person but is operated by another person, it is the operator's duty to file an application for a permit.

(4) Application requirements for all applicants. All applicants shall submit the following information, using application forms supplied by the commission:

(A) name, mailing address, and location of the brine mining facility for which the application is submitted;

(B) the operator's name, mailing address, telephone number, and status as federal, state, private, public, or other entity, and a statement indicating whether the operator is the owner of the facility;

(C) the proposed uses for the brine mined at the facility;

(D) a listing of all permits or construction approvals for the facility received or applied for under federal or state environmental programs;

(E) a topographic map, or other map if the topographic map is unavailable, extending one mile beyond the property boundaries of the facility, depicting the facility and those springs, other surface water bodies, drinking water wells, and other wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary;

(F) a plat showing the oil and gas operators of the tract on which the facility is located and the tracts adjacent to the tract on which the facility is located. On the plat or on a separate sheet attached to the plat, the applicant shall list the names and addresses of the oil and gas operators;

(G) a plat showing the surface ownership of the tract on which the facility is located and the tracts adjacent to the tract on which the facility is located. On the plat or on a separate sheet attached to the plat, the applicant shall list the names and addresses of the surface owners, as determined from the current county tax rolls or other reliable sources, and shall identify the source of the list. If the director determines that, after diligent efforts, the applicant has been unable to ascertain the name and address of one or more surface owners, the director may waive the requirements of this subparagraph with respect to those surface owners;

(H) a map with surveys marked showing the type, location, and depth of all wells of public record within a 1/4 mile radius of the brine mining injection well that penetrate the salt formation. The applicant shall attach the following information to the map:

(i) a tabulation of the wells showing the dates the wells were drilled and the present status of the wells; and

(ii) plugging records for plugged and abandoned wells and completion records for other wells;

(I) a letter from the Texas Commission on Environmental Quality stating the depth to which fresh water strata should be protected;

(J) a complete electric log of the brine mining injection well or a nearby well. On the log, the applicant shall identify the geologic formations between the land surface and the top of the salt formation and the depths at which they occur;

(K) a drawing of the surface and subsurface construction details of the brine mining injection well;

(L) the proposed maximum daily injection rate and maximum injection pressure;

(M) the proposed injection procedure;

(N) the proposed mechanical integrity testing procedure;

(O) the source of mining water to be used at the facility. If the source is groundwater, the following information must be included:

(i) the groundwater formation name;

(ii) an depth of the groundwater formation; and

(iii) an analysis of the groundwater;

(P) the direction of the hydraulic gradient in the area; and

(Q) the proposed groundwater monitoring plan, or an alternate plan for assuring that fluids are not escaping from the permitted injection zone.

(5) Additional information. The applicant shall submit any other information required on the application form supplied by the commission. In addition to the information reported on the application form, the applicant shall submit, at the director's request, any other information the commission may reasonably require to assess the brine mining injection well and to determine whether to issue a permit.

(e) Signatories to applications and reports.

(1) Applications. All applications shall be signed as follows:

(A) for a corporation, by a responsible corporate officer. A responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or

(B) for a partnership or sole proprietorship, by a general partner or the proprietor, respectively.

(2) Reports. All reports required by permits and other information requested by the commission shall be signed by a person described in paragraph (1) of this subsection or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(A) the authorization is made in writing by a person described in paragraph (1) of this subsection;

(B) the authorization specifies an individual or position having responsibility for the overall operation of the regulated facility; and

(C) the authorization is submitted to the commission before or together with any report of information signed by the authorized representative.

(3) Certification. Any person signing a document under paragraph (1) or (2) of this subsection shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or who are directly responsible for gathering the

information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information."

(f) Conditions applicable to all permits. The conditions specified in this subsection apply to all permits.

(1) Duty to comply. The operator shall comply with all conditions of the permit. Any permit noncompliance is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

(2) Duty to reapply. If the operator wishes to continue a permitted activity after the expiration date of the permit, the operator shall apply for and obtain a new permit.

(3) Need to halt or reduce activity not a defense. It is not a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(4) Duty to mitigate. The operator shall take all reasonable steps to minimize and correct any adverse effect on the environment resulting from noncompliance with the permit.

(5) Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control, and related appurtenances, that are installed or used by the operator to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up and auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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(7) Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege.

(8) Duty to provide information. The operator shall also furnish to the commission, within a time specified by the commission, any information that the commission may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. The operator shall also furnish to the commission, upon request, copies of records required to be kept under the conditions of the permit.

(9) Inspection and entry. The operator shall allow any member or employee of the commission, on proper identification, to:

(A) enter upon the premises where a regulated activity is conducted or where records are kept under the conditions of the permit;

(B) have access to and copy, during reasonable working hours, any records required to be kept under the conditions of the permit;

(C) inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

(D) sample or monitor any substance or parameter for the purpose of assuring compliance with the permit or as otherwise authorized by the Texas Water Code, §27.071, or the Texas Natural Resources Code, §91.1012.

(10) Monitoring and records.

(A) Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

(B) The operator shall retain records of all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the permit application, for at least three years from the date of the sample, measurement, report, or application. This period may be extended by request of the commission at any time.

(C) Records of monitoring information must include the date, exact place, and time of the sampling or measurements; the individual(s) who performed the sampling or measurements; the date(s) analyses were performed; the individual(s) who performed the analyses; the analytical techniques or methods used; and the results of the analyses.

(11) Signatory requirements. All reports and other information submitted to the commission shall be signed and certified in accordance with subsection (e) of this section.

(12) Reporting requirements.

(A) The operator shall notify the commission as soon as possible of any planned physical alteration or addition to the facility.

(B) The operator shall give advance notice to the commission of any planned changes in the facility that may result in noncompliance with permit requirements.

(C) Monitoring results shall be reported at the intervals specified in the permit.

(D) Reports of compliance or noncompliance with the requirements contained in any compliance schedule of the permit shall be submitted no later than 30 days after each scheduled date.

(E) The operator shall report to the commission any noncompliance that may endanger human health or the environment.

(i) An oral report shall be made to the appropriate district office immediately after the operator becomes aware of the noncompliance. A written report shall be filed with the Austin office within five days of the time the operator becomes aware of the noncompliance. The written report must contain the following information:

(I) a description of the noncompliance and its cause;

(II) the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and

(III) steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(ii) Information that shall be reported under this subparagraph includes the following:

(I) any monitoring or any other information that indicates that any contaminant may endanger fresh water; or

(II) any noncompliance with a permit condition or malfunction of the injection system that may cause fluid migration into or between fresh water strata.

(F) The operator shall report any noncompliance not reported under subparagraphs (C), (D), and (E) of this paragraph at the time monitoring reports are submitted. The report must contain the information listed in subparagraph (E) of this paragraph.

(G) If the operator becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or a report to the commission, the operator shall promptly submit the relevant facts or correct information.

(13) Transfers. The permit is not transferable to any person except by modification, or revocation and reissuance, to change the name of the operator and incorporate other necessary requirements.

(14) Completion report. Injection operations may not begin in any new brine mining injection well until the operator has submitted a completion report to the director, and the director has reviewed the completion report and found the well in compliance with the conditions of the permit.

(15) Workovers. The operator shall notify the appropriate district office at least 48 hours before performing any workover or corrective maintenance operations that involve the removal of the tubing or well stimulation.

(16) Mechanical integrity.

(A) No person may perform injection operations in a brine mining injection well that lacks mechanical integrity. A well has mechanical integrity if:

(i) there is not significant leak in the casing; and

(ii) there is no significant fluid movement into fresh water strata through vertical channels adjacent to the wellbore.

(B) For any existing brine mining injection well, mechanical integrity must be demonstrated annually. For any new brine mining injection well, mechanical integrity must be demonstrated before injection operations begin and annually thereafter. In addition, for all brine mining injections wells, mechanical integrity must be demonstrated after any workover that involves the removal of the tubing.

(C) To demonstrate the absence of a significant leak in the casing, the operator shall conduct a fluid pressure test in accordance with the following procedures:

(i) the operator shall submit a written test procedure to the commission in Austin at least 15 days before the test;

(ii) the operator shall notify the district office orally at least 48 hours before the test;

(iii) the operator shall perform the test using the test procedure submitted prior to the testing unless otherwise instructed by the commission; and

(iv) the operator shall file a complete record of the test with the commission in Austin within 30 days after the test.

(D) In lieu of an annual fluid pressure test, the operator may monitor the pressure of a hydrocarbon pad or blanket contained in the annulus space of the well, provided the operator has obtained written approval from the director prior to using this method.

(E) One of the following methods shall be used to demonstrate the absence of significant fluid movement into fresh water strata through vertical channels adjacent to the wellbore:

(i) the results of a temperature or noise log; or

(ii) where the nature of the casing precludes the use of the logging techniques prescribed in clause (i) of this subparagraph, cementing records demonstrating the presence of adequate cement to prevent such movement.

(F) The director may allow the use of a method of demonstrating mechanical integrity other than one listed in subparagraphs (C), (D), and (E) of this paragraph with the approval of the administrator of the Environmental Protection Agency obtained pursuant to 40 Code of Federal Regulations §146.8(d).

(G) Mechanical integrity must be demonstrated to the satisfaction of the director. In conducting and evaluating the results of a mechanical integrity test, the operator and the director will apply procedures and standards generally accepted in the industry. In reporting the results of a mechanical integrity test, the operator must include a description of the method and procedures used. In evaluating the results, the director will review monitoring and other test data submitted since the previous mechanical integrity test.

(17) Notice of conversion or abandonment. The operator shall notify the commission at such times as the permit requires before conversion or abandonment of the well.

(18) Plugging. Within one year after cessation of brine mining injection operations, the operator shall plug the well in accordance with §3.14(a) and (c)(h) of this title (relating to Plugging) (Rule 14(a) and (c) - (h)). For good cause, the director may grant a reasonable extension of time in which to plug the well if the operator submits a proposal that describes actions or procedures to ensure that the well will not endanger fresh water during the period of the extension.

(g) Other permit conditions. In addition to the conditions required in all permits, the commission will establish conditions, as required on a case-by-case basis, to provide for and assure compliance with the requirements specified in this subsection.

(1) Duration. Permits will be effective for a term up to the operating life of the facility. The commission will review each permit issued pursuant to this section at least once every five years to determine whether cause exists for modification, revocation and reissuance, or termination of the permit.

(2) Operating requirements. Permits will prescribe operating requirements, which will at a minimum specify that:

(A) except during well stimulation, injection pressure at the wellhead may not exceed a maximum calculated to assure that the injection pressure does not initiate new fractures or propagate existing fractures in the injection zone; and

(B) in no case may the injection pressure initiate fractures in the confining zone or cause the escape of injection or formation fluids from the injection zone.

(3) Monitoring requirements. Permits will specify the following monitoring requirements:

(A) requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods;

(B) requirements concerning the type, intervals, and frequency of monitoring sufficient to yield data representative of the monitored activity, including continuous monitoring when appropriate; and

(C) requirements to report monitoring results with a frequency dependent on the nature and effect of the monitored activity, but in no case less than quarterly.

(4) Construction requirements. Permits will specify construction requirements to assure that the injection operations will not endanger fresh water. Changes in construction requirements during construction may be approved by the director as minor modifications of the permit. No such changes may be physically incorporated into the construction of the well prior to approval of the modifications by the director.

(A) An existing brine mining injection well shall achieve compliance with the construction requirements according to a compliance schedule established as soon as possible and in no case later than one year after the effective date of the permit. The permit will require the operator to submit a written compliance report within 30 days after compliance has been achieved.

(B) A new brine mining injection well must be cased and cemented in accordance with §3.13 of this title (relating to Casing, Cementing, Drilling, and Completion Requirements), (Rule 13), provided, however, that the operator shall set and cement surface casing in accordance with the letter obtained from the Texas Commission on Environmental Quality pursuant to subsection (d)(4)(I) of this section regardless of the total depth of the well. No alternative program for setting less surface casing will be authorized.

(C) Appropriate logs and other tests must be conducted during the drilling and construction of a new brine mining injection well. A descriptive report interpreting the results of such logs and tests must be prepared by a knowledgeable log analyst and submitted to the director. The logs and tests appropriate to each well will be determined based on the depth, construction, and other characteristics of the well, the availability of similar data in the area, and the need for additional information that may arise from time to time as the construction of the well progresses.

(5) Financial responsibility. It shall be a permit condition that the operator maintain financial responsibility and resources to plug and abandon the brine mining injection well. The operator shall show evidence of such financial responsibility to the commission by submitting a surety bond or letter of credit in a form prescribed by the commission. Such bond or letter of credit shall be maintained until the well is plugged in accordance with subsection (f)(18) of this section.

(6) Corrective action. For all known wells that penetrate the injection zone within a 1/4 mile radius of the brine mining injection well and are improperly completed, plugged, or abandoned, the commission will consider requiring corrective action to prevent movement of fluid into fresh water strata.

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(A) In determining the need for corrective action, the commission will consider the following factors: nature and volume of injected fluid; nature of native fluids; potentially affected population; geology; hydrology; history of the injection operation; completion and plugging records; abandonment procedures in effect at the time a well was abandoned; and hydraulic connections with fresh water.

(B) For an existing brine mining injection well requiring corrective action, any permit issued will include a compliance schedule leading to compliance with corrective action requirements. The compliance schedule will require compliance as soon as possible and in no case later than one year after the effective date of the permit. The permit will require the operator to submit a written compliance report within 30 days after all required corrective action has been taken.

(C) For a new brine mining injection well, the operator may not begin injection operations until all required corrective action has been taken.

(h) Modification, revocation and reissuance, and termination of permits. A permit may be modified, revoked and reissued, or terminated by the commission either upon the written request of any interested person, including the operator, or upon the commission's initiative, but only for the reasons and under the conditions specified in this subsection. Except for minor modifications made under paragraph (2) of this subsection, the commission will follow the applicable procedures in subsection (i) of this section. In the case of a modification, the commission may request additional information or an updated application. In the case of a revocation and reissuance, the commission will require a new application. If a permit is modified, only the conditions subject to modification are reopened. The term of a permit may not be extended by modification. If a permit is revoked and reissued, the entire permit is reopened and subject to revision, and the permit is reissued for a new term.

(1) Modification, or revocation and reissuance. The following are causes for modification, or revocation and reissuance:

(A) material and substantial alterations or additions to the facility occurred after permit issuance and justify permit conditions that are different or absent in the existing permit;

(B) the commission receives new information;

(C) the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(D) the commission determines good cause exists for modifying a compliance schedule, such as a act of God, strike, flood, materials shortage, or other event over which the operator has little or no control and for which there is no reasonably available remedy;

(E) cause exists for terminating a permit under paragraph (3) of this subsection, and the commission

determines that modification, or revocation and reissuance, is appropriate; or

(F) a transfer of the permit is proposed.

(2) Minor modifications. With the operator's consent, the director may make minor modifications to a permit administratively, without following the procedures of subsection (i) of this section. Minor modifications may only:

(A) correct clerical or typographical errors, or clarify any description or provision in the permit, provided that the description or provision is not changed substantively;

(B) require more frequent monitoring or reporting;

(C) change construction requirements provided that any changes shall comply with the requirements of subsection (g)(4) of this section; or

(D) allow a transfer of the permit where the director determines that no change in the permit is necessary other than a change in the name of the operator, provided that a written agreement between the current operator and the new operator containing a specific data for the transfer of permit responsibility, coverage, and liability has been submitted to the commission.

(3) Termination. The following are causes for terminating a permit during its term, or for denying a permit renewal application:

(A) the operator fails to comply with any condition of the permit or this section;

(B) the operator fails to disclose fully all relevant facts in the permit application or during the permit issuance process, or misrepresents any relevant fact at any time;

(C) a material change of conditions occurs in the operation or completion of the well, or there are material changes in the information originally furnished;

(D) the commission determines that the permitted injection endangers human health or the environment, or that pollution of fresh water is occurring or is likely to occur as a result of the permitted injection; or

(E) fluids are escaping from the permitted injection zone.

(i) Permitting procedures.

(1) Review of applications. Upon receipt of an application for a permit, the director will review the application for completeness. Within 30 days after receipt of the application, the director will notify the applicant in writing whether the application is complete or deficient. A notice of deficiency will state the additional information necessary to complete the application, and a date for submitting this information. The application will be deemed withdrawn if the necessary information is not received by the specified date, unless the director has extended this date upon request of the applicant. Upon timely receipt of the necessary information, the director will notify the applicant that the application is complete. The director will not begin processing a permit until the application is complete.

(2) Permit denial. If the director administratively denies a permit application, a notice of

administrative denial will be mailed to the applicant. The applicant will have a right to a hearing on request. If the applicant requests a hearing, the notice of administrative denial will be subject to the same procedures as a draft permit prepared under paragraph (3) of this subsection.

(3) Draft permits.

(A) A draft permit will be prepared when the director tentatively decides:

(i) to issue a permit;

(ii) to modify, or revoke and reissue, a permit; or

(iii) to terminate a permit, in which case the director will prepare a notice of intent to terminate, which is a type of draft permit.

(B) A draft permit will contain all proposed permit conditions.

(4) Fact sheets. The director will prepare a fact sheet to accompany every draft permit that the director finds is the subject of widespread public interest or raises important issues. The fact sheet will briefly set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The fact sheet will include information satisfying the requirements of 40 Code of Federal Regulations §124.8(b).

(5) Notice.

(A) The commission will give notice when a draft permit is prepared under paragraph (3) of this subsection, and when a hearing is scheduled under paragraph (7) of this subsection.

(B) Notice will be given by the methods specified in this subparagraph.

(i) A copy of the notice will be mailed to the following persons:

(I) any agency that the commission knows has issued or is required to issue a permit for the same facility under any federal or state environmental program;

(II) the United States Environmental Protection Agency;

(III) persons on a mailing list developed according to 40 Code of Federal Regulations §124.10(c)(1)(viii);

(IV) any unit of local government having jurisdiction over the area where the facility is or is proposed to be located, and each state agency having any authority under state law with respect to the construction or operation of the facility;

(V) the operator; and

(VI) any oil and gas operators or surface owners required to be listed in the application under subsection (d)(4)(F) and (G) of this section. If, pursuant to subsection (d)(4)(G), the director waived the requirement to list certain surface owners in the application, the applicant shall notify such persons by

publishing the notice. The notice shall be published by the applicant once each week for two consecutive weeks in a newspaper of general circulation for the county where the facility is located. The applicant shall file proof of publication with the commission in Austin.

(ii) The notice shall be published by the applicant at least once in a newspaper of general circulation for the county where the facility is located. The applicant shall file proof of publication with the commission in Austin.

(C) Notices will include information satisfying the requirements of 40 Code of Federal Regulations §124.10(d) and the Texas Government Code, Chapter 2001.

(D) A copy of any draft permit, fact sheet, and application will be mailed to the persons notified under subparagraph (B)(i)(I) and (II) of this paragraph, and to any other person upon request. The applicant will be mailed a copy of any draft permit and fact sheet.

(E) The Texas Commission on Environmental Quality, the Texas Water Development Board, the Texas Department of Health, the Texas Parks and Wildlife Department, the United States Fish and Wildlife Service, other state and federal agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, state historic preservation officers, and other appropriate government authorities will be given opportunity to receive copies of notices, applications, draft permits, and fact sheets.

(6) Comments and requests for hearing. Notice of a draft permit will allow at least 30 days for public comment. During the public comment period, any interested person may submit written comments on the draft permit and may request a hearing if one has not already been scheduled.

(7) Hearings on draft permits.

(A) A hearing will be held:

(i) when the director finds, on the basis of requests, a significant degree of public interest in a draft permit;

(ii) when an applicant or an affected person requests a hearing on a draft permit; or

(iii) when an operator requests a hearing on a draft permit prepared when the director tentatively decides to modify, revoke and reissue, or terminate a permit.

(B) The commission may hold a hearing at its discretion, for instance, when a hearing might clarify one or more issues involved in the permit decision.

(C) Notice of a hearing will be given at least 30 days before the hearing. The public comment period under paragraph (6) of this subsection will automatically be extended to the close of any hearing under this paragraph.

(8) Administrative approval. After the close of the public comment period, the director may issue, modify, revoke and reissue, or terminate a permit administratively if no hearing is required under paragraph (7) of this subsection.

(9) Response to comments. When a final permit is issued, the commission will respond in writing to

comments received during the public comment period. The response will be made available to the public and will:

(A) specify which provisions, if any, of the draft permit have been changed in the final permit, and the reasons for the changes; and

(B) briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing on the draft permit.

(j) Commission review of administrative actions. Administrative actions performed by the director or commission staff pursuant to this section are subject to review by the commissioners.

(k) Federal regulations. All references to the Code of Federal Regulations in this section are references to the 1987 edition of the Code. The following federal regulations are adopted by reference and can be obtained at the William B. Travis Building, 1701 North Congress Avenue, Austin, Texas 78711: 40 Code of Federal Regulations §§124.8(b), 124.10(c)(1)(viii), 124.10(d), and 146.8(d). Where the word "director" is used in the adopted federal regulations, it should be interpreted to mean "commission."

(l) Effective date. This section becomes effective upon approval of the commission's Class III Underground Injection Control (UIC) Program for brine mining injection wells by the United States Environmental Protection Agency under the Safe Drinking Act, §1422 (42 United States Code §300h-1).

Source Note: The provisions of this §3.81 adopted to be effective August 25, 2003, 28 TexReg 6816; amended to be effective November 24, 2004, 29 TexReg 10728

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TITLE 16 ECONOMIC REGULATION
PART 1 RAILROAD COMMISSION OF TEXAS
CHAPTER 3 OIL AND GAS DIVISION
RULE §3.13 **Casing, Cementing, Drilling, and Completion Requirements**

(a) General.

(1) The operator is responsible for compliance with this section during all operations at the well. It is the intent of all provisions of this section that casing be securely anchored in the hole in order to effectively control the well at all times, all usable-quality water zones be isolated and sealed off to effectively prevent contamination or harm, and all potentially productive zones be isolated and sealed off to prevent vertical migration of fluids or gases behind the casing. When the section does not detail specific methods to achieve these objectives, the responsible party shall make every effort to follow the intent of the section, using good engineering practices and the best currently available technology.

(2) Definitions. The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(A) Stand under pressure--To leave the hydrostatic column pressure in the well acting as the natural force without adding any external pump pressure. The provisions are complied with if a float collar is used and found to be holding at the completion of the cement job.

(B) Zone of critical cement--For surface casing strings shall be the bottom 20% of the casing string, but shall be no more than 1,000 feet nor less than 300 feet. The zone of critical cement extends to the land surface for surface casing strings of 300 feet or less.

(C) Protection depth--Depth to which usable-quality water must be protected, as determined by the Texas Commission on Environmental Quality (TCEQ) or its successor agencies, which may include zones that contain brackish or saltwater if such zones are correlative and/or hydrologically connected to zones that contain usable-quality water.

(D) Productive horizon--Any stratum known to contain oil, gas, or geothermal resources in commercial quantities in the area.

(b) Onshore and inland waters.

(1) General.

(A) All casing cemented in any well shall be steel casing that has been hydrostatically pressure tested with an applied pressure at least equal to the maximum pressure to which the pipe will be subjected in the well. For new pipe, the mill test pressure may be used to fulfill this requirement. As an alternative to hydrostatic testing, a full length electromagnet, ultrasonic, radiation thickness gauging, or magnetic particle inspection may be employed.

(B) Wellhead assemblies shall be used on wells to maintain surface control of the well. Each component of the wellhead shall have a pressure rating equal to or greater than the anticipated pressure

to which that particular component might be exposed during the course of drilling, testing, or producing the well.

(C) A blowout preventer or control head and other connections to keep the well under control at all times shall be installed as soon as surface casing is set. This equipment shall be of such construction and capable of such operation as to satisfy any reasonable test which may be required by the commission or its duly accredited agent.

(D) When cementing any string of casing more than 200 feet long, before drilling the cement plug the operator shall test the casing at a pump pressure in pounds per square inch (psi) calculated by multiplying the length of the casing string by 0.2. The maximum test pressure required, however, unless otherwise ordered by the commission, need not exceed 1,500 psi. If, at the end of 30 minutes, the pressure shows a drop of 10% or more from the original test pressure, the casing shall be condemned until the leak is corrected. A pressure test demonstrating less than a 10% pressure drop after 30 minutes is proof that the condition has been corrected.

(E) Wells drilling to formations where the expected reservoir pressure exceeds the weight of the drilling fluid column shall be equipped to divert any wellbore fluids away from the rig floor. All diverter systems shall be maintained in an effective working condition. No well shall continue drilling operations if a test or other information indicates the diverter system is unable to function or operate as designed.

(2) Surface casing.

(A) Amount required.

(i) An operator shall set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the TCEQ. Before drilling any well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable field rules, an operator shall obtain a letter from the TCEQ stating the protection depth. In no case, however, is surface casing to be set deeper than 200 feet below the specified depth without prior approval from the commission.

(ii) Any well drilled to a total depth of 1,000 feet or less below the ground surface may be drilled without setting surface casing provided no shallow gas sands or abnormally high pressures are known to exist at depths shallower than 1,000 feet below the ground surface; and further, provided that production casing is cemented from the shoe to the ground surface by the pump and plug method.

(B) Cementing. Cementing shall be by the pump and plug method. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. If cement does not circulate to ground surface or the bottom of the cellar, the operator or his representative shall obtain the approval of the district director for the procedures to be used to perform additional cementing operations, if needed, to cement surface casing from the top of the cement to the ground surface.

(C) Cement quality.

(i) Surface casing strings must be allowed to stand under pressure until the cement has reached a compressive strength of at least 500 psi in the zone of critical cement before drilling plug or initiating a test. The cement mixture in the zone of critical cement shall have a 72-hour compressive strength of at

least 1,200 psi.

(ii) An operator may use cement with volume extenders above the zone of critical cement to cement the casing from that point to the ground surface, but in no case shall the cement have a compressive strength of less than 100 psi at the time of drill out nor less than 250 psi 24 hours after being placed.

(iii) In addition to the minimum compressive strength of the cement, the API free water separation shall average no more than six milliliters per 250 milliliters of cement tested in accordance with the current API RP 10B.

(iv) The commission may require a better quality of cement mixture to be used in any well or any area if evidence of local conditions indicates a better quality of cement is necessary to prevent pollution or to provide safer conditions in the well or area.

(D) Compressive strength tests. Cement mixtures for which published performance data are not available must be tested by the operator or service company. Tests shall be made on representative samples of the basic mixture of cement and additives used, using distilled water or potable tap water for preparing the slurry. The tests must be conducted using the equipment and procedures adopted by the American Petroleum Institute, as published in the current API RP 10B. Test data showing competency of a proposed cement mixture to meet the above requirements must be furnished the commission prior to the cementing operation. To determine that the minimum compressive strength has been obtained, operators shall use the typical performance data for the particular cement used in the well (containing all the additives, including any accelerators used in the slurry) at the following temperatures and at atmospheric pressure.

(i) For the cement in the zone of critical cement, the test temperature shall be within 10 degrees Fahrenheit of the formation equilibrium temperature at the top of the zone of critical cement.

(ii) For the filler cement, the test temperature shall be the temperature found 100 feet below the ground surface level, or 60 degrees Fahrenheit, whichever is greater.

(E) Cementing report. Upon completion of the well, a cementing report must be filed with the commission furnishing complete data concerning the cementing of surface casing in the well as specified on a form furnished by the commission. The operator of the well or his duly authorized agent having personal knowledge of the facts, and representatives of the cementing company performing the cementing job, must sign the form attesting to compliance with the cementing requirements of the commission.

(F) Centralizers. Surface casing shall be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In nondeviated holes, pipe centralization as follows is required: a centralizer shall be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers shall meet API spec 10D specifications. In deviated holes, the operator shall provide additional centralization.

(G) Alternative surface casing programs.

(i) An alternative method of fresh water protection may be approved upon written application to the appropriate district director. The operator shall state the reason (economics, well control, etc.) for the alternative fresh water protection method and outline the alternate program for casing and cementing through the protection depth for strata containing usable-quality water. Alternative programs for setting

more than specified amounts of surface casing for well control purposes may be requested on a field or area basis. Alternative programs for setting less than specified amounts of surface casing will be authorized on an individual well basis only. The district director may approve, modify, or reject the proposed program. If the proposal is modified or rejected, the operator may request a review by the director of field operations. If the proposal is not approved administratively, the operator may request a public hearing. An operator shall obtain approval of any alternative program before commencing operations.

(ii) Any alternate casing program shall require the first string of casing set through the protection depth to be cemented in a manner that will effectively prevent the migration of any fluid to or from any stratum exposed to the wellbore outside this string of casing. The casing shall be cemented from the shoe to ground surface in a single stage, if feasible, or by a multi-stage process with the stage tool set at least 50 feet below the protection depth.

(iii) Any alternate casing program shall include pumping sufficient cement to fill the annular space from the shoe or multi-stage tool to the ground surface. If cement is not circulated to the ground surface or the bottom of the cellar, the operator shall run a temperature survey or cement bond log. The appropriate district office shall be notified prior to running the required temperature survey or bond log. After the top of cement outside the casing is determined, the operator or his representative shall contact the appropriate district director and obtain approval for the procedures to be used to perform any required additional cementing operations. Upon completion of the well, a cementing report shall be filed with the commission on the prescribed form.

(iv) Before parallel (nonconcentric) strings of pipe are cemented in a well, surface or intermediate casing must be set and cemented through the protection depth.

(3) Intermediate casing.

(A) Cementing method. Each intermediate string of casing shall be cemented from the shoe to a point at least 600 feet above the shoe. If any productive horizon is open to the wellbore above the casing shoe, the casing shall be cemented from the shoe up to a point at least 600 feet above the top of the shallowest productive horizon or to a point at least 200 feet above the shoe of the next shallower casing string that was set and cemented in the well.

(B) Alternate method. In the event the distance from the casing shoe to the top of the shallowest productive horizon make cementing, as specified above, impossible or impractical, the multi-stage process may be used to cement the casing in a manner that will effectively seal off all such possible productive horizons and prevent fluid migration to or from such strata within the wellbore.

(4) Production casing.

(A) Cementing method. The producing string of casing shall be cemented by the pump and plug method, or another method approved by the commission, with sufficient cement to fill the annular space back of the casing to the surface or to a point at least 600 feet above the shoe. If any productive horizon is open to the wellbore above the casing shoe, the casing shall be cemented in a manner that effectively seals off all such possibly productive horizons by one of the methods specified for intermediate casing in paragraph (3) of this subsection.

(B) Isolation of associated gas zones. The position of the gas-oil contact shall be determined by coring, electric log, or testing. The producing string shall be landed and cemented below the gas-oil

contact, or set completely through and perforated in the oil-saturated portion of the reservoir below the gas-oil contact.

(5) Tubing and storm choke requirements.

(A) Tubing requirements for oil wells. All flowing oil wells shall be equipped with and produced through tubing. When tubing is run inside casing in any flowing oil well, the bottom of the tubing shall be at a point not higher than 100 feet above the top of the producing interval nor more than 50 feet above the top of a line, if one is used. In a multiple zone structure, however, when an operator elects to equip a well in such a manner that small through-the-tubing type tools may be used to perforate, complete, plug back, or recomplete without the necessity of removing the installed tubing, the bottom of the tubing may be set at a distance up to, Cont'd...

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but not exceeding, 1,000 feet above the top of the perforated or open-hole interval actually open for production into the wellbore. In no case shall tubing be set at a depth of less than 70% of the distance from the surface of the ground to the top of the interval actually open to production.

(B) Storm choke. All flowing oil, gas, and geothermal resource wells located in bays, estuaries, lakes, rivers, or streams must be equipped with a storm choke or similar safety device installed in the tubing a minimum of 100 feet below the mud line.

(c) Texas offshore casing, cementing, drilling, and completion requirements.

(1) Casing. The casing program shall include at least three strings of pipe, in addition to such drive pipe as the operator may desire, which shall be set in accordance with the following program.

(A) Conductor casing. A string of new pipe, or reconditioned pipe with substantially the same characteristics as new pipe, shall be set and cemented at a depth of not less than 300 feet TVD (true vertical depth) nor more than 800 feet TVD below the mud line. Sufficient cement shall be used to fill the annular space back of the pipe to the mud line; however, cement may be washed out or displaced to a maximum depth of 50 feet below the mud line to facilitate pipe removal on abandonment. Casing shall be set and cemented in all cases prior to penetration of known shallow oil and gas formations, or upon encountering such formations.

(B) Surface casing. All surface casing shall be a string of new pipe with a mill test of at least 1,100 pounds per square inch (psi) or reconditioned pipe that has been tested to an equal pressure. Sufficient cement shall be used to fill the annular space behind the pipe to the mud line; however, cement may be washed out or displaced to a maximum depth of 50 feet below the mud line to facilitate pipe removal on abandonment. Surface casing shall be set and cemented in all cases prior to penetration of known shallow oil and gas formations, or upon encountering such formations. In all cases, surface casing shall be set prior to drilling below 3,500 feet TVD. Minimum depths for surface casing are as follows.

(i) Surface Casing Depth Table.

Attached Graphic

(ii) Casing test. Cement shall be allowed to stand under pressure for a minimum of eight hours before drilling plug or initiating tests. Casing shall be tested by pump pressure to at least 1,000 psi. If, at the end of 30 minutes, the pressure shows a drop of 100 psi or more, the casing shall be condemned until the leak is corrected. A pressure test demonstrating a drop of less than 100 psi after 30 minutes is proof that the condition has been corrected.

(C) Production casing or oil string. The production casing or oil string shall be new or reconditioned pipe with a mill test of at least 2,000 psi that has been tested to an equal pressure and after cementing

shall be tested by pump pressure to at least 1,500 psi. If, at the end of 30 minutes, the pressure shows a drop of 150 psi or more, the casing shall be condemned. After corrective operations, the casing shall again be tested in the same manner. Cementing shall be by the pump and plug method. Sufficient cement shall be used to fill the calculated annular space above the shoe to protect any prospective producing horizons and to a depth that isolates abnormal pressure from normal pressure (0.465 gradient). A float collar or other means to stop the cement plug shall be inserted in the casing string above the shoe. Cement shall be allowed to stand under pressure for a minimum of eight hours before drilling the plug or initiating tests.

(2) Blowout preventers.

(A) Before drilling below the conductor casing, the operator shall install at least one remotely controlled blowout preventer with a mechanism for automatically diverting the drilling fluid to the mud system when the blowout preventer is activated.

(B) After setting and cementing the surface casing, a minimum of two remotely controlled hydraulic ram-type blowout preventers (one equipped with blind rams and one with pipe rams), valves, and manifolds for circulating drilling fluid shall be installed for the purpose of controlling the well at all times. The ram-type blowout preventers, valves, and manifolds shall be tested to 100% of rated working pressure, and the annular-type blowout preventer shall be tested to 1,000 psi at the time of installation. During drilling and completion operations, the ram-type blowout preventers shall be tested by closing at least once each trip, and the annular-type preventer shall be tested by closing on drill pipe once each week.

(3) Kelly cock. During drilling, the well shall be fitted with an upper kelly cock in proper working order to close in the drill string below hose and swivel, when necessary for well control. A lower kelly safety valve shall be installed so that it can be run through the blowout preventer. When needed for well control, the operator shall maintain at all times on the rig floor safety valves to include:

(A) full-opening valve of similar design as the lower kelly safety valves; and

(B) inside blowout preventer valve with wrenches, handling tools, and necessary subs for all drilling pipe sizes in use.

(4) Mud program. The characteristics, use, and testing of drilling mud and conduct of related drilling procedures shall be designed to prevent the blowout of any well. Adequate supplies of mud of sufficient weight and other acceptable characteristics shall be maintained. Mud tests shall be made frequently. Adequate mud testing equipment shall be kept on the drilling platform at all times. The hole shall be kept full of mud at all times. When pulling drill pipe, the mud volume required to fill the hole each time shall be measured to assure that it corresponds with the displacement of pipe pulled. A derrick floor recording mud pit level indicator shall be installed and operative at all times. A careful watch for swabbing action shall be maintained when pulling out of hole. Mud-gas separation equipment shall be installed and operated.

(5) Casinghead.

(A) Requirement. All wells shall be equipped with casingheads of sufficient rated working pressure, with adequate connections and valves available, to permit pumping mud-laden fluid between any two strings of casing at the surface.

(B) Casinghead test procedure. Any well showing sustained pressure on the casinghead, or leaking gas or oil between the surface casing and the oil string, shall be tested in the following manner. The well shall be killed with water or mud and pump pressure applied. Should the pressure gauge on the casinghead reflect the applied pressure, the casing shall be condemned. After corrective measures have been taken, the casing shall be tested in the same manner. This method shall be used when the origin of the pressure cannot be determined otherwise.

(6) Christmas tree. All completed wells shall be equipped with Christmas tree fittings and wellhead connections with a rated working pressure equal to, or greater than, the surface shut-in pressure of the well. The tubing shall be equipped with a master valve, but two master valves shall be used on all wells with surface pressures in excess of 5,000 psi. All wellhead connections shall be assembled and tested prior to installation by a fluid pressure equal to the test pressure of the fitting employed.

(7) Storm choke and safety valve. A storm choke or similar safety device shall be installed in the tubing of all completed flowing wells to a minimum of 100 feet below the mud line. Such wells shall have the tubing-casing annulus sealed below the mud line. A safety valve shall be installed at the wellhead downstream of the wing valve. All oil, gas, and geothermal resource gathering lines shall have check valves at their connections to the wellhead.

(8) Pipeline shut-off valve. All gathering pipelines designed to transport oil, gas, condensate, or other oil or geothermal resource field fluids from a well or platform shall be equipped with automatically controlled shut-off valves at critical points in the pipeline system. Other safety equipment must be in full working order as a safeguard against spillage from pipeline ruptures.

(9) Training. Effective January 1, 1981, all tool pushers, drilling superintendents, and operators' representatives (when the operator is in control of the drilling) shall be required to furnish certification of satisfactory completion of a USGS-approved school on well control equipment and techniques. The certification shall be renewed every two years by attending a USGS-approved refresher course. These training requirements apply to all drilling operations on lands which underlie fresh or marine waters in Texas.

Source Note: The provisions of this §3.13 adopted to be effective January 1, 1976; amended to be effective April 8, 1980, 5 TexReg 1152; amended to be effective October 3, 1980, 5 TexReg 3794; amended to be effective January 1, 1983, 7 TexReg 3982; amended to be effective March 10, 1986, 11 TexReg 901; amended to be effective January 11, 1991, 16 TexReg 39; amended to be effective August 13, 1991, 16 TexReg 4153; amended to be effective August 25, 2003, 28 TexReg 6816

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TITLE 16 ECONOMIC REGULATION
PART 1 RAILROAD COMMISSION OF TEXAS
CHAPTER 3 OIL AND GAS DIVISION
RULE §3.14 Plugging

(a) Definitions and application to plug.

(1) The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise:

(A) Active operation--Regular and continuing activities related to the production of oil and gas for which the operator has all necessary permits. In the case of a well that has been inactive for 12 consecutive months or longer and that is not permitted as a disposal or injection well, the well remains inactive for purposes of this section, regardless of any minimal activity, until the well has reported production of at least 10 barrels of oil for oil wells or 100 mcf of gas for gas wells each month for at least three consecutive months.

(B) Approved cementer--A cementing company, service company, or operator approved by the Commission to mix and pump cement for the purpose of plugging a well in accordance with the provisions of this section. The term shall also apply to a cementing company, service company, or operator authorized by the Commission to use an alternate material other than cement to plug a well.

(C) Delinquent inactive well--An unplugged well that has had no reported production, disposal, injection, or other permitted activity for a period of greater than 12 months and for which, after notice and opportunity for hearing, the Commission has not extended the plugging deadline.

(D) Funnel viscosity--Viscosity as measured by the Marsh funnel, based on the number of seconds required for 1,000 cubic centimeters of fluid to flow through the funnel.

(E) Good faith claim--A factually supported claim based on a recognized legal theory to a continuing possessory right in a mineral estate, such as evidence of a currently valid oil and gas lease or a recorded deed conveying a fee interest in the mineral estate.

(F) Groundwater conservation district--Any district or authority created under §52, Article III, or §59, Article XVI, Texas Constitution, that has the authority to regulate the spacing of water wells, the production from water wells, or both.

(G) Operator designation form--A certificate of compliance and transportation authority or an application to drill, deepen, recomplete, plug back, or reenter which has been completed, signed and filed with the Commission.

(H) Productive horizon--Any stratum known to contain oil, gas, or geothermal resources in producible quantities in the vicinity of an unplugged well.

(I) Related piping--The surface piping and subsurface piping that is less than three feet beneath the ground surface between pieces of equipment located at any collection or treatment facility. Such piping

would include piping between and among headers, manifolds, separators, storage tanks, gun barrels, heater treaters, dehydrators, and any other equipment located at a collection or treatment facility. The term is not intended to refer to lines, such as flowlines, gathering lines, and injection lines that lead up to and away from any such collection or treatment facility.

(J) Reported production--Production of oil or gas, excluding production attributable to well tests, accurately reported to the Commission on Form PR, Monthly Production Report.

(K) To serve notice on the surface owner or resident--To hand deliver a written notice identifying the well or wells to be plugged and the projected date the well or wells will be plugged to the surface owner, or resident if the owner is absent, at least three days prior to the day of plugging or to mail the notice by first class mail, postage pre-paid, to the last known address of the surface owner or resident at least seven days prior to the day of plugging.

(L) Unbonded operator--An operator that has a current and active organization report on file with the Commission that filed a nonrefundable annual fee as financial security prior to September 1, 2004, and is not required by §3.78 of this title (relating to Fees and Financial Security Requirements) to file an individual performance bond, blanket performance bond, letter of credit, or cash deposit as its financial security until the first date for annual renewal of the operators organization report after September 1, 2004.

(M) Usable quality water strata--All strata determined by the Texas Commission on Environmental Quality or its successor agencies to contain usable quality water.

(N) Written notice--Notice actually received by the intended recipient in tangible or retrievable form, including notice set out on paper and hand-delivered, facsimile transmissions, and electronic mail transmissions.

(2) The operator shall give the Commission notice of its intention to plug any well or wells drilled for oil, gas, or geothermal resources or for any other purpose over which the Commission has jurisdiction, except those specifically addressed in §3.100(e)(1) of this title (relating to Seismic Holes and Core Holes) (Statewide Rule 100), prior to plugging. The operator shall deliver or transmit the written notice to the district office on the appropriate form.

(3) The operator shall cause the notice of its intention to plug to be delivered to the district office at least five days prior to the beginning of plugging operations. The notice shall set out the proposed plugging procedure as well as the complete casing record. The operator shall not commence the work of plugging the well or wells until the proposed procedure has been approved by the district director or the director's delegate. The operator shall not initiate approved plugging operations before the date set out in the notification for the beginning of plugging operations unless authorized by the district director or the director's delegate. The operator shall notify the district office at least four hours before commencing plugging operations and proceed with the work as approved. The district director or the director's delegate may grant exceptions to the requirements of this paragraph concerning the timing of notices when a workover or drilling rig is already at work on location, and ready to commence plugging operations. Operations shall not be suspended prior to plugging the well unless the hole is cased and casing is cemented in place in compliance with Commission rules. The Commission's approval of a notice of intent to plug and abandon a well shall not relieve an operator of the requirement to comply with subsection (b)(2) of this section, nor does such approval constitute an extension of time to comply with subsection (b)(2) of this section.

(4) The surface owner and the operator may file an application to condition an abandoned well located on the surface owner's tract for usable quality water production operations. The application shall be made on the form prescribed by the Commission, the Application of Landowner to Condition an Abandoned Well for Fresh Water Production.

(A) Standard for Commission Approval. Before the Commission will consider approval of an application:

(i) the surface owner shall assume responsibility for plugging the well and obligate himself, his heirs, successors, and assignees to complete the plugging operations;

(ii) the operator responsible for plugging the well shall place all cement plugs required by this rule up to the base of the usable quality water strata; and

(iii) the surface owner shall submit:

(I) a signed statement attesting to the fact that:

(-a-) there is no groundwater conservation district for the area in which the well is located; or

(-b-) there is a groundwater conservation district for the area where the well is located, but the groundwater conservation district does not require that the well be permitted or registered; or

(-c-) the surface owner has registered the well with the groundwater conservation district for the area where the well is located; or

(II) a copy of the permit from the groundwater conservation district for the area where the well is located.

(B) The duty of the operator to properly plug ends only when:

(i) the operator has properly plugged the well in accordance with Commission requirements up to the base of the usable quality water stratum;

(ii) the surface owner has registered the well with, or has obtained a permit for the well from, the groundwater conservation district, if applicable; and

(iii) the Commission has approved the application of surface owner to condition an abandoned well for fresh water production.

(5) The operator of a well shall serve notice on the surface owner of the well site tract, or the resident if the owner is absent, before the scheduled date for beginning the plugging operations. A representative of the surface owner may be present to witness the plugging of the well. Plugging shall not be delayed because of the lack of actual notice to the surface owner or resident if the operator has served notice as required by this paragraph. The district director or the director's delegate may grant exceptions to the requirements of this paragraph concerning the timing of notices when a workover or drilling rig is already at work on location and ready to commence plugging operations.

(b) Commencement of plugging operations, extensions, and testing.

(1) The operator shall complete and file in the district office a duly verified plugging record, in duplicate, on the appropriate form within 30 days after plugging operations are completed. A cementing report made by the party cementing the well shall be attached to, or made a part of, the plugging report. If the well the operator is plugging is a dry hole, an electric log status report shall be filed with the plugging record.

(2) Plugging operations on each dry or inactive well shall be commenced within a period of one year after drilling or operations cease and shall proceed with due diligence until completed. Plugging operations on delinquent inactive wells shall be commenced immediately unless the well is restored to active operation. For good cause, a reasonable extension of time in which to start the plugging operations may be granted pursuant to the following procedures.

(A) Plugging of inactive wells operated by unbonded operators. During the interim period between September 1, 2004, and the first date for annual renewal of an unbonded operator's organization report after September 1, 2004, the Commission or its delegate may administratively grant an extension of up to one year of the deadline for plugging an inactive well that is operated by an unbonded operator if the following criteria are met:

(i) The well and associated facilities are in compliance with all other laws and Commission rules;

(ii) The operator's organization report is current and active;

(iii) The operator has, and upon request provides evidence of, a good faith claim to a continuing right to operate the well; and

(iv) The operator has tested the well in accordance with the provisions of paragraph (3) of this subsection and files with its application proof of either:

(I) a fluid level test conducted within 90 days prior to the application for a plugging extension demonstrating that any fluid in the wellbore is at least 250 feet below the base of the deepest usable quality water stratum; or,

(II) a hydraulic pressure test conducted during the period the well has been inactive and not more than four years prior to the date of application demonstrating the mechanical integrity of the well.

(B) Plugging of inactive wells operated by bonded operators. An operator that maintains valid, Commission-approved financial security in the form of an individual performance bond, blanket performance bond, letter of credit, or cash deposit as provided in §3.78 of this title (relating to Fees and Financial Security Requirements) (Statewide Rule 78) will be granted a one-year plugging extension for each well it operates that has been inactive for 12 months or more at the time its annual organizational report is approved by the Commission if the following criteria are met:

(i) The well and associated facilities are in compliance with all laws and Commission rules; and,

(ii) The operator has, and upon request provides evidence of, a good faith claim to a continuing right to operate the well.

(C) Revocation or denial of plugging extension.

(i) The Commission or its delegate may revoke a plugging extension if the operator of the well that

is the subject of the extension fails to maintain the well and all associated facilities in compliance with Commission rules; fails to maintain a current and accurate organizational report on file with the Commission; fails to provide the Commission, upon request, with evidence of a continuing good faith claim to operate the well; or fails to obtain or maintain financial security as required by §3.78 of this title (relating to Fees and Financial Security Requirements) (Statewide Rule 78).

(ii) If the Commission or its delegate declines to grant or continue a plugging extension or revokes a previously granted extension, the operator shall either return the well to active operation or, within 30 days, plug the well or request a hearing on the matter.

(3) The operator of any well more than 25 years old that becomes inactive and subject to the provisions of this subsection or the operator of any well for which a plugging extension is sought under the terms of subparagraph (A) of paragraph (2) of this subsection shall plug the well or successfully conduct a fluid level or hydraulic pressure test establishing that the well does not pose a potential threat of harm to natural resources, including surface and subsurface water, oil and gas.

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TITLE 16 ECONOMIC REGULATION
PART 1 RAILROAD COMMISSION OF TEXAS
CHAPTER 3 OIL AND GAS DIVISION
RULE §3.14 **Plugging**

(A) In general, a fluid level test is a sufficient test for purposes of this paragraph. The operator shall give the district office written notice specifying the date and approximate time it intends to conduct the fluid level test at least 48 hours prior to conducting the test; however, upon a showing of undue hardship, the district director or the director's delegate may grant a written waiver or reduction of the notice requirement for a specific well test. The director or the director's delegate may require alternate methods of testing if necessary to ensure the well does not pose a potential threat of harm to natural resources. Alternate methods of testing may be approved by the director or the director's delegate by written application and upon a showing that such a test will provide information sufficient to determine that the well does not pose a threat to natural resources.

(B) No test other than a fluid level test shall be acceptable without prior approval from the district director or the director's delegate. The district director or the director's delegate shall be notified at least 48 hours before any test other than a fluid level test is conducted. Mechanical integrity test results shall be filed with the district office and fluid level test results shall be filed with the Commission in Austin. Test results shall be filed on a Commission-approved form, within 30 days of the completion of the test. Upon request, the operator shall file the actual test data for any mechanical integrity or fluid level test that it has conducted.

(C) Notwithstanding the provisions of subparagraph (B) of this paragraph, a hydraulic pressure test may be conducted without prior approval from the district director or the director's delegate, provided that the operator gives the district office written notice specifying the date and approximate time for the test at least 48 hours prior to the time the test will be conducted, the production casing is tested to a depth of at least 250 feet below the base of usable quality water strata, or 100 feet below the top of cement behind the production casing, whichever is deeper, and the minimum test pressure is greater than or equal to 250 psig for a period of at least 30 minutes.

(D) If the operator performs a hydraulic pressure test in accordance with the provisions of subparagraph (C) of this paragraph, the well shall be exempt from further testing for five years from the date of the test, except to the extent that the Commission or its delegate may require the operator to perform testing more frequently to ensure that the well does not pose a threat of harm to natural resources. The Commission or its delegate may approve less frequent well tests under this paragraph upon written request and for good cause shown provided that less frequent testing will not increase the threat of harm to natural resources.

(E) A well subject to the testing requirements of this paragraph shall not be returned to active operation unless a fluid level test of the well has been performed within 12 months prior to the return to activity or a mechanical integrity test of the well has been performed within 60 months prior to the return to activity.

(4) The Commission may plug or replug any dry or inactive well as follows:

(A) After notice and hearing, if the well is causing or is likely to cause the pollution of surface or

subsurface water or if oil, gas, or other formation fluid is leaking from the well, and:

(i) Neither the operator nor any other entity responsible for plugging the well can be found; or

(ii) Neither the operator nor any other entity responsible for plugging the well has assets with which to plug the well.

(B) Without a hearing if the well is a delinquent inactive well and:

(i) the Commission has sent notice of its intention to plug the well as required by §89.043(c) of the Texas Natural Resources Code; and

(ii) the operator did not request a hearing within the period (not less than 10 days after receipt) specified in the notice.

(C) Without notice or hearing, if:

(i) The Commission has issued a final order requiring that the operator plug the well and the order has not been complied with; or

(ii) The well poses an immediate threat of pollution of surface or subsurface waters or of injury to the public health and the operator has failed to timely remediate the problem.

(5) The Commission may seek reimbursement from the operator and any other entity responsible for plugging the well for state funds expended pursuant to paragraph (4) of this subsection.

(c) Designated operator responsible for proper plugging.

(1) The entity designated as the operator of a well specifically identified on the most recent Commission-approved operator designation form filed on or after September 1, 1997, is responsible for properly plugging the well in accordance with this section and all other applicable Commission rules and regulations concerning plugging of wells.

(2) As to any well for which the most recent Commission-approved operator designation form was filed prior to September 1, 1997, the entity designated as operator on that form is presumed to be the entity responsible for the physical operation and control of the well and to be the entity responsible for properly plugging the well in accordance with this section and all other applicable Commission rules and regulations concerning plugging of wells. The presumption of responsibility may be rebutted only at a hearing called for the purpose of determining plugging responsibility.

(d) General plugging requirements.

(1) Wells shall be plugged to insure that all formations bearing usable quality water, oil, gas, or geothermal resources are protected. All cementing operations during plugging shall be performed under the direct supervision of the operator or his authorized representative, who shall not be an employee of the service or cementing company hired to plug the well. Direct supervision means supervision at the well site during the plugging operations. The operator and the cementer are both responsible for complying with the general plugging requirements of this subsection and for plugging the well in conformity with the procedure set forth in the approved notice of intention to plug and abandon for the well being plugged. The operator and cementer may each be assessed administrative penalties for

failure to comply with the general plugging requirements of this subsection or for failure to plug the well in conformity with the approved notice of intention to plug and abandon the well.

(2) Cement plugs shall be set to isolate each productive horizon and usable quality water strata. Plugs shall be set as necessary to separate multiple usable quality water strata by placing the required plug at each depth as determined by the Texas Commission on Environmental Quality or its successor agencies. The operator shall verify the placement of the plug required at the base of the deepest usable quality water stratum by tagging with tubing or drill pipe or by an alternate method approved by the district director or the district director's delegate.

(3) Cement plugs shall be placed by the circulation or squeeze method through tubing or drill pipe. Cement plugs shall be placed by other methods only upon written request with the written approval of the district director or the director's delegate.

(4) All cement for plugging shall be an approved API oil well cement without volume extenders and shall be mixed in accordance with API standards. Slurry weights shall be reported on the cementing report. The district director or the director's delegate may require that specific cement compositions be used in special situations; for example, when high temperature, salt section, or highly corrosive sections are present. An operator shall request approval to use alternate materials, other than API oil well cement without volume extenders, to plug a well by filing with the director or the director's delegate a written request providing all pertinent information to support the use of the proposed alternate material and plugging method. The director or the director's delegate shall determine whether such a request warrants approval, after considering factors which include but are not limited to whether or not the well to be plugged was used as an injection or disposal well; the well's history; the well's current bottom hole pressure; the presence of highly pressurized formations intersected by the wellbore; the method by which the alternative material will be placed in the wellbore; and the compressive strength and other performance specifications of the alternative material to be used. The director or the director's delegate shall approve such a request only if the proposed alternate material and plugging method will ensure that the well does not pose a potential threat of harm to natural resources.

(5) Operators shall use only cementers approved by the director or the director's delegate, except when plugging is conducted in accordance with subparagraph (B)(ii) of this paragraph or paragraph (6) of this subsection. Cementing companies, service companies, or operators may apply for designation as approved cementers. Approval will be granted on a showing by the applicant of the ability to mix and pump cement or other alternate materials as approved by the director or the director's delegate in compliance with this rule. An approved cementer is authorized to conduct plugging operations in accordance with Commission rules in each Commission district.

(A) A cementing company, service company, or operator seeking designation as an approved cementer shall file a request in writing with the district director of the district in which it proposes to conduct its initial plugging operations. The request shall contain the following information:

(i) the name of the organization as shown on its most recent approved organizational report;

(ii) a list of qualifications including personnel who will supervise mixing and pumping operations;

(iii) length of time the organization has been in the business of cementing oil and gas wells;

(iv) an inventory of the type of equipment to be used to mix and pump cement or other alternate materials as approved by the director or the director's delegate; and

(v) a statement certifying that the organization will comply with all Commission rules.

(B) No request for designation as an approved cementer will be approved until after the district director or the director's delegate has:

(i) inspected all equipment to be used for mixing and pumping cement or other alternate materials as approved by the director or the director's delegate; and

(ii) witnessed at least one plugging operation to determine if the cementing company, service company, or operator can properly mix and pump cement or other alternate materials as approved by the director or the director's delegate according to the specifications required by this rule.

(C) The district director or the director's delegate shall file a letter with the director or the director's delegate recommending that the application to be designated as an approved cementer be approved or denied. If the district director or the director's delegate does not recommend approval, or the director or the director's delegate denies the application, the applicant may request a hearing on its application.

(D) Designation as an approved cementer may be suspended or revoked for violations of Commission rules. The designation may be revoked or suspended administratively by the director or the director's delegate for violations of Commission rules if:

(i) the cementer has been given written notice by personal service or by registered or certified mail informing the cementer of the proposed action, the facts or conduct alleged to warrant the proposed action, and of its right to request a hearing within 10 days to demonstrate compliance with Commission rules and all requirements for retention of designation as an approved cementer; and

(ii) the cementer did not file a written request for a hearing within 10 days of receipt of the notice.

(6) An operator may request administrative authority to plug its own wells without being an approved cementer. An operator seeking such authority shall file a written request with the district director and demonstrate its ability to mix and pump cement or other alternate materials as approved by the director or the director's delegate in compliance with this subsection. The district director or the director's delegate shall determine whether such a request warrants approval. If the district director or the director's delegate refuses to administratively approve this request, the operator may request a hearing on its request.

(7) The district director or the director's delegate may require additional cement plugs to cover and contain any productive horizon or to separate any water stratum from any other water stratum if the water qualities or hydrostatic pressures differ sufficiently to justify separation. The tagging and/or pressure testing of any such plugs, or any other plugs, and respotting may be required if necessary to ensure that the well does not pose a potential threat of harm to natural resources.

(8) For onshore or inland wells, a 10-foot cement plug shall be placed in the top of the well, and casing shall be cut off three feet below the ground surface.

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(9) Mud-laden fluid of at least 9-1/2 pounds per gallon with a minimum funnel viscosity of 40 seconds shall be placed in all portions of the well not filled with cement or other alternate material as approved by the director or the director's delegate. The hole shall be in static condition at the time the cement plugs are placed. The district director or the director's delegate may grant exceptions to the requirements of this paragraph if a deviation from the prescribed minimums for fluid weight or viscosity will insure that the well does not pose a potential threat of harm to natural resources. An operator shall request approval to use alternate fluid other than mud-laden fluid by filing with the district director a written request providing all pertinent information to support the use of the proposed alternate fluid. The district director or the director's delegate shall determine whether such a request warrants approval, and shall approve such a request only if the proposed alternate fluid will insure that the well does not pose a potential threat of harm to natural resources.

(10) Non-drillable material that would hamper or prevent reentry of a well shall not be placed in any wellbore during plugging operations, except in the case of a well plugged and abandoned under the provisions of §3.35 or §4.614(b) of this title (relating to Procedures for Identification and Control of Wellbores in Which Certain Logging Tools Have Been Abandoned (Statewide Rule 35); and Authorized Disposal Methods, respectively). Pipe and unretrievable junk shall not be cemented in the hole during plugging operations without prior approval by the district director or the director's delegate.

(11) All cement plugs, except the top plug, shall have sufficient slurry volume to fill 100 feet of hole, plus 10% for each 1,000 feet of depth from the ground surface to the bottom of the plug.

(12) The operator shall fill the rathole, mouse hole, and cellar, and shall empty all tanks, vessels, related piping and flowlines that will not be actively used in the continuing operation of the lease within 120 days after plugging work is completed. Within the same 120 day period, the operator shall remove all such tanks, vessels, and related piping, remove all loose junk and trash from the location, and contour the location to discourage pooling of surface water at or around the facility site. The operator shall close all pits in accordance with the provisions of §3.8 of this title (relating to Water Protection (Statewide Rule 8)). The district director or the director's delegate may grant a reasonable extension of time of not more than an additional 120 days for the removal of tanks, vessels and related piping.

(e) Plugging requirements for wells with surface casing.

(1) When insufficient surface casing is set to protect all usable quality water strata and such usable quality water strata are exposed to the wellbore when production or intermediate casing is pulled from the well or as a result of such casing not being run, a cement plug shall be a minimum of 100 feet in length and shall extend at least 50 feet above and 50 feet below the base of the deepest usable quality water stratum. This plug shall be evidenced by tagging with tubing or drill pipe. The plug shall be respotted if it has not been properly placed. In addition, a cement plug shall be set across the shoe of the surface casing. This plug shall be a minimum of 100 feet in length and shall extend at least 50 feet above and below the shoe.

(2) When sufficient surface casing has been set to protect all usable quality water strata, a cement plug shall be placed across the shoe of the surface casing. This plug shall be a minimum of 100 feet in length and shall extend at least 50 feet above the shoe and at least 50 feet below the shoe.

(3) If surface casing has been set deeper than 200 feet below the base of the deepest usable quality water stratum, an additional cement plug shall be placed inside the surface casing across the base of the deepest usable quality water stratum. This plug shall be a minimum of 100 feet in length and shall extend at least 50 feet below and 50 feet above the base of the deepest usable quality water stratum.

(4) Plugs shall be set as necessary to separate multiple usable quality water strata by placing the required plug at each depth as determined by the Texas Commission on Environmental Quality or its successor agencies.

(f) Plugging requirements for wells with intermediate casing.

(1) For wells in which the intermediate casing has been cemented through all usable quality water strata and all productive horizons, a cement plug meeting the requirements of subsection (d)(11) of this section shall be placed inside the casing and centered opposite the base of the deepest usable quality water stratum, but extend no less than 50 feet above and below the base of the deepest usable quality water stratum.

(2) For wells in which intermediate casing is not cemented through all usable quality water strata and all productive horizons, and if the casing will not be pulled, the intermediate casing shall be perforated at the required depths to place cement outside of the casing by squeeze cementing through casing perforations.

(3) Additionally, plugs shall be set as necessary to separate multiple usable quality water strata by placing the required plug at each depth as determined by the Texas Commission on Environmental Quality or its successor agencies.

(g) Plugging requirements for wells with production casing.

(1) For wells in which the production casing has been cemented through all usable quality water strata and all productive horizons, a cement plug meeting the requirements of subsection (d)(11) of this section shall be placed inside the casing and centered opposite the base of the deepest usable quality water stratum and across any multi-stage cementing tool. This plug shall be a minimum of 100 feet in length and shall extend at least 50 feet below and 50 feet above the base of the deepest usable quality water stratum.

(2) For wells in which the production casing has not been cemented through all usable quality water strata and all productive horizons and if the casing will not be pulled, the production casing shall be perforated at the required depths to place cement outside of the casing by squeeze cementing through casing perforations.

(3) The district director or the director's delegate may approve a cast iron bridge plug to be placed immediately above each perforated interval, provided at least 20 feet of cement is placed on top of each bridge plug. A bridge plug shall not be set in any well at a depth where the pressure or temperature exceeds the ratings recommended by the bridge plug manufacturer.

(4) Additionally, plugs shall be set as necessary to separate multiple usable quality water strata by

placing the required plug at each depth as determined by the Texas Commission on Environmental Quality or its successor agencies.

(h) Plugging requirements for well with screen or liner.

(1) If practical, the screen or liner shall be removed from the well.

(2) If the screen or liner is not removed, a cement plug in accordance with subsection (d)(11) of this section shall be placed at the top of the screen or liner.

(i) Plugging requirements for wells without production casing and open-hole completions.

(1) Any productive horizon or any formation in which a pressure or formation water problem is known to exist shall be isolated by cement plugs centered at the top and bottom of the formation. Each cement plug shall have sufficient slurry volume to fill a calculated height as specified in subsection (d)(11) of this section.

(2) If the gross thickness of any such formation is less than 100 feet, the tubing or drill pipe shall be suspended 50 feet below the base of the formation. Sufficient slurry volume shall be pumped to fill the calculated height from the bottom of the tubing or drill pipe up to a point at least 50 feet above the top of the formation, plus 10% for each 1,000 feet of depth from the ground surface to the bottom of the plug.

(j) The district director or the director's delegate shall review and approve the notification of intention to plug in a manner so as to accomplish the purposes of this section. The district director or the director's delegate may approve, modify, or reject the operator's notification of intention to plug. If the proposal is modified or rejected, the operator may request a review by the director or the director's delegate. If the proposal is not administratively approved, the operator may request a hearing on the matter. After hearing, the examiner shall recommend final action by the Commission.

(k) Plugging horizontal drainhole wells. All plugs in horizontal drainhole wells shall be set in accordance with subsection (d)(11) of this section. The productive horizon isolation plug shall be set from a depth 50 feet below the top of the productive horizon to a depth either 50 feet above the top of the productive horizon, or 50 feet above the production casing shoe if the production casing is set above the top of the productive horizon. If the production casing shoe is set below the top of the productive horizon, then the productive horizon isolation plug shall be set from a depth 50 feet below the production casing shoe to a depth that is 50 feet above the top of the productive horizon. In accordance with subsection (d)(7) of this section, the Commission or its delegate may require additional plugs.

Source Note: The provisions of this §3.14 adopted to be effective January 1, 1976; amended to be effective February 29, 1980, 5 TexReg 499; amended to be effective January 1, 1983, 7 TexReg 3989; amended to be effective March 10, 1986, 11 TexReg 901; amended to be effective September 8, 1986, 11 TexReg 3792; amended to be effective November 9, 1987, 12 TexReg 3959; amended to be effective May 9, 1988, 13 TexReg 2026; amended to be effective March 1, 1992, 17 TexReg 1227; amended to be effective September 1, 1992, 17 TexReg 5283; amended to be effective September 20, 1995, 20 TexReg 6931; amended to be effective September 14, 1998, 23 TexReg 9300; amended to be effective December 28,1999,24TexReg11711;amendedto be effective July 10, 2000, 25 TexReg 6487; amended to be effective November 1, 2000, 25 TexReg 9924; amended to be effective January 9, 2002, 27 TexReg 139; amended to be effective July 28, 2003, 28 TexReg 5853; amended to be effective

December 3, 2003, 28 TexReg 10747; amended to be effective September 1, 2004, 29 TexReg 8271; amended to be effective January 30, 2007, 32 TexReg 287

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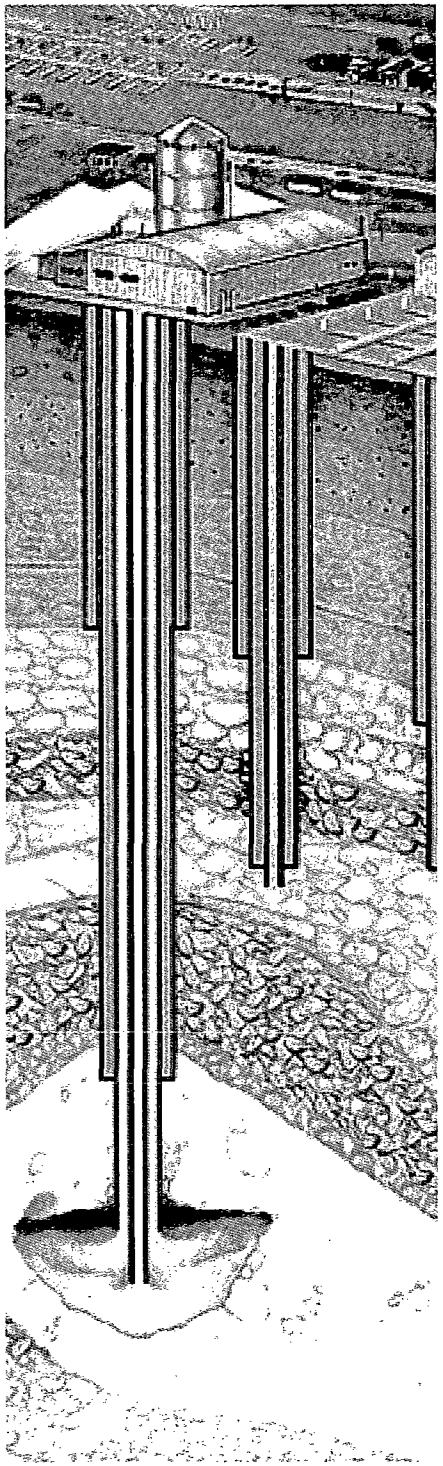
FEDERAL UIC REGULATIONS

BRINE WELL WORK GROUP

3/26/09 - Present



Protecting Drinking Water Through Underground Injection Control

Drinking Water Pocket Guide #2

EPA United States Environmental Protection Agency

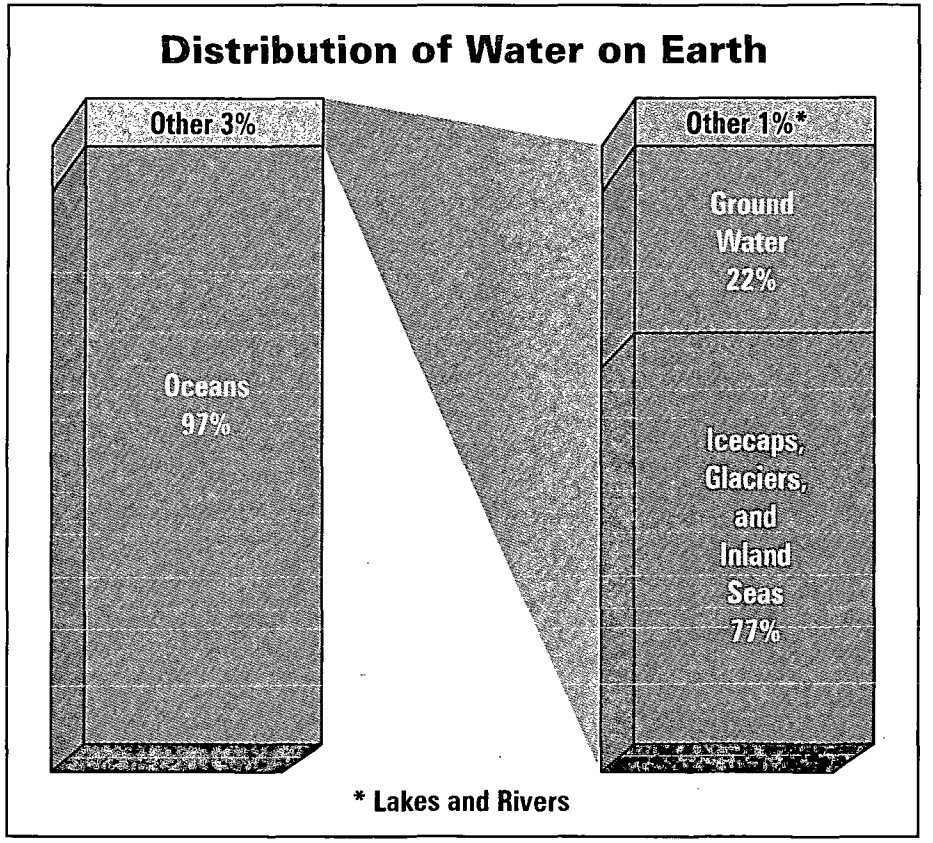
Office of Ground Water and
Drinking Water (4606-M)
EPA 816-K-02-001
www.epa.gov/safewater
January 2002

Printed on Recycled Paper

Contents

Importance of Drinking Water

Water is our most vital resource. It is essential for life. Eighty-seven percent of the earth is covered by water. Most water fit for drinking is frozen in glaciers. The remaining fresh water is largely found below our feet in aquifers. More than 90 percent of all public drinking water systems rely on water found in aquifers to supply the population with drinking water. Aquifers also supply water for agriculture, feed our lakes, and provide recharge to our streams and rivers. In addition, millions of Americans living in rural areas rely on private wells. Protecting this resource from source to tap is essential to the health of the public and the economic health of communities.



At the same time, Americans generate large amounts of waste fluids. More than 750 billion gallons of hazardous and non-hazardous fluids are disposed of safely through underground injection. The Underground Injection Control (UIC) Program insures that these fluids are disposed of safely and cost effectively while fulfilling our mission to protect underground sources of drinking water (USDWs) from contamination by regulating the location, construction, operation and closure of injection wells. This booklet outlines UIC Program basics and the minimum federal requirements for an effective UIC Program.

Safe Drinking Water Act (UIC Related Sections)

Sections of the SDWA require the EPA to provide safeguards so that injection wells do not endanger current and future USDWs.

Section	Description
1421	**Identifies what state regulations must include** – Sets out the framework for the minimum federal requirements that states will have to meet in order to have primary enforcement for the UIC Program. Regulations must contain minimum requirements for effective programs (e.g., inspection, monitoring and record-keeping) to prevent underground injection that endangers underground sources of drinking water.
1422	**Outlines the process for state primary enforcement applications** – including timelines, and public participation requirements. If a state does not assume primacy, EPA will assume direct implementation responsibility. This section also allows tribes to assume primary enforcement authority.

1423	**Sets forth enforcement of the program** – Civil and criminal actions are described, including the amount of any penalty levied.
1425	**Describes optional demonstrations a state may make for the portion of the UIC program relating to oil and natural gas operations** – Allows EPA approval of existing state oil and gas programs if the state can show that the program is effective in preventing endangerment of drinking water sources.
1426	**Requires the Administrator to determine the applicability of monitoring methods** – and calls for EPA to submit a Report to Congress for Class V wells. The Report to Congress required information on Class V inventory, well types, design and construction recommendations and risks associated with wastes discharged.
1431	**Authorizes emergency powers for EPA** – to take action in a state if there is an imminent and substantial endangerment.
1442	**Addresses EPA's authority to conduct research, studies, training and demonstrations** – specifically looking at improved methods for protecting USDWs.
1443	**Establishes grants for Primacy Programs**

Key Concepts

Aquifer: An underground geologic formation, or group of formations, containing usable amounts of groundwater that can supply drinking water wells or springs

Underground Source of Drinking Water (USDW): An aquifer or portion of an aquifer that

- Supplies any public water system or contains a quantity of ground water sufficient to supply a public water system, and
- Currently supplies drinking water for human consumption, or
- Contains fewer than 10,000 mg/L total dissolved solids and is not an exempted aquifer

Well:

- A bored, drilled or driven shaft whose depth is greater than the largest surface dimension, or
- A dug hole whose depth is greater than the largest surface dimension, or
- An improved sinkhole, or
- A subsurface fluid distribution system

Well Injection: Subsurface discharge of fluids through a well

SDWA UIC Program Principles

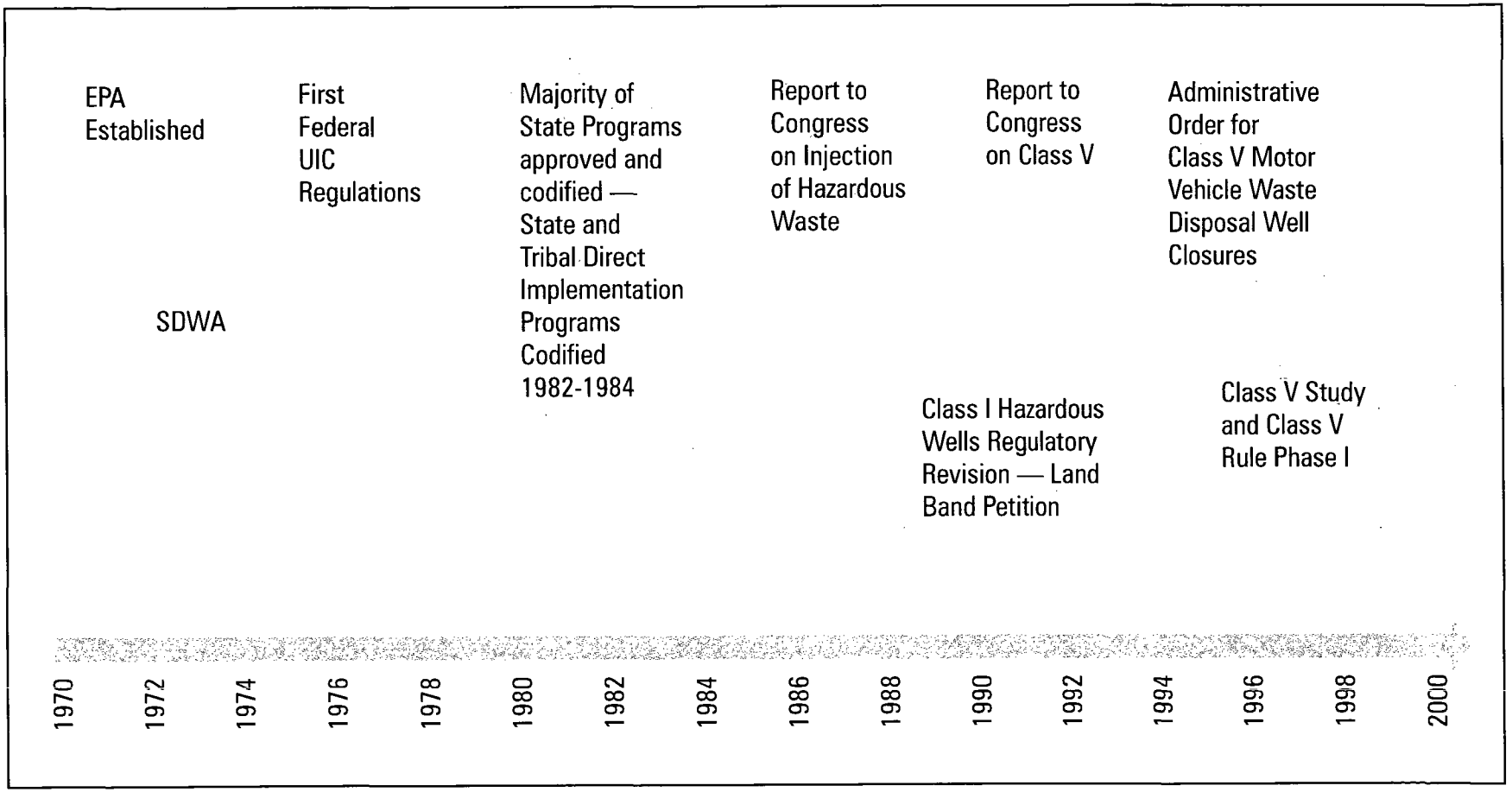
Non-Endangerment: The Safe Drinking Water Act prohibits injection which endangers an underground source of drinking water. Underground injection endangers drinking water sources if such injection may result in the presence in underground water that supplies, or can reasonably be expected to supply, any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons.

Primacy: EPA is directed to establish minimum federal requirements for state and tribal UIC programs. States and tribes then apply to EPA to obtain primary enforcement responsibility, or primacy, to administer the UIC program. Primacy programs must meet the minimum federal requirements, and may have more stringent requirements. To date, 33 states, Guam, the Commonwealth of the Mariana Islands, and Puerto Rico have obtained primacy for all classes of injection wells. Seven states share primacy with EPA. For the remaining states, the Virgin Islands, American Samoa, and Indian Country, EPA is directly implementing their UIC programs. (See map on page 29)

EPA Injection Well Classification System

Well Class	Injection Well Description	Approximate Inventory
Class I	– Inject hazardous wastes beneath the lowermost USDW – Inject industrial non-hazardous liquid beneath the lowermost USDW – Inject municipal wastewater beneath the lowermost USDW	500
Class II	– Dispose of fluids associated with the production of oil and natural gas – Inject fluids for enhanced oil recovery – Inject liquid hydrocarbons for storage	147,000
Class III	Inject fluids for the extraction of minerals	17,000
Class IV	Inject hazardous or radioactive waste into or above a USDW. This activity is Banned. These wells can only inject as part of an authorized cleanup	40 sites
Class V	Wells not included in the other classes. Inject non-hazardous liquid into or above a USDW.	Range from >500,000 to >685,000

UIC Historical Timeline



The five pathways

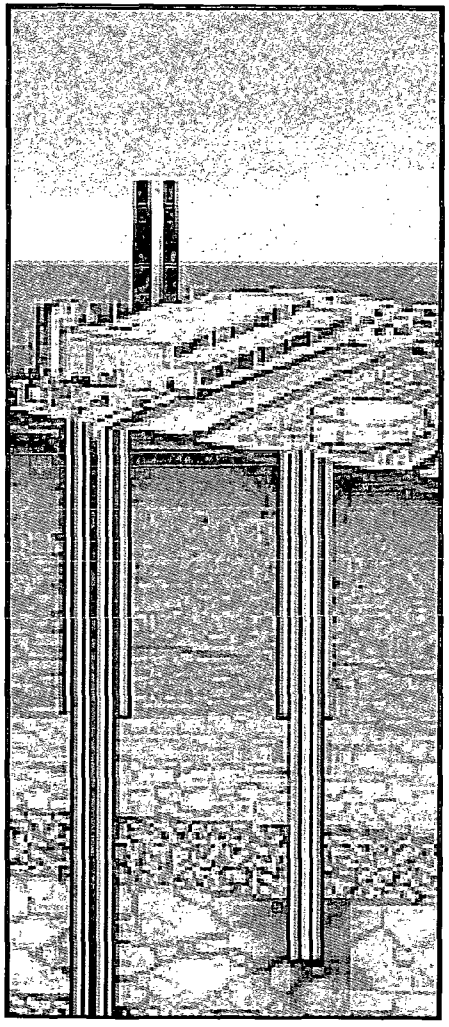
The fundamental purpose of the UIC program is to protect curren
fluids within the well and the intended injection zone to preve
through five major pathways.

Pathway	Owner/Operator Must Demc
1: Faulty Well Construction: Leaks in well casing or fluid escaping between well's outer casing and well bore.	No significant leaks or fluid m bore (mechanical integrity) ev
2: Nearby Wells: Fluids from pressurized area in injection zone may escape through wells in injection area.	Properly construct or plug we injection zone. Submit plans f abandonment with permit apr P&A reports prior to closing a
3: Faults or Fractures in Confining Strata: Fluids may leak out of pressurized area through faults/fractures in confining beds.	Wells are sited to inject belov confining bed. Monitor injecti prevent fractures in injection z confining bed.
4: Direct Injection: Inject fluids into or above USDWs.	Fluids do not endanger. Must prior to injection.
5: Displacement: Fluid may be displaced from injection zone into hydraulically connected USDWs.	Proximity of injection wells to permitting authority can confi Control injection pressure; co and testing to track future flui

urrent and potential drinking water resources by keeping injected prevent endangerment. Injected fluids can contaminate USDWs

Demonstrate	UIC Program Requirements
uid movement in well ty) every 5 years.	Permits; Mechanical integrity tests (MIT); Inspections; File reviews; Corrective action (CA) on wells with MIT failure; Enforcement; Closures
g wells that penetrate lans for plugging and it applications. Submit ing any well.	Permits; File reviews; CA on problem wells in area of review; Inspections; Enforcement; Closures
below an unfractured njection pressure to tion zone or in	Permits; File reviews; MITs; Inspections; Monitoring record reviews; CA on wells with MIT failure; Enforcement; Closures
Must submit inventory	Permits; Outreach and compliance assistance; Inspections; Enforcement; Closures; Inventory
lls to USDWs so confirm proper siting. e; conduct monitoring e fluid migration.	Permits; MITs; CA on wells with MIT failure; Inspections; Enforcement; Closures

Class I wells – *Isolate hazardous, industrial and municipal wastes through deep injection.*



Purpose:

Regulate and manage safe injection of industrial or municipal waste beneath the lowermost USDW

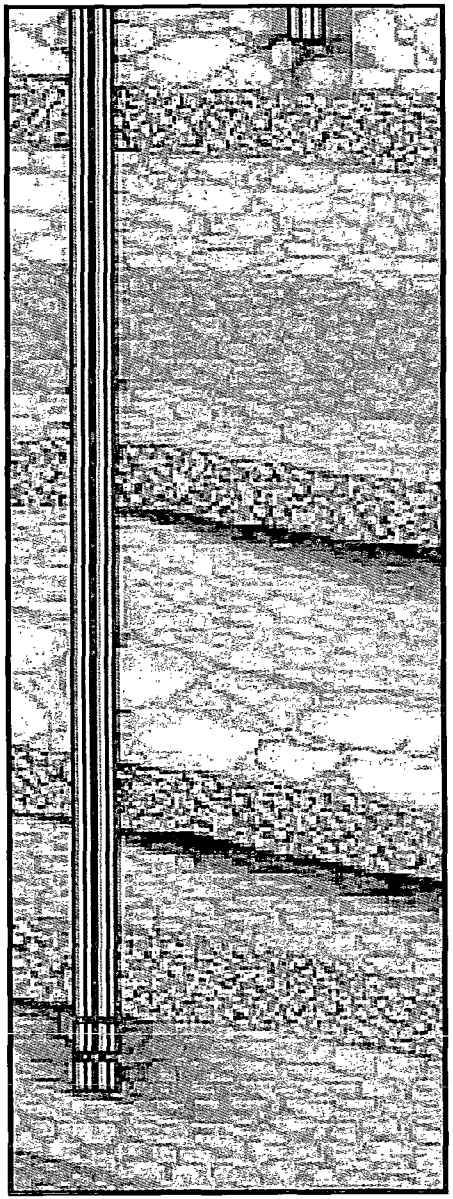
Examples of Fluids:

- Manufacturing and mining wastewater
- RCRA hazardous waste
- Treated municipal effluent
- Radioactive waste

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs
- Tubing and packer appropriate for injected wastewater



- Determine impact of placing a new well close to existing wells. Minimum area of review is 2 miles for hazardous waste wells and ¼ mile for non-hazardous waste wells
- Sited in geologically stable areas

Monitoring and testing

- Hazardous Wells – Internal mechanical integrity test (MIT) every year, External MIT every 5 years
- Non-hazardous Wells – Internal and external MIT every 5 years
- Yearly monitoring required of injection operation
- Monitoring wells to supplement ambient monitoring are authorized

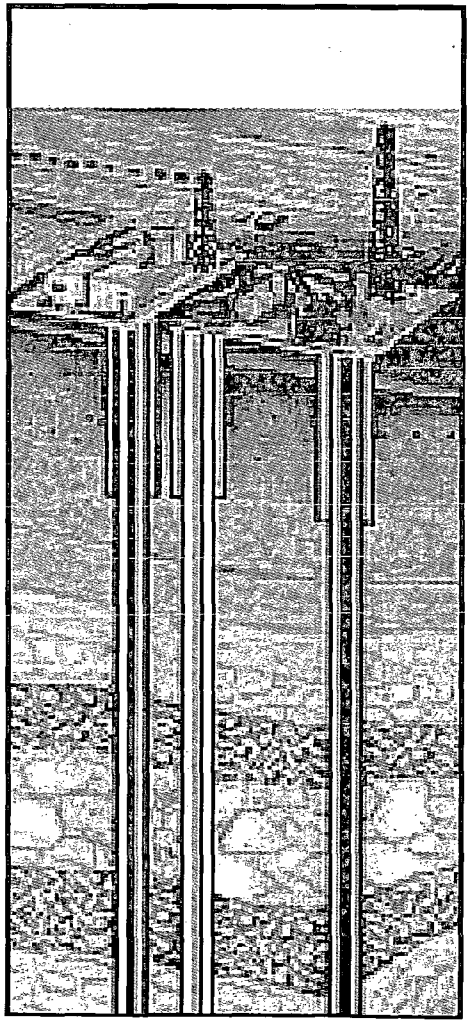
Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility

Regulatory Citations:

- 40 CFR 144 General Provisions
- 40 CFR 146.11 to 146.14, 146.61 to 146.73
- 40 CFR 148 (all) for hazardous waste wells

Class II wells – *Inject oil and gas production waste and materials.*



Purpose:

Regulate and manage safe injection of fluid brought to the surface in connection with oil and gas related production, or for enhanced recovery of oil or natural gas, or liquid hydrocarbon storage.

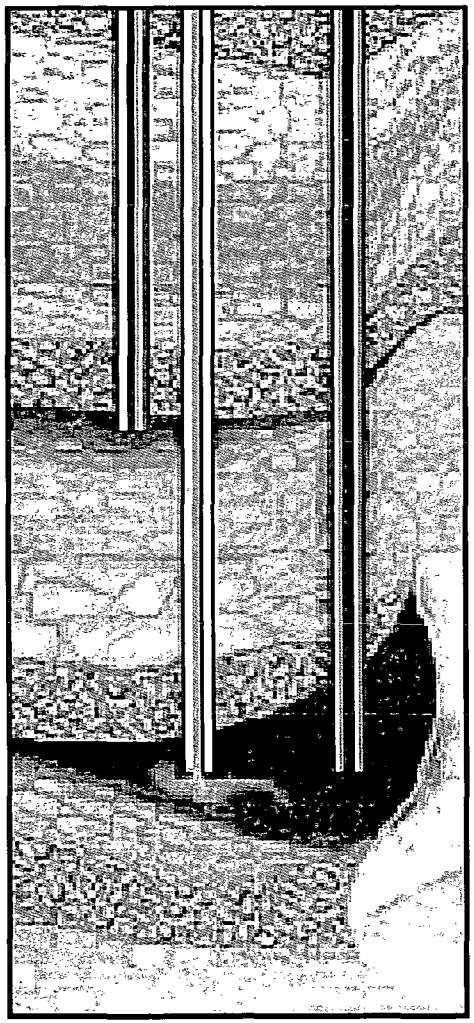
Examples of Fluids:

- Produced high salinity brine
- Crude oil (for storage)
- Polymers and viscosifiers for enhanced recovery wells
- Drilling fluids and muds

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs
- Construction and design of well (casing, tubing, and packer) varies



Monitoring and testing

- Internal/External MIT
- Periodic monitoring and reporting

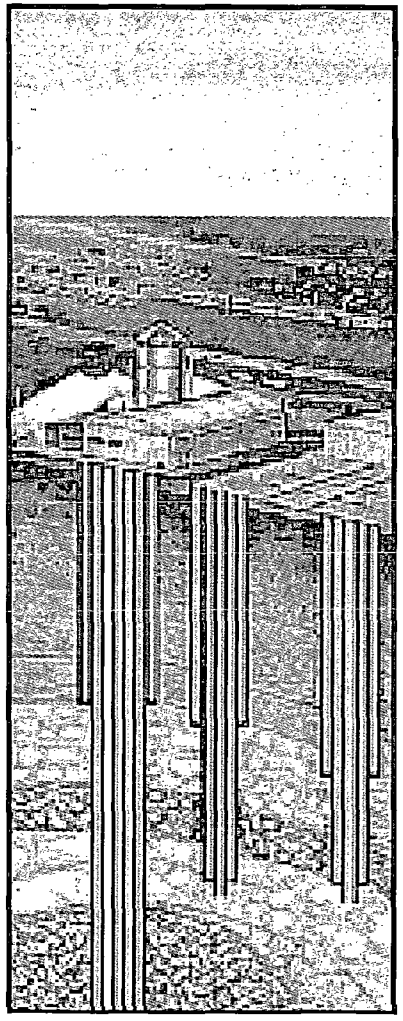
Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility

Regulatory Citations:

- 40 CFR 144 General Provisions
- 40 CFR 146 General Provisions
- 40 CFR 146.21 to 146.24

Class III wells – *Minimize environmental impacts from solution mining operations*



Purpose:

Regulate and manage safe injection of fluids or leaching agents to dissolve specific salt/minerals for extraction and recovery.

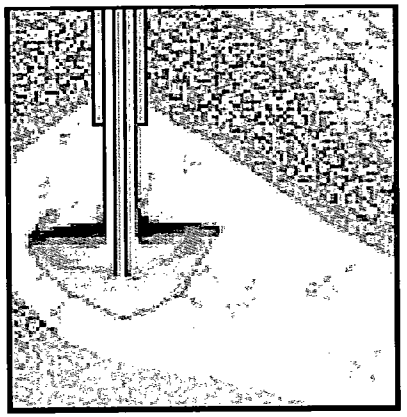
Examples of Fluids:

- Fresh water to extract salt (NaCl)
- Sodium bicarbonate to extract uranium salts
- Steam to extract sulfur
- Proprietary solutions to extract other minerals and metals

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs
- Tubing and packer appropriate for injected fluids



Monitoring and testing

- Nature of the injected fluid
- Injection pressure or injectate rate or volume
- Internal/external MIT
- Frequent testing of fluids in the injection zone
- Monitoring wells in adjacent USDWs

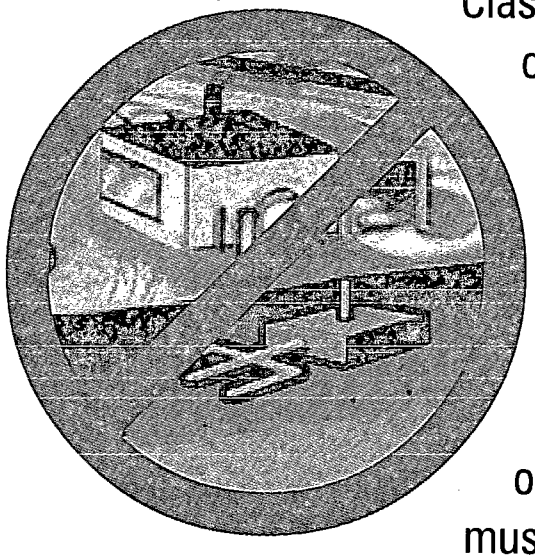
Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility

Regulatory Citations:

- 40 CFR 144
- 40 CFR 146.4, 146.6, 146.8 and 146.10
- 40 CFR 146.31 to 146.34

Class IV wells – *Prevent ground water contamination by prohibiting the shallow injection of hazardous waste except as part of authorized cleanup activities.*

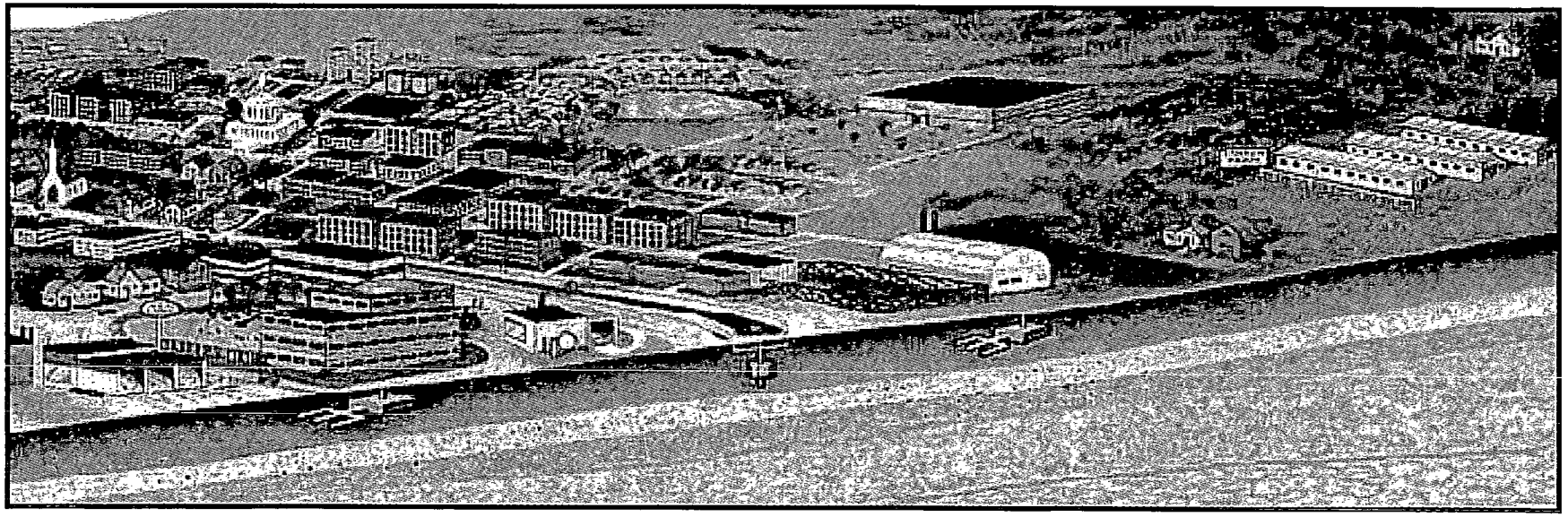


Class IV wells were used to inject hazardous or radioactive wastes into or above USDWs. **The use of Class IV wells to dispose of waste was banned in 1984.** However, these wells are authorized when operated to inject treated contaminated ground water back into the original aquifer as part of a clean-up effort and may only be operated with federal or state approval under the Resource Conservation and Recovery Act (RCRA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) programs. Owners and operators of Class IV wells must still meet all UIC Program requirements.

Class V wells – *Manage the shallow injection of non-hazardous fluids.*

Purpose:

Regulate and manage the safe injection of non-hazardous fluids through on-site disposal systems such as dry wells, septic systems, leach fields and similar types of drainage wells, and deeper wells that inject into or above USDWs.



Examples of Fluids:

- *Wastewater disposal* – storm water runoff, incidental and process wastes from industry, car wash water, food processing wastes, treated sanitary wastes*, drainage from agricultural activities, and aquifer remediation.

- *Beneficial uses* – aquifer recharge, aquifer storage and recovery, subsidence control, saline intrusion barrier, and brine return from mineral recovery and energy production.

Protective Requirements:

- Cannot endanger USDW's
- Submit inventory information
- Additional specific requirements for motor vehicle waste disposal wells and large capacity cesspools (*see Class V Rule, page 21*)

Monitoring:

- States and EPA can require any well owner to obtain a permit, monitor injectate or close the well if there is a potential to endanger USDWs.

Regulatory Citation:

- 40 CFR 144 Subpart G.

* The Underground Injection Control Program does not regulate individual residential septic systems and cesspools and nonresidential septic systems and cesspools with the capacity to serve fewer than 20 persons per day and inject only sanitary waste.

Class V Rule

In 1999, EPA finalized the *Underground Injection Control Regulations for Class V Injection Wells, Revisions* (FR Vol. 46 No. 234 pp. 68546-68573), known as the Class V Rule, Phase 1. The Class V Rule establishes minimum federal standards for two subtypes of Class V wells: large-capacity cesspools and motor vehicle waste disposal wells.

Large-capacity Cesspools

Definition: Typically a drywell with an open bottom and/or perforated sides that receives untreated sanitary waste. A *large-capacity* cesspool is any residential cesspool used by multiple dwellings, community or regional establishments, or non-residential cesspools that have the capacity to serve 20 or more people.

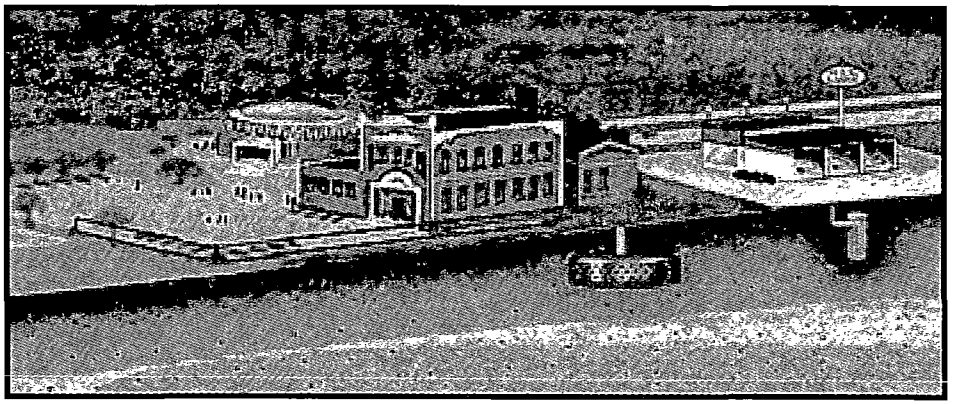
Protective Requirements:

- New large-capacity cesspools are banned (2000)
- Existing large-capacity cesspools nationwide must close by 2005
- Owners and operators must notify the UIC Program Director 30 days prior to closing their large capacity cesspool

Motor Vehicle Waste Disposal Wells

Definition: Shallow waste disposal systems that receive or have received fluids from vehicular repair or maintenance activities, such as auto body or automotive repair, car dealerships, or other vehicular repair work.

- New motor vehicle waste disposal wells are banned (2000)
- Existing motor vehicle waste disposal wells are banned in regulated areas. States may allow owners and operators to seek a waiver from the ban and obtain a permit.
- Owners and operators must notify the UIC Program Director 30 days prior to closing their motor vehicle waste disposal well.



EPA UIC Strategic Program Priorities

Base Program – Classes I-IV

- Maintain and improve the core program
- Establish a meaningful and useful data management system

Class V

- Implement the Class V, Phase 1 Rule
- Build a credible and robust Class V, Phase 2 Program
- Develop a comprehensive inventory

All Classes

- Better integrate the UIC Program with SDWA and other programs (i.e., Clean Water Act, RCRA and CERCLA or Superfund)
- Expand outreach and education

UIC Program Implementation Milestones

Well Class	*Date*	*Activity*
Class I Hazardous	March 2001	Study of Risks Associated with Class I Underground Injection Wells
Class I Municipal	Spring 2002	South Florida Waste Water Study
	Spring 2002	Class I Municipal Well Final Rule
Class II	Winter 2002	Coal Bed Methane Hydro-Fracture Study Phase I
Class V Phase 1 Rule Implementation	April 2000	• New Large Capacity Cesspools Banned • New Motor Vehicle Waste Disposal Wells Banned
	April 2005	• Existing Large Capacity Cesspools Closed
	April 2000 – Jan. 2008	• Existing Motor Vehicle Waste Disposal Wells Close or Obtain a Permit in Regulated Areas
Class V Phase 2 Determination	April 2001 May 2002	• Proposal • Final

Importance of UIC Program to source water and other watershed activities

Underground Injection Control is one of many activities that help ensure tap water is safe to drink. A variety of safeguards, from the drinking water source to the consumer's tap, form multiple barriers against contamination. The UIC Program works to protect underground sources of drinking water from contamination by regulating the construction, operation, and closure of injection wells. Other protective barriers include assessing the vulnerability of drinking water sources to contamination; adopting community drinking water programs to protect wells and collection systems; making sure water is treated by qualified operators; ensuring the integrity of distribution systems; setting regulations to control the level of contaminants in tap water; and making information available to the public on drinking water quality. EPA, states, tribes, drinking water utilities, communities and citizens share the responsibility of protecting America's drinking water.

Did you know?

- 89 percent of the hazardous waste that is land disposed is through Class I Wells
- More than 700 million gallons of fluids are injected into Class II wells each year
- Typically, 10 gallons of brine are produced for each gallon of oil
- 50 percent of the salt used in America is extracted through Class III wells
- 80 percent of the uranium is extracted using Class III wells
- The majority of Class V well owners are small businesses and municipalities
- The two most numerous types of Class V wells are storm water drainage and large-capacity septic systems.

Glossary

Aquifer Exemption — A regulatory or administrative waiver to allow injection into all or part of a USDW that is not currently being used and will not be used in the future as a drinking water source. Without an aquifer exemption, certain types of energy production, mining, or waste disposal into USDWs would be prohibited under UIC regulations.

Casing — Pipe material placed inside the borehole that transmits fluids through the well into the injection zone. Casing is usually distinguished from tubing with respect to its function and its location in the well. Casing refers to the outer pipe string, often cemented in place to maintain the structural integrity in the borehole.

Drywell — A well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

Improved Sinkhole — A naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

Mechanical Integrity Test (MIT) — One means of measuring the adequacy of construction of an injection well is by requiring a demonstration that a well has mechanical integrity. A well is deemed to have mechanical integrity if there is no significant leak in the casing, tubing, or packer, and there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection wellbore.

Packer — Mechanical devices used to provide a seal between the tubing and the casing or the tubing and the open hole. Packers can be used to separate multiple injection zones, to protect casing from injection pressure and fluids, to isolate a given injection zone, to isolate casing leaks, or to facilitate subsurface safety control.

Public Water System — A water system that provides water to the public for human consumption through pipes or other constructed conveyances, if such a system has at least 15 service connections or regularly serves at least 25 people.

Sanitary Waste — Liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned. Sources of these

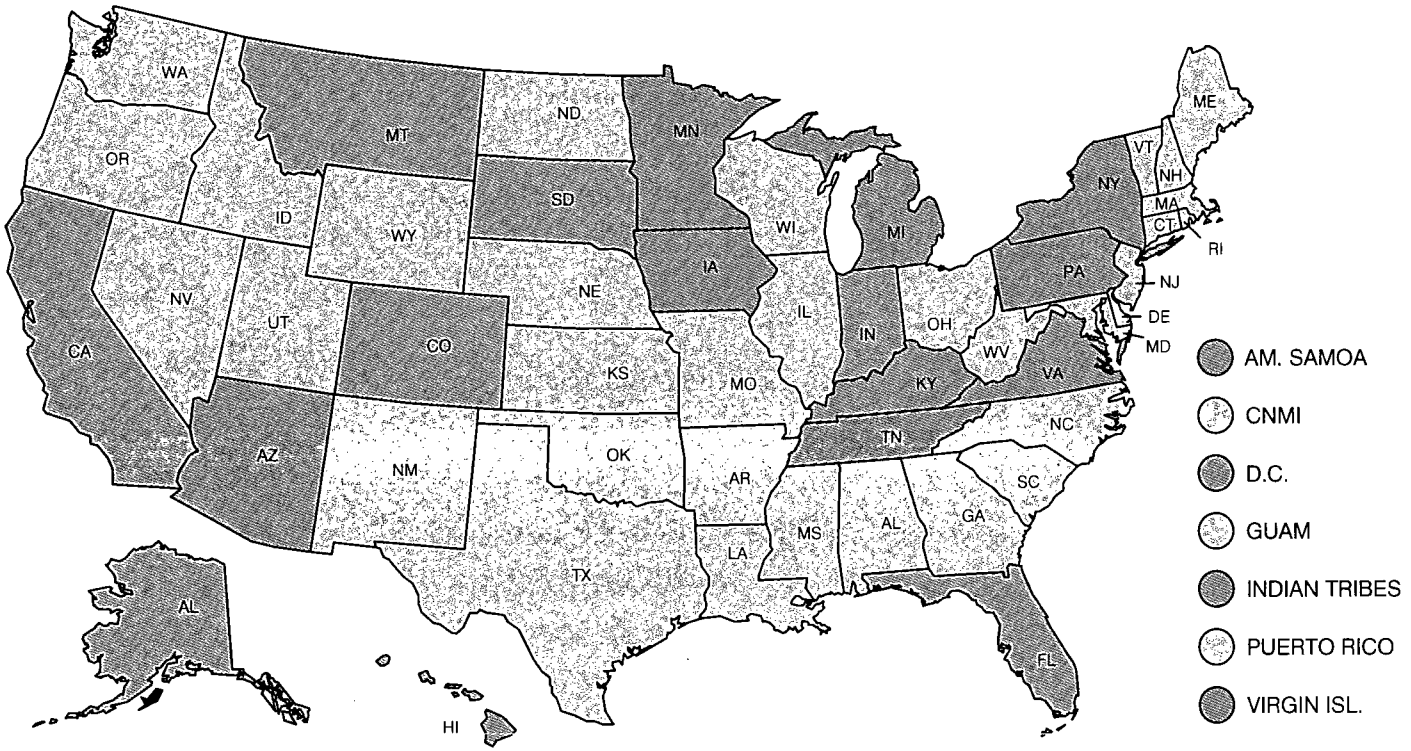
wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste.

Septic System — A "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

Subsurface Fluid Distribution System — An assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.

Tubing — The innermost pipe string through which injection usually takes place. It is often separated from concentric strings of casing by an annular fluid and can be removed easily from the well. In wells without tubing, the innermost casing can be refered to as the injection casing.

Agencies Responsible for Implementing the UIC Program



State Underground Injection Control (UIC) Program (33 States and 3 Territories)

EPA UIC Program (10 States, 2 Terr., D.C., and all Indian Tribes)

EPA and State share responsibility (7 States)

Contacts

EPA REGION 1 ..... **(617) 918-1614**
Connecticut Department of Environmental Protection (Classes I-V) ..... (860) 424-3018
Maine Department of Environmental Protection (Classes I-V) ..... (207) 287-7814
Massachusetts Department of Environmental Protection (Classes I-V) ..... (617) 574-6855
New Hampshire Department of Environmental Services (Classes I-V) ..... (603) 271-2858
Rhode Island Department of Environmental Management (Classes I-V) ..... (401) 222-6820
Vermont Department of Environmental Conservation (Classes I-V) ..... (802) 241-4455 ext. 7552
Indian Lands in Region 1 States — EPA Region 1 (Classes I-V) ..... (617) 918-1614

EPA REGION 2 ..... **(212) 637-3766**
New Jersey Department of Environmental Protection (Classes I-V) ..... (609) 292-0407
New York — EPA Region 2 (Classes I-V) ..... (214) 637-3766
Puerto Rico Environmental Quality Board (Classes I-V) ..... (787) 767-8181
Virgin Islands — EPA Region 2 (Classes I-V) ..... (212) 637-3766
Indian Lands in Region 2 States — EPA Region 2 (Classes I-V) ..... (212) 637-3766

EPA REGION 3 ..... **(215) 814-5445**

Delaware Department of Natural Resources & Env. Control (Classes I-V) ..... (302) 739-4762
Maryland Department of Environment (Classes I-V) ..... (410) 631-3662
Pennsylvania — EPA Region 3 (Classes I-V) ..... (215) 814-5445
Virginia — EPA Region 3 (Classes I-V) ..... (215) 814-5445
West Virginia Division of Environmental Protection (Classes I, III-V) ..... (304) 558-2108
West Virginia Division of Environmental Protection (Class II) ..... (304) 759-0514
District of Columbia — EPA Region 3 (Classes I-V) ..... (215) 814-5445

EPA REGION 4 ..... **(404) 562-9438**

Alabama Department of Environmental Management (Classes I, III-V) ..... (334) 271-7844
Alabama State Oil and Gas Board (Class II) ..... (205) 349-2852
Florida Department of Environmental Protection (Classes I, III-V) ..... (850) 921-9417
Florida — EPA Region 4 (Class II) ..... (404) 562-9352
Georgia Environmental Protection Division (Classes I-V) ..... (404) 656-3229
Kentucky — EPA Region 4 (Classes I-V) ..... (404) 562-9423
Mississippi Department of Environmental Quality (Classes I, III-V) ..... (601) 961-5640
Mississippi Oil and Gas Board (Class II) ..... (601) 354-7142
North Carolina Department of Environment and Nat. Resources (Classes I-V) ..... (919) 715-6165
South Carolina Department of Natural Resources (Classes I-V) ..... (803) 898-3549

Tennessee — EPA Region 4 (Classes I-V) ..... (404) 562-9473
Indian Lands in Region 4 States — EPA Region 4 (Classes I-V) ..... (404) 562-9473

EPA REGION 5 ..... (312) 886-1492
Illinois Environmental Protection Agency (Classes I, III-V) ..... (217) 782-6070
Illinois Department of Natural Resources (Class II) ..... (217) 782-1689
Indiana — EPA Region 5 (Classes I, III-V) ..... (312) 886-1492
Indiana Department of Natural Resources (Class II) ..... (317) 232-4058
Michigan — EPA Region 5 (Classes I-V) ..... (312) 886-1492
Minnesota — EPA Region 5 (Classes I-V) ..... (312) 886-1492
Ohio Environmental Protection Agency (Classes I, III-V) ..... (614) 644-2752
Ohio Department of Natural Resources (Class II) ..... (614) 265-7079
Wisconsin Department of Natural Resources ..... (608) 266-2438
Indian Lands in Region 5 States — EPA Region 5 ..... (312) 886-1492

EPA REGION 6 (Classes I, III-V) ..... (214) 665-7165
EPA REGION 6 (Class II) ..... (214) 655-7165
Arkansas Department of Environmental Quality (Classes I, III-V) ..... (501) 682-0646
Arkansas Oil and Gas Commission (Class II) ..... (870) 862-4965
Louisiana Department of Natural Resource (Classes I, III-V) ..... (225) 342-5515
Louisiana Office of Conservation (Class II) ..... (225) 342-5515

New Mexico Environment Department (Classes I, III-V) ..... (505) 827-2936
New Mexico Oil Conservation Division (Class II) ..... (505) 476-3466
Oklahoma Department of Environmental Quality (Classes I, III-V) ..... (405) 702-5100
Oklahoma Corporation Commission (Class II) ..... (405) 522-2751
Texas Natural Resource Conservation Commission (Classes I, III-V) ..... (512) 239-6633
Texas Railroad Commission (Class II) ..... (512) 463-6780
Indian Lands in Region 6 States — EPA Region 6 (Classes I-V) ..... (214) 665-7165

EPA REGION 7 ..... (913) 551-7030
Iowa — EPA Region 7 (Classes I-V) ..... (913) 551-7030
Kansas Department of Health and Environment (Classes I, III-V) ..... (785) 296-5560
Kansas Corporation Commission (Class II) ..... (316) 337-6197
Missouri Department of Natural Resources (Classes I-V) ..... (573) 368-2170
Nebraska Department of Environmental Quality (Classes I, III-V) ..... (402) 471-0096
Nebraska Oil and Gas Conservation Commission (Class II) ..... (308) 254-6919
Indian Lands in Region 7 States — EPA Region (Classes I-V) ..... (913) 551-7030

EPA REGION 8 ..... (800) 227-8917
Colorado — EPA Region 8 (Classes I, III-V) ..... (800) 227-8917
Colorado Oil and Gas Conservation Commission (Class II) ..... (303) 894-2011 ext. 105

Montana — EPA Region 8 (Classes I, III-V) ..... (800) 227-8917
Montana Board of Oil and Gas Conservation (Class II) ..... (406) 656-0040
North Dakota Department of Health (Classes I, III-V) ..... (701) 328-5210
North Dakota Industrial Commission (Class II) ..... (701) 328-8020
South Dakota — EPA Region 8 (Classes I, III-V) ..... (800) 227-8917
South Dakota Department of Environment and Natural Resources (Class II) ..... (605) 773-6296
Utah Department of Environmental Quality (Classes I, III-V) ..... (801) 538-6023
Utah Department of Natural Resources (Class II) ..... (801) 538-5297
Wyoming Department of Environmental Quality (Classes I, III-V) ..... (307) 777-7095
Wyoming Oil and Gas Conservation Commission (Class II) ..... (307) 234-7147
Indian Lands in Region 8 States — EPA Region 8 (Classes I-V) ..... (800) 227-8917

EPA REGION 9 ..... (415) 972-3538
Arizona — EPA Region 9 (Classes I-V) ..... (415) 972-3543
California — EPA Region 9 (Classes I, III-V) ..... (415) 972-3537
California Division of Oil, Gas and Geothermal Resources (Class II) ..... (916) 323-1781
Commonwealth of N. Mariana Islands Div. of Environmental Quality (Classes I-V) ..... (670) 234-1012
Guam Environmental Protection Agency — EPA Region 9 (Classes I-V) ..... (617) 472-8863
Hawaii — EPA Region 9 (Classes I-V) ..... (415) 972-3531
Nevada Division of Environmental Protection (Classes I-V) ..... (775) 687-4670 ext. 3137

Indian Lands in Region 9 States — EPA Region 9 (Classes I-III) ..... (415) 972-3544
Indian Lands in Region 9 States — EPA Region 9 (Classes IV-V) ..... (415) 972-3532

EPA REGION 10 ..... (206) 553-1200

Alaska — EPA Region 10 (Classes I, III-V) ..... (206) 553-1200
Alaska Oil and Gas Conservation Commission (Class II) ..... (907) 279-1433
Idaho Department of Water Resources (Classes I-V) ..... (208) 327-7900
Oregon Department of Environmental Quality (Classes I-V) ..... (503) 229-5696
Washington Department of Ecology (Classes I-V) ..... (360) 407-6000
Indian Lands in Region 10 States — EPA Region 10 (Classes I-V) ..... (206) 553-1200

EPA HEADQUARTERS — OFFICE OF GROUND WATER AND DRINKING WATER, PROTECTION BRANCH ..... (202) 564-3869

For More Information

EPA Office of Ground Water and Drinking Water

www.epa.gov/safewater

EPA/OGWDW: (202) 564-3750

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, February 12, 2009 10:52 AM
To: david_herrell@blm.gov; James_Rutley@blm.gov; mike_schumacher@cargill.com; daniel.ferguson@wipp.ws; byrum.charles@epa.gov; Leissner.Ray@epamail.epa.gov; hugh.harvey@intrepidpotash.com; lmolleur@keyenergy.com; gveni@nckri.org; Leavitt, Marcy, NMENV; brada.jones@state.nm.us; Chavez, Carl J, EMNRD; VonGonten, Glenn, EMNRD; Griswold, Jim, EMNRD; Price, Wayne, EMNRD; Kostrubala, Thaddeus; balch@prrc.nmt.edu; lland@gis.nmt.edu; leo.vansambeek@respec.com; rlbeauh@sandia.gov; grkirke@sandia.gov; reitze@socon.com; douglas.johnson@rrc.state.tx.us; mcartwright@unitedbrine.com; dave.hughes@wipp.ws; Allen.Hains@wnr.com; ken.parker@wnr.com; Ron.Weaver@wnr.com
Cc: Sanchez, Daniel J., EMNRD; jhand@kdhe.state.ks.us; khoeffner@kdheks.gov; mcochran@kdheks.gov; jvoigt@solutionmining.org; cpoyer@kdhe.state.ks.us; douglas.johnson@rrc.state.tx.us; joeb@dnr.state.la.us; psbriggs@gw.dec.state.ny.us
Subject: New Mexico UIC Class III Brine Well Evaluation Work Group March 26 - 27, 2009
Attachments: KS UIC regs Class III Final Draft (2).doc; OCD UIC Class III Brine Well Evaluation Group.xlsx

Ladies and Gentlemen:

The purpose of the work group is to focus on an examination of the causes of the recent brine well collapses and provide recommendations for a safe path forward in a report to the NM Oil Conservation Commission by May 1, 2009. The 6-month brine well moratorium will end May 14, 2009.

Please mark your calendars for the work group meeting scheduled for March 26 – 27, 2009 at the New Mexico Oil Conservation Division (NMOCD). The 2-day meeting will be held in "Porter Hall" (1st floor) of the Wendell Chino Building, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505.

The NMOCD has received your responses and/or your referrals to the NMOCD by the recipients of the NMOCD's request for the above subject on January 27, 2009. The NMOCD compiled a spreadsheet based on the information received to date (see attached spreadsheet) and is working on an agenda based on your recommended topics.

You will notice that the NMOCD has also added an Internet Work Group in the event the work group develops a draft product that requires review by members of the work group. The Internet Work Group was created to be included in the event it wishes to provide comments in the process. The NMOCD feels that including other experts from across the country who are unable to attend the meeting will benefit the process. Although, the number of biographies requested by the NMOCD to date is incomplete. Participants are encouraged to send their brief biographies for compilation and inclusion in NMOCD's records.

The NMOCD requests contact information from those persons on the spreadsheet who lack contact info., etc. Please send it to me to update the work group tables and also if you are on the work group or internet work group.

Please find below UIC Brine Well Regulations links and/or attachments from KS, TX and NM in advance of the meeting to begin looking over regulations in comparison to New Mexico. This will surely be an agenda item.

Kansas UIC Brine Well Regulations (Draft Regulations are currently in Progress)

Kansas is in the process of adopting new Class III regulations to strengthen our control over these types of wells, so I have attached (see attached word document) our latest draft for your review. Hope this information helps and we look forward to assisting in your project.
Here is the link to our website: http://www.kdheks.gov/uic/index.html.

I have a new email address: khoeffner@kdheks.gov
Kirk Hoeffner, LG
Unit Chief, Underground Injection Control
Geology Section, Bureau of Water
Kansas Department of Health & Environment
1000 SW Jackson St. Suite 420

Topeka, KS 66612-1367
Telephone: (785) 296-1843
Fax: (785) 296-5509

Texas UIC Brine Well Regulations

Here is the link to our Rules, go to Chapter 3: Oil and Gas Division, then scroll to Rule 3.81, let me know if you have any trouble getting there:

http://www.rrc.state.tx.us/rules/rule.php

Respectfully,
Doug O. Johnson, PE
Manager for Injection - Storage Permits and Support Technical Permitting Section Oil and Gas Division
Texas Railroad Commission
Douglas.johnson@rrc.state.tx.us

New Mexico UIC Brine Well Regulations

Regulations: 20.6.2 NMAC: http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0002.htm

Guidance: UIC Manual: http://www.emnrd.state.nm.us/ocd/Publications.htm

Please contact me to update your contact information, add new members, etc., or if you have questions. Thank you for your participation.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Kansas Department of Health & Environment Draft Regulations

3/5/2009

Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-7. Draft permits. 40 CFR 124.6, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-8. Fact sheets. 40 CFR 124.8, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec.19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

3/5/2009

Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-9. Establishing permit conditions. 40 CFR 144.52, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-10. Term of permits. (a) Class I, III, and V permits shall be effective for a fixed term not to exceed 10 years.

~~(b) Class III permits shall be issued for a period up to the operating life of the facility.~~

~~(c) Each permit shall be reviewed at least once every five years to determine whether it should be modified, revoked and reissued, or terminated, with the exception of permits for class I hazardous waste injection wells, which shall be reviewed at least annually to determine whether they should be modified, revoked and reissued, or terminated.~~

~~(d) Modification of permits shall not include extension of the maximum duration specified in subsection (a). At the end of the permit term, application shall be filed for a new permit.~~

(b) If the permittee wishes to continue an activity regulated by the permit after the expiration date of the permit, the permittee shall apply for and obtain a new permit. An application to renew the permit shall be filed with the department at least 180 days before the permit expiration date. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended May 1, 1987; amended March 21, 1994; amended P-_____.)

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28-46-11. Schedules of compliance. 40 CFR 144.53, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-12. Requirements for recording and reporting of monitoring results. 40 CFR 144.54, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-13. Effect of a permit. 40 CFR 144.35, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-14. Transfer of permits. 40 CFR 144.38, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-15. Modification or revocation and reissuance of permits. 40 CFR 124.5 and 40 CFR 144.39, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-16. Termination of permits. 40 CFR 144.40 as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by K.S.A. 2007 Supp. 65-171d; implementing K.S.A. 65-165; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-17. Minor modifications of permits. 40 CFR 144.41, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-18. Area permits. 40 CFR 144.33, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-19. Emergency permits. 40 CFR 144.34, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec.19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-20. Corrective action. 40 CFR 144.55, 40 CFR 146.7 and 40 CFR 146.64, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec.19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-21. Public notice of permit actions and public comment period; public comments and requests for public hearings; public hearings; response to comments. ~~(a)~~ 40 CFR 124.10 through 40 CFR 124.12~~;~~, and 40 CFR 124.17, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference.

~~(b) Any provisions of Kansas law which provide additional opportunity for public comment or public hearing shall supersede the provisions of the federal regulations.~~ (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-22. Signatories to permit applications and reports. 40 CFR 144.32, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-27. Prohibition of movement of fluid into underground sources of drinking water. 40 CFR 144.12, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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28-46-28. Establishing maximum injection pressure. (a) A maximum allowable injection pressure for each injection well shall be established by the secretary as a permit condition.

(b) (1) All class I wells operating on other than gravity flow shall be prohibited.

(2) In the case of gravity flow, the positive wellhead pressure for a class I well shall not exceed 35 pounds per square inch gauge.

(c) For all wells, the maximum operating pressure shall not be allowed to exceed fracture pressure, except during the development of fractures for well stimulation operations, or ~~during the development of solution-mined wells as defined in K.A.R. 28-43-2(c)~~ for the purpose of establishing the connection of a class III salt solution mining well to other class III wells for operation as a salt solution mining gallery. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____, and K.S.A. 2007 Supp. 55-1, 117; effective P-_____)

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28-46-29. Design and construction requirements. 40 CFR 146.12 and 40 CFR 146.65, governing class I wells; and 40 CFR 146.32, governing class III wells, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. In addition, the following requirements shall apply to class III salt solution mining wells:

(a) Each salt solution mining well cavern wall shall be located not less than 50 feet from other active or abandoned brine-supply wells or other holes or excavations penetrating the salt section, except where the wells, holes or excavations have been properly plugged, and not less than 50 feet from existing surface structures not owned by the permittee, including any transportation artery.

(b) The cavern wall for a solution mining well shall be located not less than 50 feet from the property boundaries of any owners who have not consented to the mining of salt under their property.

(c) A salt solution mining wellhead shall be located not less than 150 feet from the property boundaries of any owners who have not consented to the mining of salt under their property.

(d) For each new salt solution mining well new or like new oil-field type steel surface casing shall be set through all freshwater formations and encased in cement from bottom to top by circulating cement through the bottom of the casing to the surface.

(e) Production casing, for each new salt solution mining well, shall be set into the upper

part of the salt formation and encased in cement as specified in this regulation. The casing shall extend a minimum of 55 feet into the salt formation. Centralizers shall be used on the outside of the production casing and shall not be spaced more than 100 feet apart. Before setting and cementing the production casing, the mudcake on the bore wall shall be removed by the use of scratchers or a washing method approved by the director. The cement for that part of the casing opposite the salt formation shall be prepared with salt-saturated cement.

(f) A variance for each well not meeting these requirements may be granted by the secretary if all the following conditions are met:

(1) The variance is protective of public health, safety, and the environment;

(2) the permittee agrees to perform any additional monitoring or well improvements, or any combination thereof, if required by the secretary; and

(3) the permittee agrees to conduct a geomechanical study in support of the variance request. The geomechanical study shall be conducted by a contractor experienced in conducting and interpreting geomechanical studies.

(g) Each permittee seeking a variance shall submit a written request, including justification for the variance, the geomechanical study and interpretation, and any additional supporting information to the secretary for review and consideration for approval.

(h) A cement bond log shall be conducted on the production casing after the cement mixture has cured for a minimum of 72 hours and submitted to the department within 45 days from completion of the test. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-

86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.), and K.S.A. 2007 Supp. 55-1, 117; effective P-_____)

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28-46-29a. Operation of class III wells. (a) Each class III salt solution mining well shall not be operated under any of the following conditions:

(1) Where the salt roof is less than 50 feet in thickness above the washed cavern;

(2) the solution cavern has been developed as a single well and the dimensions of the cavern across a horizontal plane exceed 400 feet at any depth, or 300 feet when occurring in the upper one-third of the potential cavern height;

(3) the top of the solution cavern is less than 250 feet from the ground surface;

(4) the solution cavern has been developed as part of a gallery and the dimensions of the cavern across a horizontal plane exceed 400 feet at any depth, or 300 feet when occurring in the upper one-third of the potential cavern height, except the route of interconnection between wells;

(5) in areas where the depth to the top of the salt section is less than 400 feet below land surface, the dimensions of the cavern across a horizontal plane exceed 300 feet in diameter, except the route of interconnection between wells;

(6) the distance between adjacent galleries is less than 100 feet from the wall of a cavern in an adjacent gallery; or

(7) if there are leaks or losses of fluid in the casing or surface pipe of a well.

(b) A variance for wells not meeting the requirements in paragraphs (a)(2) and (a)(4) through (a)(6) may be granted by the secretary if all of the following conditions are met:

(1) The variance is protective of public health, safety, and the environment;

(2) the applicant or permittee agrees to perform any additional monitoring or well improvements, or any combination, if required by the secretary; and

(3) the applicant or permittee agrees to conduct a geomechanical study in support of the variance request. The geomechanical study shall be conducted by a contractor experienced in conducting and interpreting geomechanical studies.

(c) Each applicant or permittee seeking a variance shall submit a written request, including justification for the variance, the geomechanical study and interepretation, and any additional supporting information to the secretary for review and consideration for approval. (Authorized by and implementing K.S.A. 2007 Supp. 55-1, 117; effective P-_____)

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28-46-30. ~~Operating,~~ Monitoring and reporting requirements for class I wells. 40 CFR 146.13, 40 CFR 146.67, 40 CFR 146.68 and 40 CFR 146.69, regulating class I wells ~~and 40 CFR 146.33, regulating class III wells~~, as in effect on ~~April 1, 1993~~ July 1, 2007, are hereby adopted by reference. In addition to 40 CFR 144.14 and 40 CFR 146.70, the following requirements are applicable to each class I hazardous waste injection well.

(a) Records of the continuously monitored parameters shall be maintained in addition to the monthly average, minimum and maximum values of the following parameters:

(1) Injection pressure;

(2) flow rate;

(3) injection volume; and

(4) annular pressure.

(b) Monitoring results shall be reported to the department on a monthly basis on forms provided by the department.

(c) The necessary number of monitoring wells in appropriate geologic zones for early detection of contaminant migration, to protect public health, safety, and the environment, shall be determined by the secretary. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994, amended P-_____.)

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28-46-30a. Monitoring and reporting requirements for class III wells. 40 CFR 146.33, regulating class III wells, as in effect on July 1, 2007, is hereby adopted by reference. In addition, the following requirements shall apply to the permittee of a class III salt solution mining well:

(a) Within two years of the effective date of this regulation, each permittee shall submit a facility plan for monitoring the injection and withdrawal volumes and injection pressures that meets the secretary's approval and ensures the protection of public health, safety, and the environment.

(b) The following monitoring records shall be submitted to the department on a monthly basis on a form provided by the department:

(1) The weekly injection and withdrawal volume for each salt solution mining well or gallery;

(2) the weekly injection and withdrawal ratio for each salt solution mining well or gallery; and

(3) a summary of the weekly minimum and maximum injection pressures for each salt solution mining well or gallery.

(c) A report shall be submitted annually to the department, on a form provided by the department, including the following:

(1) For each well, a percentage of the remaining amount of salt that can potentially be mined in accordance with these regulations; and

(2) a summary of facility activities regarding abnormal fluid loss, well drilling, well plugging, geophysical well logging, sonar caliper surveys, mechanical integrity testing, calibration and maintenance of flow meters and gauges, elevation survey results, and the description of the model theory used to calculate the percentage of the total amount of remaining salt that can potentially be mined in accordance with these regulations.

(d) If an unanticipated loss of fluid has occurred or the monitoring system indicates that leakage has occurred and has been verified, the permittee shall notify the department orally within 24 hours of discovery and confirm, in writing, within seven days regarding the abnormal loss or leakage.

(e) A sonar caliper survey shall be conducted on each well when calculations based on a model, approved by the secretary, indicate that 20% of the total amount of remaining salt that can potentially be mined in accordance with these regulations has been mined. The well shall be checked by the permittee to determine the dimensions and configuration of the cavern developed by the solutioning, and thereafter upon increments of the solutioning of each additional 20% of the total amount of remaining salt that can be potentially be mined in accordance with these regulations.

(f) Any permittee may use an alternative method for determining the dimensions and configuration of the solution mining cavern if the secretary determines that the alternative

method is substantially equivalent to the sonar caliper survey. The permittee shall submit the following information for the secretary's consideration:

(1) A description of the survey method and theory of operation, including the survey sensitivities, and justification for the survey parameters;

(2) a description of the well and cavern conditions under which the survey can be conducted;

(3) the procedure for interpreting the survey results; and

(4) an interpretation of the survey upon completion of the survey.

(g) More frequent monitoring of the cavern dimensions and configuration by sonar caliper survey may be required if the integrity or stability of the cavern is suspect. Each existing well shall comply with the survey frequency established in the well permit. The results of the survey, including logs, and an interpretation by a contractor experienced in sonar interpretation shall be submitted to the department within 45 days of completing the survey.

(h) A variance request to the sonar caliper survey frequency may be submitted by the permittee to the secretary for review and consideration if the sonar survey frequency results in undesirable cavern development, as determined by the secretary, providing both of the following conditions are met:

(1) The variance is protective of public health, safety, and the environment; and

(2) the permittee agrees to perform any additional monitoring or well improvements, or any combination thereof, if required by the secretary.

(i) Each permittee seeking a variance shall submit a written request, including

justification for the variance and any supporting data to the secretary for review and consideration for approval.

(j) The thickness of the salt roof shall be checked at the end of two years of use and biennially thereafter, unless otherwise permitted by the secretary by gamma ray or other methods approved by the secretary. A report of the method used and a copy of the survey shall be submitted to the department within 45 days from completion of the test.

(k) Each permittee shall give oral notification to the department of a verified exceedence of the maximum permitted injection pressure within 24 hours of discovery of the exceedence and submit written notification within seven calendar days to the department.

(l) Each new well shall have a meter to measure injection or withdrawal volume and the permittee shall maintain records of these flow volumes at the facility and shall make the records available to the secretary upon request.

(m) Each permittee shall submit a ground subsidence monitoring plan to the secretary within two years of the effective date of these regulations. The following requirements shall apply:

(1) The ground subsidence monitoring plan shall include the following information:

(A) A description of the method for conducting an elevation survey; and

(B) the criteria for establishing monuments, benchmarks, and wellhead survey points.

(2) The criteria for subsidence monitoring shall be as follows:

(A) Level measurements to the accuracy of 0.01 foot shall be made.

(B) Verified surface elevation changes in excess of 0.10 foot shall be reported within 24

hours of discovery to the department.

(C) No established benchmark shall be changed, unless the permittee submits a justification that the change is protective of public health, safety, and the environment.

(D) If a benchmark is changed, the elevation change from the previous benchmark shall be noted in the elevation survey report.

(E) Each permittee shall submit the elevation before and after any wellhead work that results in a change in the survey point at the wellhead.

(3) The elevation survey shall be conducted by a licensed professional land surveyor.

(4) All annual elevation survey results shall be submitted to the department within 45 days after completion of the survey.

(5) All certified and stamped field notes shall be made available by the permittee upon request by the secretary. (Authorized by and implementing K.S.A. 2007 Supp. 55-1, 117; effective P-_____.)

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28-46-30b. Groundwater monitoring for class III wells. (a) Each permittee of a salt solution mining well shall submit a groundwater monitoring plan, within two years of the effective date of these regulations, to the secretary for review and consideration for approval to ensure the protection of public health, safety, and the environment.

(b) All well locations and the spacing between all well locations shall be based on the geology and the hydrogeology at the facility to ensure the protection of public health, safety, and the environment, and shall meet the Secretary's approval.

(c) Within two years of the effective date of these regulations, each permittee shall submit a quality assurance plan, including techniques for sampling and analysis that meets the Secretary's approval and ensures the protection of public health, safety, and the environment.

(d) Each permittee shall collect groundwater samples and analyze the samples for chloride and any other parameters determined by the secretary that may pose a threat to public health, safety, and the environment. The sampling results shall be submitted to the department on forms provided by the department.

(e) Each permittee shall submit the results for chloride analyses from groundwater samples to the department on an annual basis on forms provided by the department or on a more frequent basis as determined by the secretary to ensure protection of public health, safety, and the environment.

(f) Each permittee shall submit a static groundwater level measurement for each monitoring

well with the chloride analyses results as specified in subsection (e).

(g) Any permittee where chloride concentrations in the groundwater exceeds concentrations greater than 250 milligrams per liter or the established background chloride concentration may be required to submit a workplan that meets the secretary's approval to ensure protection of public health, safety and the environment, and describes the methods to delineate potential source areas and to control migration of the chloride contamination. (Authorized by and implementing K.S.A. 2007 Supp. 55-1, 117; effective P-_____.)

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28-46-31. Information to be considered by the secretary. 40 CFR 146.14, 40 CFR 146.62, 40 CFR 146.66, 40 CFR 146.70 and 40 CFR part 144, subpart F, for class I wells and 40 CFR 146.34, for class III wells, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. In addition to 40 CFR 146.14, 40 CFR 146.62, 40 CFR 146.66, 40 CFR 146.70 and 40 CFR part 144, subpart F, the following shall be applicable to class I hazardous waste injections wells:

(a) The ~~provisions of~~ requirements pursuant to K.S.A. 65-3439, and amendments thereto, as ~~it~~ the requirements ~~relates~~ relate to hazardous waste injection wells shall be applicable to class I hazardous waste injection wells.

(b) Each applicant shall be responsible for providing all available information to the department necessary ~~for the secretary to determine~~ so that well injection of the hazardous waste liquid in question is the most reasonable method of disposal after all other options have been considered.

(1) Factors to be considered in determining the most reasonable method shall include those ~~set forth~~ specified in K.S.A. 65-3439~~(d)~~, and amendments thereto.

(2) All factors considered shall be documented in a detailed report ~~in the format required by the secretary~~ submitted to the department.

(c) The location of each abandoned oil and gas well and exploratory hole within the area

of review, as specified in K.A.R. 28-46-32, shall be determined through a detailed record search and field survey.

(1) An interview with those responsible for drilling, producing, plugging, or witnessing these activities shall be a part of the record.

(2) The results of the field survey shall be documented in a report ~~in the format required by the secretary~~ submitted to the department.

(3) A map geographically documenting the location of all the holes and abandoned wells within the area of review, as specified in K.A.R. 28-46-32, shall be included as a part of the report. (Authorized by and implementing K.S.A. 2006 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; and amended P-_____.) and K.S.A. 2007 Supp. 55-1, 117; effective P-_____.)

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28-46-33. Mechanical integrity testing. (a) A mechanical integrity test consisting of a pressure test with a liquid to evaluate the absence of a significant leak in the casing, tubing or packer and a test to determine the absence of significant fluid movement through vertical channels adjacent to the wellbore shall be required of each class I and class III permittee on each injection well at least once every five years.

(1) For class I hazardous waste injection wells, the mechanical integrity shall be conducted in accordance with 40 CFR 146.8 and 40 CFR 146.68(d), as in effect on July 1, 2007, and shall be demonstrated by the permittee by using all of the following:

(A) Conducting a pressure test with a liquid of the casing, tubing and packer at least annually and ~~whenever~~ if there has been a well workover;

(B) conducting a test of the bottom-hole cement by use of an approved radioactive survey at least annually;

(C) conducting a temperature, noise or oxygen activation log to test for movement of fluid along the borehole at least once every five years; and

(D) conducting a casing inspection log at least once every five years.

(2) The test for class I non-hazardous waste injection wells shall be conducted in accordance with 40 CFR 146.8, as ~~in effect April 1, 1993~~ adopted in K.A.R. 28-46-1.

(3) The test for class III injection wells shall be conducted in accordance with 40 CFR 146.8, ~~as in effect on April 1, 1993~~, except the casing shall be pressure tested by the use of a mechanical packer or retrievable plug~~; and the test for class I hazardous waste injection wells shall be conducted in accordance with 40 CFR 146.8 and 40 CFR 146.68(d), as in effect on April 1, 1993~~.

(b) ~~The~~ Each permittee shall be notified at least 30 days in advance ~~by the secretary~~ by the department that a mechanical integrity test ~~must~~ shall be performed, or a permittee may notify the ~~secretary~~ department that a voluntary mechanical integrity test will be performed at least 14 days in advance of the test.

(c) ~~The~~ Each permittee shall be required to cease injection operations immediately and to conduct a mechanical integrity test ~~approved by the secretary if the secretary believes that, due to an apparent problem~~, ~~the~~ if continued use of an injection well constitutes a threat to ~~human~~ public health or to waters of the state. Injection operations shall not be resumed until all of the following are met:

(1) The test has been conducted;

(2) ~~it~~ the test has been demonstrated ~~to the satisfaction of the secretary~~ that the well has mechanical integrity; and

(3) authorization to use the well has been ~~given~~ approved by the secretary.

(d) ~~A qualified state inspector~~ The secretary's authorized representative shall ~~be provided by the secretary to~~ witness all of the pressure mechanical integrity tests performed.

(e) ~~The~~ Each permittee shall submit results of all mechanical integrity tests to the secretary, in writing, within 30 days after the test has been conducted.

(f) 40 CFR 144.51(p), as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference.

(Authorized by and implementing K.S.A. 2006 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.), and

K.S.A. 2007 Supp. 55-1, 117; effective P-_____.)

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28-46-34. Plugging and abandonment. 40 CFR 144.51(n)~~;~~, 40 CFR 144.52(a)(6), 40 CFR 146.10, 40 CFR 146.71, 40 CFR 146.72 and 40 CFR 146.73, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. In addition, the following shall apply for class III salt solution mining wells,

(a) The plugging of each salt solution mining well shall be conducted as specified in the department=s document titled Aprocedure for plugging and abandonment of a class III salt solution mining well, procedure #:UICIII-7," dated March 2005, and hereby adopted by reference.

(b) Any permittee may use an alternative method for the plugging of each salt solution mining well if the secretary determines that the alternative method is substantially equivalent to the procedure specified in subsection (a) and is protective of public health, safety and the environment. The permittee shall submit a detailed description of the alternative plugging method for the secretary's consideration. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d, effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.), and K.S.A. 2007 Supp. 55-1, 117; effective P-_____.)

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Article 46 - Underground Injection Control Regulations

28-46-35. State inspection and right of entry. ~~(a) Qualified state inspectors to inspect and monitor injection well facilities shall be provided by the secretary.~~

~~(b)~~ An ~~duly~~ authorized ~~representatives~~ representative of the secretary shall have access to injection facilities for all activities required by these regulations. (Authorized by K.S.A. ~~1984~~ 2007 Supp. 65-171d; implementing K.S.A. 65-170b; effective May 1, 1982; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended P-_____.)

Kansas Department of Health and Environment
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28-46-40. Exempted aquifers. (a) An aquifer may be designated by the secretary as exempt from protection as an underground source of drinking water. Criteria for exemption may include whether an aquifer meets one of the following:

(1) Contains water with more that 10,000 milligrams per liter of total dissolved solid;

(2) produces mineral, hydrocarbon or geothermal energy; or

(3) is situated at a depth ~~which~~ that makes the recovery of water economically impractical.

(b) These designations shall be first submitted to and approved by the administrator of the United States environmental protection agency. (Authorized by and implementing K.S.A. ~~1984~~ 2007 Supp. 65-171d; effective May 1, 1982; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended P-_____.)

Kansas Department of Health and Environment
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28-46-41. Sharing of information. 40 CFR 145.14, as in effect on ~~April 1, 1993~~ July 1, 2007, is adopted by reference. (Authorized by K.S.A. 2007 Supp. 65-171d; implementing K.S.A. 65-170g; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

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Article 46 - Underground Injection Control Regulations

28-46-44. Sampling and analysis techniques. (a) Sampling and analysis shall be performed in accordance with the techniques ~~prescribed~~ specified in 40 CFR part 136, as in effect on ~~April 1, 1993~~ July 1, 2007, ~~which~~ is adopted by reference.

(b) ~~Where~~ If 40 CFR part 136 does not contain sampling and analytical techniques for the parameter in question, or ~~where it is determined by the secretary that the~~ if in part 136 the sampling and analytical techniques are inappropriate for the parameter in question, the sampling and analysis shall be performed using validated analytical methods or other appropriate sampling and analytical procedures approved by the secretary to ensure the protection of public health, safety, and the environment.

~~(c) Alternate sampling and analytical techniques suggested by the permittee or other persons will be considered by the secretary.~~ (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective March 21, 1994; amended P-_____.)

Kansas Department of Health and Environment
Proposed New Regulation

Article 46 - Underground Injection Control Regulations

28-46-45. Salt solution mining well operations; fees. (a) Each permittee shall submit an annual permit fee of $12,000 per facility and $175 per unplugged salt solution mining well on or before April 1 of each year.

(b) Fees shall be made payable to the AKansas department of health and environment - subsurface hydrocarbon storage fund.

(c) The fees collected under the provisions of this regulation are nonrefundable.

(d) If ownership of a salt solution mining well or salt solution mining facility changes during the term of a valid permit, no additional fee shall be required unless a change occurs that results in a new salt solution mining well or an expanded facility operation. (Authorized by and implementing K.S.A. 55-1,118; effective P-_____.)

3/5/2009

Kansas Department of Health and Environment
Proposed Revocation Regulation

Article 46 - Underground Injection Control Regulations

28-46-1. General provisions. (Authorized by and implementing K.S.A. 65-171d; effective May 1, 1982; amended, T-86-47, Dec 19, 1985; amended May 1, 1986; amended March 21, 1994, revoked P-_____.)

Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-2a. Definitions. (a) The following federal regulations, as in effect on ~~July 1, 2005~~ July 1, 2007, are hereby adopted by reference, except as specified:

(1) 40 CFR 124.2, except for the following terms and their definitions:

(A) AApplication@;

(B) Adirector@;

(C) Afacility or activity@;

(D) Amajor facility@;

(E) Aowner or operator@;

(F) Apermit@; and

(G) ASDWA@;

(2) 40 CFR 144.3, except for the following terms and their definitions:

(A) AApplication@;

(B) Aappropriate act and regulations@;

(C) Adirector@;

(D) Adraft permit@;

(E) AIndian tribe@;

(F) Atotal dissolved solids@; and

(G) Awell@;

(3) 40 CFR 144.61;

(4) 40 CFR 146.3, except for the following terms and their definitions:

(A) AApplication@;

(B) Adirector@;

(C) Aexempted aquifer@;

(D) Afacility or activity@;

(E) AIndian tribe@;

(F) Aowner or operator@;

(G) Apermit@;

(H) ASDWA@;

(I) Asite@; and

(J) Awell@; and

(5) 40 CFR 146.61(b), except for the term Acone of influence@ and its definition.

(b) In addition to the definitions adopted in subsection (a), the following definitions shall apply in this article:

(1) AApplication@ means the standard departmental form or forms required for applying for a permit, including any additions, revisions, and modifications to the forms.

(2) AAuthorized by rule,@ when used to describe an injection well, means that the well meets all of the following conditions:

(A) The well is a class V injection well.

(B) The well is in compliance with this article.

(C) The well is not prohibited, as specified in K.A.R. 28-46-26a.

(D) The well is not required by the secretary to have a permit.

(3) ACone of impression@ means the mound in the potentiometric surface of the receiving formation in the vicinity of the injection well.

(4) ACone of influence@ means the area around a well within which increased injection pressures caused by injection into the well would be sufficient to drive fluids into an underground source of drinking water (USDW).

(5) ADepartment@ means the Kansas department of health and environment.

(6) ADirector@ means the director of the division of environment of the Kansas department of health and environment.

(7) AExisting salt solution mining@ means a well authorized and permitted by the secretary before the effective date of these regulations.

(8) AFracture pressure@ means the wellhead pressure that could cause vertical or horizontal fracturing of rock along a well bore.

(9) AGallery @ means a series of two or more salt solution mining wells that are artificially connected within the salt horizon and are produced as a system with one or more wells designated for withdrawal of solutioned salt.

~~(8)~~ (10) AInjection well facility@ and "facility" ~~means all land, structures, appurtenances, and improvements on which one or more injection wells are located and that are within the same well field or project~~ mean the acreage associated with the injection field with facility boundaries

approved by the secretary. This term shall include the injection wells, wellhead, and any related equipment, including any appurtenances associated with the well field.

~~(9)~~ (11) AMaximum allowable injection pressure@ means the maximum wellhead pressure not to be exceeded as a permit condition.

~~(10)~~ (12) AMotor vehicle waste disposal well@ and AMVWDW@ mean a disposal well that received, receives, or has the potential to receive fluids from vehicular repair or maintenance activities.

(13) AProduction casing@ when used for a class III well, means the casing inside the surface casing of a well that extends into the salt formation.

(14) "Salt roof" means a value that is determined by subtracting the depth in feet below groundsurface of the highest point of a salt solution mining cavern from the depth in feet below groundsurface of the top of the salt section and approved by the secretary.

(15) ATransportation artery@ means any highway, county road, township road, private road, railroad, excluding existing right-of-way, not owned or leased by the permittee.

~~(11)~~ (16) ASecretary@ means the secretary of the Kansas department of health and environment or the secretary=s authorized representative.

~~(12)~~ (17) AWell@ means any of the following:

(A) A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension;

(B) a dug hole whose depth is greater than the largest surface dimension;

(C) a sinkhole modified to receive fluids; or

(D) a subsurface fluid distribution system. (Authorized by and implementing K.S.A. ~~2005~~ 2007 Supp. 65-171d; effective March 2, 2007; amended P-_____.)

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Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-3. Classification of injection wells. 40 CFR 144.6, 40 CFR 144.80, and 40 CFR 146.5, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985, amended May 1, 1986; amended March 21, 1994; amended P-_____.)

Kansas Department of Health and Environment
Proposed Amended Regulation

Article 46 - Underground Injection Control Regulations

28-46-4. Injection of hazardous or radioactive wastes into or above an underground source of drinking water. Injection of hazardous or radioactive wastes into or above an underground source of drinking water shall be prohibited. ~~Any similar injection taking place before the effective date of these rules and regulations shall be stopped immediately on the effective date of these rules and regulations. The secretary may issue such orders or take such actions as may be appropriate to enforce the provisions of this section~~. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended P-_____.)

3/5/2009

Kansas Department of Health and Environment
Proposed Amended Regulation

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28-46-5. Application for injection well permits. 40 CFR 124.3 and 40 CFR 144.31, as in effect on ~~April 1, 1993~~ July 1, 2007, are adopted by reference. In addition, the provisions of K.S.A. 65-3437, and amendments thereto, ~~which relate~~ that relate to hazardous waste injection wells shall be applicable to class I hazardous waste injection wells. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

Kansas Department of Health and Environment
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28-46-6. Conditions applicable to all permits. 40 CFR 144.51(a) through (p), as in effect ~~April 1, 1993~~ July 1, 2007, are adopted by reference. (Authorized by and implementing K.S.A. 2007 Supp. 65-171d; effective May 1, 1982; amended, T-83-49, Dec. 22, 1982; amended May 1, 1983; amended, T-86-47, Dec. 19, 1985; amended May 1, 1986; amended March 21, 1994; amended P-_____.)

New Mexico Oil Conservation Division Class III Brine Well Regulations

TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 6 WATER QUALITY
PART 2 GROUND AND SURFACE WATER PROTECTION

20.6.2.1 ISSUING AGENCY: Water Quality Control Commission
[12-1-95; 20.6.2.1 NMAC - Rn, 20 NMAC 6.2.I.1000, 1-15-01]

20.6.2.2 SCOPE: All persons subject to the Water Quality Act, NMSA 1978, Sections 74-6-1 et seq.
[12-1-95; 20.6.2.2 NMAC - Rn, 20 NMAC 6.2.I.1001, 1-15-01]

20.6.2.3 STATUTORY AUTHORITY: Standards and Regulations are adopted by the commission under the authority of the Water Quality Act, NMSA 1978, Sections 74-6-1 through 74-6-17.
[2-18-77, 9-20-82, 12-1-95; 20.6.2.3 NMAC - Rn, 20 NMAC 6.2.I.1002, 1-15-01]

20.6.2.4 DURATION: Permanent.
[12-1-95; 20.6.2.4 NMAC - Rn, 20 NMAC 6.2.I.1003, 1-15-01]

20.6.2.5 EFFECTIVE DATE: December 1, 1995 unless a later date is cited at the end of a section.
[12-1-95, 11-15-96; 20.6.2.5 NMAC - Rn, 20 NMAC 6.2.I.1004, 1-15-01; A, 1-15-01]

20.6.2.6 OBJECTIVE: The objective of this Part is to implement the Water Quality Act, NMSA 1978, Sections 74-6-1 et seq.
[12-1-95; 20.6.2.6 NMAC - Rn, 20 NMAC 6.2.I.1005, 1-15-01]

20.6.2.7 DEFINITIONS: Terms defined in the Water Quality Act, but not defined in this part, will have the meaning given in the act. As used in this part:

A. "abandoned well" means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be rehabilitated for its intended purpose or other purposes including monitoring and observation;

B. "abate" or "abatement" means the investigation, containment, removal or other mitigation of water pollution;

C. "abatement plan" means a description of any operational, monitoring, contingency and closure requirements and conditions for the prevention, investigation and abatement of water pollution, and includes Stage 1, Stage 2, or Stage 1 and 2 of the abatement plan, as approved by the secretary;

D. "adjacent properties" means properties that are contiguous to the discharge site or property that would be contiguous to the discharge site but for being separated by a public or private right of way, including roads and highways.

E. "background" means, for purposes of ground-water abatement plans only and for no other purposes in this part or any other regulations including but not limited to surface-water standards, the amount of ground-water contaminants naturally occurring from undisturbed geologic sources or water contaminants which the responsible person establishes are occurring from a source other than the responsible person's facility; this definition shall not prevent the secretary from requiring abatement of commingled plumes of pollution, shall not prevent responsible persons from seeking contribution or other legal or equitable relief from other persons, and shall not preclude the secretary from exercising enforcement authority under any applicable statute, regulation or common law;

F. "casing" means pipe or tubing of appropriate material, diameter and weight used to support the sides of a well hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent fluid from entering or leaving the well other than to or from the injection zone;

G. "cementing" means the operation whereby a cementing slurry is pumped into a drilled hole and/or forced behind the casing;

H. "cesspool" means a **"drywell"** that receives untreated domestic liquid waste containing human excreta, and which sometimes has an open bottom and/or perforated sides; a large capacity cesspool means a cesspool that receives greater than 2,000 gallons per day of untreated domestic liquid waste;

I. "collapse" means the structural failure of overlying materials caused by removal of underlying materials;

J. "commission" means:

(1) the New Mexico water quality control commission or

(2) the department, when used in connection with any administrative and enforcement activity;

K. "confining zone" means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement from an injection zone;

L. "conventional mining" means the production of minerals from an open pit or underground excavation; underground excavations include mine shafts, workings and air vents, but does not include excavations primarily caused by in situ extraction activities;

M. "daily composite sample" means a sample collected over any twenty-four hour period at intervals not to exceed one hour and obtained by combining equal volumes of the effluent collected, or means a sample collected in

accordance with federal permit conditions where a permit has been issued under the national pollutant discharge elimination system or for those facilities which include a waste stabilization pond in the treatment process where the retention time is greater than twenty (20) days, means a sample obtained by compositing equal volumes of at least two grab samples collected within a period of not more than twenty-four (24) hours;

N. **"department", "agency",** or **"division"** means the New Mexico environment department or a constituent agency designated by the commission;

O. **"discharge permit"** means a discharge plan approved by the department;

P. **"discharge permit modification"** means a change to the requirements of a discharge permit that result from a change in the location of the discharge, a significant increase in the quantity of the discharge, a significant change in the quality of the discharge; or as required by the secretary;

Q. **"discharge permit renewal"** means the re-issuance of a discharge permit for the same, previously permitted discharge;

R. **"discharge plan"** means a description of any operational, monitoring , contingency, and closure requirements and conditions for any discharge of effluent or leachate which may move directly or indirectly into ground water;

S. **"discharge site"** means the entire site where the discharge and associated activities will take place;

T. **"disposal"** means to abandon, deposit, inter or otherwise discard a fluid as a final action after its use has been achieved;

U. **"domestic liquid waste"** means human excreta and water-carried waste from typical residential plumbing fixtures and activities, including but not limited to waste from toilets, sinks, bath fixtures, clothes or dishwashing machines and floor drains;

V. **"domestic liquid waste treatment unit"** means a watertight unit designed, constructed and installed to stabilize only domestic liquid waste and to retain solids contained in such domestic liquid waste, including but not limited to aerobic treatment units and septic tanks;

W. **"drywell"** means a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids;

X. **"experimental technology"** means a technology which has not been proven feasible under the conditions in which it is being tested;

Y. **"fluid"** means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state;

Z. **"ground water"** means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply;

AA. **"hazard to public health"** exists when water which is used or is reasonably expected to be used in the future as a human drinking water supply exceeds at the time and place of such use, one or more of the numerical standards of Subsection A of 20.6.2.3103 NMAC, or the naturally occurring concentrations, whichever is higher, or if any toxic pollutant affecting human health is present in the water; in determining whether a discharge would cause a hazard to public health to exist, the secretary shall investigate and consider the purification and dilution reasonably expected to occur from the time and place of discharge to the time and place of withdrawal for use as human drinking water;

BB. **"improved sinkhole"** means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface;

CC. **"injection"** means the subsurface emplacement of fluids through a well;

DD. **"injection zone"** means a geological formation, group of formations, or part of a formation receiving fluids through a well;

EE. **"motor vehicle waste disposal well"** means a well which receives or has received fluids from vehicular repair or maintenance activities;

FF. **"non-aqueous phase liquid"** means an interstitial body of liquid oil, petroleum product, petrochemical, or organic solvent, including an emulsion containing such material;

GG. **"operational area"** means a geographic area defined in a project discharge permit where a group of wells or well fields in close proximity comprise a single class III well operation;

HH. **"owner of record"** means an owner of property according to the property records of the tax assessor in the county in which the discharge site is located at the time the application was deemed administratively complete;

II. **"packer"** means a device lowered into a well to produce a fluid-tight seal within the casing;

JJ. **"person"** means an individual or any other entity including partnerships, corporation, associations, responsible business or association agents or officers, the state or a political subdivision of the state or any agency, department or instrumentality of the United States and any of its officers, agents or employees;

KK. **"petitioner"** means a person seeking a variance from a regulation of the commission pursuant to Section 74-6-4(G) NMSA 1978;

LL. **"plugging"** means the act or process of stopping the flow of water, oil or gas into or out of a geological formation, group of formations or part of a formation through a borehole or well penetrating these geologic units;

MM. **"project discharge permit"** means a discharge permit which describes the operation of similar class III

wells or well fields within one or more individual operational areas;

NN. **"refuse"** includes food, swill, carrion, slops and all substances from the preparation, cooking and consumption of food and from the handling, storage and sale of food products, the carcasses of animals, junked parts of automobiles and other machinery, paper, paper cartons, tree branches, yard trimmings, discarded furniture, cans, oil, ashes, bottles, and all unwholesome material;

OO. **"responsible person"** means a person who is required to submit an abatement plan or who submits an abatement plan pursuant to this part;

PP. **"secretary"** or **"director"** means the secretary of the New Mexico department of environment or the director of a constituent agency designated by the commission;

QQ. **"sewer system"** means pipelines, conduits, pumping stations, force mains, or other structures, devices, appurtenances or facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal;

RR. **"sewerage system"** means a system for disposing of wastes, either by surface or underground methods, and includes sewer systems, treatment works, disposal wells and other systems;

SS. **"significant modification of Stage 2 of the abatement plan"** means a change in the abatement technology used excluding design and operational parameters, or re-location of 25 percent or more of the compliance sampling stations, for any single medium, as designated pursuant to Paragraph (4) of Subsection E of 20.6.2.4106 NMAC;

TT. **"subsurface fluid distribution system"** means an assemblage of perforated pipes, drain tiles, or other mechanisms intended to distribute fluids below the surface of the ground;

UU. **"subsurface water"** means ground water and water in the vadose zone that may become ground water or surface water in the reasonably foreseeable future or may be utilized by vegetation;

VV. **"TDS"** means total dissolved solids as determined by the "calculation method" (sum of constituents), by the "residue on evaporation method at 180 degrees" of the "*U.S. geological survey techniques of water resource investigations*," or by conductivity, as the secretary may determine;

WW. **"toxic pollutant"** means a water contaminant or combination of water contaminants in concentration(s) which, upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains, will unreasonably threaten to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring; in order to be considered a toxic pollutant a contaminant must be one or a combination of the potential toxic pollutants listed below and be at a concentration shown by scientific information currently available to the public to have potential for causing one or more of the effects listed above; any water contaminant or combination of the water contaminants in the list below creating a lifetime risk of more than one cancer per 100,000 exposed persons is a toxic pollutant:

(1) acrolein
(2) acrylonitrile
(3) aldrin
(4) benzene
(5) benzidine
(6) carbon tetrachloride
(7) chlordane
(8) chlorinated benzenes
  (a) monochlorobenzene
  (b) hexachlorobenzene
  (c) pentachlorobenzene
(9) 1,2,4,5-tetrachlorobenzene
(10) chlorinated ethanes
  (a) 1,2-dichloroethane
  (b) hexachloroethane
  (c) 1,1,2,2-tetrachloroethane
  (d) 1,1,1-trichloroethane
  (e) 1,1,2-trichloroethane
(11) chlorinated phenols
  (a) 2,4-dichlorophenol
  (b) 2,4,5-trichlorophenol
  (c) 2,4,6-trichlorophenol
(12) chloroalkyl ethers
  (a) bis (2-chloroethyl) ether
  (b) bis (2-chloroisopropyl) ether
  (c) bis (chloromethyl) ether
(13) chloroform
(14) DDT

(15) dichlorobenzene
(16) dichlorobenzidine
(17) 1,1-dichloroethylene
(18) dichloropropenes
(19) dieldrin
(20) diphenylhydrazine
(21) endosulfan
(22) endrin
(23) ethylbenzene
(24) halomethanes
  (a) bromodichloromethane
  (b) bromomethane
  (c) chloromethane
  (d) dichlorodifluoromethane
  (e) dichloromethane
  (f) tribromomethane
  (g) trichlorofluoromethane
(25) heptachlor
(26) hexachlorobutadiene
(27) hexachlorocyclohexane (HCH)
  (a) alpha-HCH
  (b) beta-HCH
  (c) gamma-HCH
  (d) technical HCH
(28) hexachlorocyclopentadiene
(29) high explosives (HE)
  (a) 2,4-dinitrotoluene (2,4,DNT)
  (b) 2,6-dinitrotoluene (2,6,DNT)
  (c) octrahydro-1,3,5,7-tetranitro-1,3,5,7 tetrazocine (HMX)
  (d) hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
  (e) 2,4,6-trinitrotoluene (TNT)
(30) isophorone
(31) methyl tertiary butyl ether
(32) nitrobenzene
(33) nitrophenols
  (a) 2,4-dinitro-o-cresol
  (b) dinitrophenols
(34) nitrosamines
  (a) N-nitrosodiethylamine
  (b) N-nitrosodimethylamine
  (c) N-nitrosodibutylamine
  (d) N-nitrosodiphenylamine
  (e) N-nitrosopyrrolidine
(35) pentachlorophenol
(36) perchlorate
(37) phenol
(38) phthalate esters
  (a) dibutyl phthalate
  (b) di-2-ethylhexyl phthalate
  (c) diethyl phthalate
  (d) dimethyl phthalate
(39) polychlorinated biphenyls (PCB's)
(40) polynuclear aromatic hydrocarbons (PAH)
  (a) anthracene
  (b) 3,4-benzofluoranthene
  (c) benzo (k) fluoranthene
  (d) fluoranthene
  (e) fluorene
  (f) phenanthrene
  (g) pyrene
(41) tetrachloroethylene

(42) toluene
(43) toxaphene
(44) trichloroethylene
(45) vinyl chloride
(46) xylenes
  (a) o-xylene
  (b) m-xylene
  (c) p-xylene
(47) 1,1-dichloroethane
(48) ethylene dibromide (EDB)
(49) cis-1,2-dichloroethylene
(50) trans-1,2-dichloroethylene
(51) naphthalene
(52) 1-methylnaphthalene
(53) 2-methylnaphthalene
(54) benzo-a-pyrene

XX. **"vadose zone"** means earth material below the land surface and above ground water, or in between bodies of ground water;

YY. **"wastes"** means sewage, industrial wastes, or any other liquid, gaseous or solid substance which will pollute any waters of the state;

ZZ. **"water"** means all water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface, public or private, except private waters that do not combine with other surface or subsurface water;

AAA. **"water contaminant"** means any substance that could alter if discharged or spilled the physical, chemical, biological or radiological qualities of water; "water contaminant" does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954;

BBB. **"watercourse"** means any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks and beds with visible evidence of the occasional flow of water;

CCC. **"water pollution"** means introducing or permitting the introduction into water, either directly or indirectly, of one or more water contaminants in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere with the public welfare or the use of property;

DDD. **"well"** means: (1) A bored, drilled, or driven shaft; (2) A dug hole whose depth is greater than the largest surface dimension; (3) An improved sinkhole; or (4) A subsurface fluid distribution system;

EEE. **"well stimulation"** means a process used to clean the well, enlarge channels, and increase pore space in the interval to be injected, thus making it possible for fluids to move more readily into the injection zone; well stimulation includes, but is not limited to, (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing.

[1-4-68, 4-20-68, 11-27-70, 9-3-72,,4-11-74, 8-13-76, 2-18-77, 6-26-80, 7-2-81, 1-29-82, 9-20-82, 11-17-84, 3-3-86, 8-17-91, 8-19-93, 12-1-95; 20.6.2.7 NMAC - Rn, 20 NMAC 6.2.I.1101, 1-15-01; A, 1-15-01; A, 12-1-01; A, 9-15-02; A, 9-26-04; A, 7-16-06]

20.6.2.8 **SEVERABILITY:** If any Section, Subsection, individual standard or application of these standards or regulations is held invalid, the remainder shall not be affected.

[2-18-77, 12-1-95; 20.6.2.8 NMAC - Rn, 20 NMAC 6.2.I.1007, 1-15-01]

20.6.2.9 **DOCUMENTS:** Documents referenced in the Part may be viewed at the New Mexico Environment Department, Ground Water Quality Bureau, Harold Runnels Building, 1190 St. Francis Drive, Santa Fe, New Mexico 87503.

[12-1-95; 20.6.2.9 NMAC - Rn, 20 NMAC 6.2.I.1006, 1-15-01; A, 12-1-01]

20.6.2.10 - 20.6.2.1199: [RESERVED]

[12-1-95; 20.6.2.10 - 20.6.2.1199 NMAC - Rn, 20 NMAC 6.2.I.1008-1100, 1102-1199, 1-15-01]

20.6.2.1200 **PROCEDURES:**

[12-1-95; 20.6.2.1200 NMAC - Rn, 20 NMAC 6.2.I.1200, 1-15-01]

20.6.2.1201 **NOTICE OF INTENT TO DISCHARGE:**

A. Any person intending to make a new water contaminant discharge or to alter the character or location of an existing water contaminant discharge, unless the discharge is being made or will be made into a community sewer system or subject to the Liquid Waste Disposal Regulations adopted by the New Mexico Environmental Improvement Board, shall file a notice with the Ground Water Quality Bureau of the department for discharges that may affect ground water, and/ or the Surface Water Quality Bureau of the department for discharges that may affect surface water. However, notice regarding discharges from facilities for the production, refinement, pipeline transmission of oil and gas or products thereof, the oil field

service industry, oil field brine production wells, geothermal installations and carbon dioxide facilities shall be filed instead with the Oil Conservation Division.

B. Any person intending to inject fluids into a well, including a subsurface distribution system, unless the injection is being made subject to the Liquid Waste Disposal Regulations adopted by the New Mexico Environmental Improvement Board, shall file a notice with the Ground Water Quality Bureau of the department. However notice regarding injection to wells associated with oil and gas facilities as described in Subsection A of Section 20.6.2.1201 NMAC shall be filed instead with the Oil Conservation Division.

C. Notices shall state:

(1) the name of the person making the discharge;
(2) the address of the person making the discharge;
(3) the location of the discharge;
(4) an estimate of the concentration of water contaminants in the discharge; and
(5) the quantity of the discharge.

D. Based on information provided in the notice of intent, the department will notify the person proposing the discharge as to which of the following apply:

(1) a discharge permit is required;
(2) a discharge permit is not required;
(3) the proposed injection well will be added to the department's underground injection well inventory;
(4) the proposed injection activity or injection well is prohibited pursuant to 20.6.2.5004 NMAC.

[1-4-68, 9-5-69, 9-3-72, 2-17-74, 2-20-81, 12-1-95; 20.6.2.1201 NMAC - Rn, 20 NMAC 6.2.I.1201, 1-15-01; A, 12-1-01]

20.6.2.1202 FILING OF PLANS AND SPECIFICATIONS--SEWERAGE SYSTEMS:

A. Any person proposing to construct a sewerage system or proposing to modify any sewerage system in a manner that will change substantially the quantity or quality of the discharge from the system shall file plans and specifications of the construction or modification with Ground Water Quality Bureau of the department for discharges that may affect ground water, and/or the Surface Water Quality Bureau of the department for discharges that may affect surface water. Modifications having a minor effect on the character of the discharge from sewerage systems shall be reported as of January 1 and June 30 of each year to the Ground Water Quality Bureau of the department for discharges that may affect ground water, or the Surface Water Quality Bureau of the department for discharges that may affect surface water.

B. Plans, specifications and reports required by this Section, if related to facilities for the production, refinement and pipeline transmission of oil and gas, or products thereof, shall be filed instead with the Oil Conservation Division.

C. Plans and specifications required to be filed under this Section must be filed prior to the commencement of construction.

[1-4-68, 9-3-72, 2-20-81, 12-1-95; 20.6.2.1202 NMAC - Rn, 20 NMAC 6.2.I.1202, 1-15-01; A, 12-1-01]

20.6.2.1203 NOTIFICATION OF DISCHARGE-REMOVAL:

A. With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, the following notifications and corrective actions are required:

(1) As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, any person in charge of the facility shall orally notify the Chief of the Ground Water Quality Bureau of the department, or his counterpart in any constituent agency delegated responsibility for enforcement of these rules as to any facility subject to such delegation. To the best of that person's knowledge, the following items of information shall be provided:

(a) the name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility;
(b) the name and address of the facility;
(c) the date, time, location, and duration of the discharge
(d) the source and cause of discharge;
(e) a description of the discharge, including its chemical composition;
(f) the estimated volume of the discharge; and
(g) any actions taken to mitigate immediate damage from the discharge.

(2) When in doubt as to which agency to notify, the person in charge of the facility shall notify the Chief of the Ground Water Quality Bureau of the department. If that department does not have authority pursuant to commission delegation, the department shall notify the appropriate constituent agency.

(3) Within one week after the discharger has learned of the discharge, the facility owner and/or operator shall send written notification to the same department official, verifying the prior oral notification as to each of the foregoing items and providing any appropriate additions or corrections to the information contained in the prior oral notification.

(4) The oral and written notification and reporting requirements contained in this Subsection A are not intended to be duplicative of discharge notification and reporting requirements promulgated by the Oil Conservation

Commission (OCC) or by the Oil Conservation Division (OCD); therefore, any facility which is subject to OCC or OCD discharge notification and reporting requirements need not additionally comply with the notification and reporting requirements herein.

(5) As soon as possible after learning of such a discharge, the owner/operator of the facility shall take such corrective actions as are necessary or appropriate to contain and remove or mitigate the damage caused by the discharge.

(6) If it is possible to do so without unduly delaying needed corrective actions, the facility owner/operator shall endeavor to contact and consult with the Chief of the Ground Water Quality Bureau of the department or appropriate counterpart in a delegated agency, in an effort to determine the department's views as to what further corrective actions may be necessary or appropriate to the discharge in question. In any event, no later than fifteen (15) days after the discharger learns of the discharge, the facility owner/operator shall send to said Bureau Chief a written report describing any corrective actions taken and/or to be taken relative to the discharge. Upon a written request and for good cause shown, the Bureau Chief may extend the time limit beyond fifteen (15) days.

(7) The Bureau Chief shall approve or disapprove in writing the foregoing corrective action report within thirty (30) days of its receipt by the department. In the event that the report is not satisfactory to the department, the Bureau Chief shall specify in writing to the facility owner/operator any shortcomings in the report or in the corrective actions already taken or proposed to be taken relative to the discharge, and shall give the facility owner/operator a reasonable and clearly specified time within which to submit a modified corrective action report. The Bureau Chief shall approve or disapprove in writing the modified corrective action report within fifteen (15) days of its receipt by the department.

(8) In the event that the modified corrective action report also is unsatisfactory to the department, the facility owner/operator has five (5) days from the notification by the Bureau Chief that it is unsatisfactory to appeal to the department secretary. The department secretary shall approve or disapprove the modified corrective action report within five (5) days of receipt of the appeal from the Bureau Chief's decision. In the absence of either corrective action consistent with the approved corrective action report or with the decision of the secretary concerning the shortcomings of the modified corrective action report, the department may take whatever enforcement or legal action it deems necessary or appropriate.

(9) If the secretary determines that the discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within one hundred and eighty (180) days after notice is required to be given pursuant to Paragraph (1) of Subsection A of Section 20.6.2.1203 NMAC, the secretary may notify the facility owner/operator that he is a responsible person and that an abatement plan may be required pursuant to Section 20.6.2.4104 and Subsection A of Section 20.6.2.4106 NMAC.

B. Exempt from the requirements of this Section are continuous or periodic discharges which are made:

(1) in conformance with regulations of the commission and rules, regulations or orders of other state or federal agencies; or

(2) in violation of regulations of the commission, but pursuant to an assurance of discontinuance or schedule of compliance approved by the commission or one of its duly authorized constituent agencies.

C. As used in this Section and in Sections 20.6.2.4100 through 20.6.2.4115 NMAC, but not in other Sections of this Part:

(1) "discharge" means spilling, leaking, pumping, pouring, emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will reach surface or subsurface water;

(2) "facility" means any structure, installation, operation, storage tank, transmission line, motor vehicle, rolling stock, or activity of any kind, whether stationary or mobile;

(3) "oil" means oil of any kind or in any form including petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes;

(4) "operator" means the person or persons responsible for the overall operations of a facility; and

(5) "owner" means the person or persons who own a facility, or part of a facility.

D. Notification of discharge received pursuant to this Part or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except for perjury or for giving a false statement.

E. Any person who has any information relating to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, is urged to notify the Chief of the Ground Water Quality Bureau of the department. Upon such notification, the secretary may require an owner/operator or a responsible person to perform corrective actions pursuant to Paragraphs (5) and (9) of Subsection A of Section 20.6.2.1203 NMAC.

[2-17-74, 2-20-81, 12-24-87, 12-1-95; 20.6.2.1203 NMAC - Rn, 20 NMAC 6.2.I.1203, 1-15-01; A, 12-1-01]

20.6.2.1204 - 20.6.2.1209 [RESERVED]

[12-1-95; 20.6.2.1204 - 20.6.2.1209 NMAC - Rn, 20 NMAC 6.2.I.1204-1209, 1-15-01]

20.6.2.1210 VARIANCE PETITIONS:

A. Any person seeking a variance pursuant to Section 74-6-4 (G) NMSA 1978, shall do so by filing a written

petition with the commission. The petitioner may submit with his petition any relevant documents or material which the petitioner believes would support his petition. Petitions shall:

(1) state the petitioner's name and address;
(2) state the date of the petition;
(3) describe the facility or activity for which the variance is sought;
(4) state the address or description of the property upon which the facility is located;
(5) describe the water body or watercourse affected by the discharge;
(6) identify the regulation of the commission from which the variance is sought;
(7) state in detail the extent to which the petitioner wishes to vary from the regulation;
(8) state why the petitioner believes that compliance with the regulation will impose an unreasonable burden upon his activity; and
(9) state the period of time for which the variance is desired.

B. The variance petition shall be reviewed in accordance with the adjudicatory procedures of 20 NMAC 1.3.

C. The commission may grant the requested variance, in whole or in part, may grant the variance subject to conditions, or may deny the variance. The commission shall not grant a variance for a period of time in excess of five years.

D. An order of the commission is final and bars the petitioner from petitioning for the same variance without special permission from the commission. The commission may consider, among other things, the development of new information and techniques to be sufficient justification for a second petition. If the petitioner, or his authorized representative, fails to appear at the public hearing on the variance petition, the commission shall proceed with the hearing on the basis of the petition. A variance may not be extended or renewed unless a new petition is filed and processed in accordance with the procedures established by this Section.

[7-19-68, 11-27-70, 9-3-72, 2-20-81, 11-15-96; 20.6.2.1210 NMAC - Rn, 20 NMAC 6.2.I.1210, 1-15-01]

20.6.2.1211 - 20.6.2.1219: [RESERVED]

[12-1-95; 20.6.2.1211 - 20.6.2.1219 NMAC - Rn, 20 NMAC 6.2.I.1211-1219, 1-15-01]

20.6.2.1220 PENALTIES ENFORCEMENT, COMPLIANCE ORDERS, PENALTIES, ASSURANCE OF DISCONTINUANCE.: Failure to comply with the Water Quality Act, or any regulation or standard promulgated pursuant to the Water Quality Act is a prohibited act. If the secretary determines that a person has violated or is violating a requirement of the Water Quality Act or any regulation promulgated thereunder or is exceeding any water quality standard or ground water standard contained in Commission regulations, or is not complying with a condition or provision of an approved or modified abatement plan, discharge plan, or permit issued pursuant to the Water Quality Act, the secretary may issue a compliance order, assess a penalty, commence a civil action in district court, or accept an assurance of discontinuance in accordance with NMSA 1978, Section 74-6-10 of the Water Quality Act.

[12-1-95; 20.6.2.1220 NMAC - Rn, 20 NMAC 6.2.I.1220, 1-15-01]

20.6.2.1221 - 20.6.2.1999: [RESERVED]

[12-1-95; 20.6.2.1221 - 20.6.2.1999 NMAC - Rn, 20 NMAC 6.2.I.1221-2099, 1-15-01]

20.6.2.2000 SURFACE WATER PROTECTION:

[12-1-95; 20.6.2.2000 NMAC - Rn, 20 NMAC 6.2.II, 1-15-01]

20.6.2.2001 - 20.6.2.2099: [RESERVED]

[12-1-95; 20.6.2.2001 - 20.6.2.2099 NMAC - Rn, 20 NMAC 6.2.I.1221-2099, 1-15-01]

20.6.2.2100 APPLICABILITY: The requirements of Section 20.6.2.2101 and 20.6.2.2102 NMAC shall not apply to any discharge which is subject to a permit under the National Pollutant Discharge Elimination System of P. L. 92-500; provided that any discharger who is given written notice of National Pollutant Discharge Elimination System permit violation from the Administrator of the Environmental Protection Agency and who has not corrected the violation within thirty days of receipt of said notice shall be subject to Section 20.6.2.2101 and 20.6.2.2102 NMAC until in compliance with the National Pollution Discharge Elimination System permit conditions; provided further that nothing in this Part shall be construed as a deterrent to action under Section 74-6-11 NMSA, 1978.

[8-13-76; 20.6.2.2100 NMAC - Rn, 20 NMAC 6.2.II.2100, 1-15-01]

20.6.2.2101 GENERAL REQUIREMENTS:

A. Except as otherwise provided in Sections 20.6.2.2000 through 20.6.2.2201 NMAC, no person shall cause or allow effluent to discharge to a watercourse if the effluent as indicated by:

(1) any two consecutive daily composite samples;
(2) more than one daily composite sample in any thirty-day period (in which less than ten (10) daily composite samples are examined);
(3) more than ten percent (10%) of the daily composite samples in any thirty-day period (in which ten (10) or

more daily composite samples are examined); or

(4) a grab sample collected during flow from an intermittent or infrequent discharge does not conform to the following:

(a)	Bio-chemical Oxygen Demand (BOD)	Less than 30 mg/l
(b)	Chemical Oxygen Demand (COD)	Less than 125 mg/l
(c)	Settleable Solids	Less than 0.5 mg/l
(d)	Fecal Coliform Bacteria	Less than 500 organisms per 100 ml
(e)	pH	Between 6.6 and 8.6

B. Upon application, the secretary may eliminate the pH requirement for any effluent source that the secretary determines does not unreasonably degrade the water into which the effluent is discharged.

C. Subsection A of this Section does not apply to the weight of constituents in the water diverted.

D. Samples shall be examined in accordance with the most current edition of Standard Methods for the Examination of Water and Wastewater published by the American Public Health Association or the most current edition of Methods for Chemical Analysis of Water and Wastes published by the Environmental Protection Agency, where applicable.
[4-20-68, 3-14-71, 10-8-71, 8-13-76, 2-20-81, 12-1-95; 20.6.2.2101 NMAC - Rn, 20 NMAC 6.2.II.2101, 1-15-01]

20.6.2.2102 RIO GRANDE BASIN--COMMUNITY SEWERAGE SYSTEMS:

A. No person shall cause or allow effluent from a community sewerage system to discharge to a watercourse in the Rio Grande Basin between the headwaters of Elephant Butte Reservoir and Angostura Diversion Dam as described in Subsection E of this Section if the effluent, as indicated by:

(1) any two consecutive daily composite samples;

(2) more than one daily composite sample in any thirty-day period (in which less than ten (10) daily composite samples are examined);

(3) more than ten percent (10%) of the daily composite samples in any thirty-day period (in which ten (10) or more daily composite samples are examined); or

(4) a grab sample collected during flow from an intermittent or infrequent discharge does not conform to the following:

(a)	Bio-chemical Oxygen Demand (BOD)	Less than 30 mg/l
(b)	Chemical Oxygen Demand (COD)	Less than 80 mg/l
(c)	Settleable Solids	Less than 0.1 mg/l
(d)	Fecal Coliform Bacteria	Less than 500 organisms per 100 ml
(e)	pH	Between 6.6 and 8.6

B. Upon application, the secretary may eliminate the pH requirement for any effluent source that the secretary determines does not unreasonably degrade the water into which the effluent is discharged.

C. Subsection A of this Section does not apply to the weight of constituents in the water diverted.

D. Samples shall be examined in accordance with the most current edition of Standard Methods for the Analysis of Water and Wastewater published by the American Public Health Association or the most current edition of Methods for Chemical Analysis of Water and Wastes published by the Environmental Protection Agency, where applicable.

E. The following is a description of the Rio Grande Basin from the headwaters of Elephant Butte Reservoir to Angostura Diversion Dam as used in this Section. Begin at San Marcial USGS gauging station, which is the headwaters of Elephant Butte Reservoir Irrigation Project, thence northwest to U.S. Highway 60, nine miles ± west of Magdalena; thence west along the northeast edge of the San Agustin Plains closed basin; thence north along the east side of the north plains closed basin to the Continental Divide; thence northly along the Continental Divide to the community of Regina on State Highway 96; thence southeasterly along the crest of the San Pedro Mountains to Cerro Toledo Peak; thence southwesterly along the Sierra de Los Valles ridge and the Borrego Mesa to Bodega Butte; thence southerly to Angostura Diversion Dam which is the upper reach of the Rio Grande in this basin; thence southeast to the crest and the crest of the Manzano Mountains and the Los Pinos Mountains; thence southerly along the divide that contributes to the Rio Grande to San Marcial gauging station to the point and place of beginning; excluding all waters upstream of Jemez Pueblo which flow into the Jemez River drainage and the Bluewater Lake. Counties included in the basin are:

(1) north portion of Socorro County;
(2) northeast corner of Catron County;
(3) east portion of Valencia County;
(4) west portion of Bernalillo County;
(5) east portion of McKinley County; and
(6) most of Sandoval County.

[3-14-71, 9-3-72, 8-13-76, 2-20-81, 12-1-95; 20.6.2.2102 NMAC - Rn, 20 NMAC 6.2.II.2102, 1-15-01]

20.6.2.2103 - 20.6.2.2199: [RESERVED]
[12-1-95; 20.6.2.2103 - 20.6.2.2199 NMAC - Rn, 20 NMAC 6.2.II.2103-2199, 1-15-01]

20.6.2.2200 WATERCOURSE PROTECTION:

[12-1-95; 20.6.2.2200 NMAC - Rn, 20 NMAC 6.2.II.2200, 1-15-01]

20.6.2.2201 DISPOSAL OF REFUSE: No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise. Solids diverted from the stream and returned thereto are not subject to abatement under this Section.
[4-20-68, 9-3-72; 20.6.2.2201 NMAC - Rn, 20 NMAC 6.2.II.2201, 1-15-01]

20.6.2.2202 - 20.6.2.2999: [RESERVED]
[12-1-95; 20.6.2.2202 - 20.6.2.2999 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3000 PERMITTING AND GROUND WATER STANDARDS:
[12-1-95; 20.6.2.3000 NMAC - Rn, 20 NMAC 6.2.III, 1-15-01]

20.6.2.3001 - 20.6.2.3100: [RESERVED]
[12-1-95; 20.6.2.3001 - 20.6.2.3100 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3101 PURPOSE:

A. The purpose of Sections 20.6.2.3000 through 20.6.2.3114 NMAC controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.3000 through 20.6.2.3114 NMAC are written so that in general:

(1) if the existing concentration of any water contaminant in ground water is in conformance with the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be allowed; and

(2) if the existing concentration of any water contaminant in ground water exceeds the standard of Section 20.6.2.3103 NMAC, no degradation of the ground water beyond the existing concentration will be allowed.

B. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources.

C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.
[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2.III.3101, 1-15-01]

20.6.2.3102: [RESERVED]
[12-1-95; 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2.III.3102, 1-15-01]

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1) Arsenic (As).....0.1 mg/l
(2) Barium (Ba).....1.0 mg/l
(3) Cadmium (Cd).....0.01 mg/l
(4) Chromium (Cr).....0.05 mg/l
(5) Cyanide (CN).....0.2 mg/l
(6) Fluoride (F).....1.6 mg/l
(7) Lead (Pb).....0.05 mg/l
(8) Total Mercury (Hg).....0.002 mg/l
(9) Nitrate (NO_3 as N).....10.0 mg/l

(10) Selenium (Se).....0.05 mg/l
(11) Silver (Ag).....0.05 mg/l
(12) Uranium (U).....0.03 mg/l
(13) Radioactivity: Combined Radium-226 & Radium-228.....30 pCi/l
(14) Benzene.....0.01 mg/l
(15) Polychlorinated biphenyls (PCB's).....0.001 mg/l
(16) Toluene.....0.75 mg/l
(17) Carbon Tetrachloride.....0.01 mg/l
(18) 1,2-dichloroethane (EDC).....0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE).....0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE).....0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE).....0.1 mg/l
(22) ethylbenzene.....0.75 mg/l
(23) total xylenes.....0.62 mg/l
(24) methylene chloride.....0.1 mg/l
(25) chloroform.....0.1 mg/l
(26) 1,1-dichloroethane.....0.025 mg/l
(27) ethylene dibromide (EDB).....0.0001 mg/l
(28) 1,1,1-trichloroethane.....0.06 mg/l
(29) 1,1,2-trichloroethane.....0.01 mg/l
(30) 1,1,2,2-tetrachloroethane.....0.01 mg/l
(31) vinyl chloride.....0.001 mg/l
(32) PAHs: total naphthalene plus monomethylnaphthalenes.....0.03 mg/l
(33) benzo-a-pyrene.....0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl).....250.0 mg/l
(2) Copper (Cu).....1.0 mg/l
(3) Iron (Fe).....1.0 mg/l
(4) Manganese (Mn).....0.2 mg/l
(6) Phenols.....0.005 mg/l
(7) Sulfate (SO_4).....600.0 mg/l
(8) Total Dissolved Solids (TDS).....1000.0 mg/l
(9) Zinc (Zn).....10.0 mg/l
(10) pH.....between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al).....5.0 mg/l
(2) Boron (B).....0.75 mg/l
(3) Cobalt (Co).....0.05 mg/l
(4) Molybdenum (Mo).....1.0 mg/l
(5) Nickel (Ni).....0.2 mg/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04]
[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly of indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20.6.2.3111 NMAC, regarding transfers.
[2-18-77, 12-24-87, 12-1-95; Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III.3104, 1-15-01; A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20.6.2.3104 and 20.6.2.3106 NMAC do not apply to the following:

A. Effluent or leachate which conforms to all the listed numerical standards of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/l or less, and does not contain any toxic pollutant. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to

obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is discharged from a sewerage system used only for disposal of household and other domestic waste which is designed to receive and which receives 2,000 gallons or less of liquid waste per day;

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section;

F. Those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall where NPDES effluent limitations are imposed, unless the secretary determines that a hazard to public health may result. For purposes of this subsection, monitoring requirements alone do not constitute effluent limitations;

G. Discharges resulting from flood control systems;

H. Leachate which results from the direct natural infiltration of precipitation through disturbed materials, unless the secretary determines that a hazard to public health may result;

I. Leachate which results entirely from the direct natural infiltration of precipitation through undisturbed materials;

J. Leachate from materials disposed of in accordance with the Solid Waste Management Regulations (20 NMAC 9.1) adopted by the New Mexico Environmental Improvement Board;

K. Natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine and without being used in any mining process; this exemption does not apply to solution mining;

L. Effluent or leachate discharges resulting from activities regulated by a mining plan approved and permit issued by the New Mexico Coal Surface Mining Commission, provided that this exemption shall not be construed as limiting the application of appropriate ground water protection requirements by the New Mexico Coal Surface Mining Commission;

M. Effluent or leachate discharges which are regulated by the Oil Conservation Commission and the regulation of which by the Water Quality Control Commission would interfere with the exclusive authority granted under Section 70-2-12 NMSA 1978, or under other laws, to the Oil Conservation Commission.

[2-18-77, 6-26-80, 7-2-81, 12-24-87, 12-1-95; 20.6.2.3105 NMAC - Rn, 20 NMAC 6.2.III.3105, 1-15-01; A, 12-1-01]

20.6.2.3106 APPLICATION FOR DISCHARGE PERMITS AND RENEWALS:

A. Any person who, before or on June 18, 1977, is discharging any of the water contaminants listed in Section 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall, within 120 days of receipt of written notice from the secretary that a discharge permit is required, or such longer time as the secretary shall for good cause allow, submit a discharge plan to the secretary for approval; such person may discharge without a discharge permit until 240 days after written notification by the secretary that a discharge permit is required or such longer time as the secretary shall for good cause allow.

B. Any person who intends to begin, after June 18, 1977, discharging any of the water contaminants listed in Section 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall notify the secretary giving the information enumerated in Subsection B of Section 20.6.2.1201NMAC; the secretary shall, within 60 days, notify such person if a discharge permit is required; upon submission, the secretary shall review the discharge plan pursuant to Sections 20.6.2.3108 and 20.6.2.3109 NMAC. For good cause shown the secretary may allow such person to discharge without a discharge permit for a period not to exceed 120 days.

C. A proposed discharge plan shall set forth in detail the methods or techniques the discharger proposes to use or processes expected to naturally occur which will ensure compliance with this Part. At least the following information shall be included in the plan:

(1) Quantity, quality and flow characteristics of the discharge;

(2) Location of the discharge and of any bodies of water, watercourses and ground water discharge sites within one mile of the outside perimeter of the discharge site, and existing or proposed wells to be used for monitoring;

(3) Depth to and TDS concentration of the ground water most likely to be affected by the discharge;

(4) Flooding potential of the site;

(5) Location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow;

(6) Depth to and lithological description of rock at base of alluvium below the discharge site if such information is available;

(7) Any additional information that may be necessary to demonstrate that the discharge permit will not result in concentrations in excess of the standards of Section 20.6.2.3103 NMAC or the presence of any toxic pollutant at any place

of withdrawal of water for present or reasonably foreseeable future use. Detailed information on site geologic and hydrologic conditions may be required for a technical evaluation of the applicant's proposed discharge plan; and

(8) Additional detailed information required for a technical evaluation of underground injection control wells as provided in Sections 20.6.2.5000 through 20.6.2. 5299 NMAC,

D. An applicant for a discharge permit shall pay fees as specified in Section 20.6.2.3114 NMAC.

E. An applicant for a permit to dispose of or use septage or sludge, or within a source category designated by the commission, may be required by the secretary to file a disclosure statement as specified in 74-6-5.1 of the Water Quality Act.

F. If the holder of a discharge permit submits an application for discharge permit renewal at least 120 days before the discharge permit expires, and the discharger is not in violation of the discharge permit on the date of its expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved. A discharge permit continued under this provision remains fully effective and enforceable. An application for discharge permit renewal must include and adequately address all of the information necessary for evaluation of a new discharge permit. Previously submitted materials may be included by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

[2-18-77, 6-26-80, 7-2-81, 9-20-82, 8-17-91, 12-1-95; 20.6.2.3106 NMAC - Rn, 20 NMAC 6.2.III.3106, 1-15-01; A, 12-1-01; A, 9-15-02]

20.6.2.3107 MONITORING, REPORTING, AND OTHER REQUIREMENTS:

A. Each discharge plan shall provide for the following as the secretary may require:

(1) The installation, use, and maintenance of effluent monitoring devices;

(2) The installation, use, and maintenance of monitoring devices for the ground water most likely to be affected by the discharge;

(3) Monitoring in the vadose zone;

(4) Continuation of monitoring after cessation of operations;

(5) Periodic submission to the secretary of results obtained pursuant to any monitoring requirements in the discharge permit and the methods used to obtain these results;

(6) Periodic reporting to the secretary of any other information that may be required as set forth in the discharge permit;

(7) The discharger to retain for a period of at least five years any monitoring data required in the discharge permit;

(8) A system of monitoring and reporting to verify that the permit is achieving the expected results;

(9) Procedures for detecting failure of the discharge system;

(10) Contingency plans to cope with failure of the discharge permit or system;

(11) A closure plan to prevent the exceedance of standards of Section 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation which includes: a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, financial assurance, and other measures necessary to prevent and/or abate such contamination. The obligation to implement the closure plan as well as the requirements of the closure plan, if any is required, survives the termination or expiration of the permit. A closure plan for any underground injection control well must also incorporate the applicable requirements of Sections 20.6.2.5005 and 20.6.2.5209 NMAC.

B. Sampling and analytical techniques shall conform with the following references unless otherwise specified by the secretary:

(1) Standard Methods for the Examination of Water and Wastewater, latest edition, American Public Health Association; or

(2) Methods for Chemical Analysis of Water and Waste, and other publications of the Analytical Quality Laboratory, EPA; or

(3) Techniques of Water Resource Investigations of the U.S. Geological Survey; or

(4) Annual Book of ASTM Standards. Part 31. Water, latest edition, American Society For Testing and Materials; or

(5) Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations; or

(6) National Handbook of Recommended Methods for Water-Data Acquisition, latest edition, prepared cooperatively by agencies of the United States Government under the sponsorship of the U.S. Geological Survey.

C. The discharger shall notify the secretary of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants.

D. Any discharger of effluent or leachate shall allow any authorized representative of the secretary to:

(1) inspect and copy records required by a discharge permit;

(2) inspect any treatment works, monitoring and analytical equipment;

(3) sample any effluent before or after discharge;

(4) use monitoring systems and wells installed pursuant to a discharge permit requirement in order to collect

samples from ground water or the vadose zone.

E. Each discharge permit for an underground injection control well shall incorporate the applicable requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC.

[2-18-77, 9-20-82, 11-17-83, 12-1-95; 20.6.2.3107 NMAC - Rn, 20 NMAC 6.2.III.3107, 1-15-01; A, 12-1-01]

20.6.2.3108 PUBLIC NOTICE AND PARTICIPATION:

A. Within 15 days of receipt of an application for a discharge permit, modification or renewal, the department shall review the application for administrative completeness. To be deemed administratively complete, an application shall provide all of the information required by Paragraphs (1) through (5) of Subsection F of 20.6.2.3108 NMAC and shall indicate, for department approval, the proposed locations and newspaper for providing notice required by Paragraphs (1) and (4) of Subsection B or Paragraph (2) of Subsection C of 20.6.2.3108 NMAC. The department shall notify the applicant in writing when the application is deemed administratively complete. If the department determines that the application is not administratively complete, the department shall notify the applicant of the deficiencies in writing within 15 days of receipt of the application and state what additional information is necessary.

B. Within 30 days of the department deeming an application for discharge permit or discharge permit modification administratively complete, the applicant shall provide notice, in accordance with the requirements of Subsection F of 20.6.2.3108 NMAC, to the general public in the locale of the proposed discharge in a form provided by the department by each of the methods listed below:

(1) for each 640 contiguous acres or less of a discharge site, prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, at a place conspicuous to the public, approved by the department, at or near the proposed facility for 30 days; one additional notice, in a form approved by and may be provided by the department, shall be posted at a place located off the discharge site, at a place conspicuous to the public and approved by the department; the department may require a second posting location for more than 640 contiguous acres or when the discharge site is not located on contiguous properties;

(2) providing written notice of the discharge by mail, to owners of record of all properties within a 1/3 mile distance from the boundary of the property where the discharge site is located; if there are no properties other than properties owned by the discharger within a 1/3 mile distance from the boundary of property where the discharge site is located, the applicant shall provide notice to owners of record of the next nearest adjacent properties not owned by the discharger;

(3) providing notice by certified mail, return receipt requested, to the owner of the discharge site if the applicant is not the owner; and

(4) publishing a synopsis of the notice in English and in Spanish, in a display ad at least three inches by four inches not in the classified or legal advertisements section, in a newspaper of general circulation in the location of the proposed discharge.

C. Within 30 days of the department deeming an application for discharge permit renewal administratively complete, the applicant shall provide notice, in accordance with the requirements of Subsection F of 20.6.2.3108 NMAC, to the general public in the locale of the proposed discharge in a form provided by the department by each of the methods listed below:

(1) providing notice by certified mail to the owner of the discharge site if the applicant is not the owner; and

(2) publishing a synopsis of the notice, in English and in Spanish, in a display ad at least two inches by three inches, not in the classified or legal advertisements section, in a newspaper of general circulation in the location of the discharge.

D. Within 15 days of completion of the public notice requirements in Subsections B or C of 20.6.2.3108 NMAC, the applicant shall submit to the department proof of notice, including an affidavit of mailing(s) and the list of property owner(s), proof of publication, and an affidavit of posting, as appropriate.

E. Within 30 days of determining an application for a discharge permit, modification or renewal is administratively complete, the department shall post a notice on its website and shall mail notice to any affected local, state, federal, tribal or pueblo governmental agency, political subdivisions, ditch associations and land grants, as identified by the department. The department shall also mail or e-mail notice to those persons on a general and facility-specific list maintained by the department who have requested notice of discharge permit applications. The notice shall include the information listed in Subsection F of 20.6.2.3108 NMAC.

F. The notice provided under Subsection B, C and E of 20.6.2.3108 NMAC shall include:

(1) the name and address of the proposed discharger;

(2) the location of the discharge, including a street address, if available, and sufficient information to locate the facility with respect to surrounding landmarks;

(3) a brief description of the activities that produce the discharge described in the application;

(4) a brief description of the expected quality and volume of the discharge;

(5) the depth to and total dissolved solids concentration of the ground water most likely to be affected by the discharge;

(6) the address and phone number within the department by which interested persons may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices; and

(7) a statement that the department will accept comments and statements of interest regarding the application

and will create a facility-specific mailing list for persons who wish to receive future notices.

G. All persons who submit comments or statements of interest to the department or previously participated in a public hearing and who provide a mail or e-mail address shall be placed on a facility-specific mailing list and the department shall send those persons the public notice issued pursuant to Subsection H of 20.6.2.3108 NMAC, and notice of any public meeting or hearing scheduled on the application. All persons who contact the department to inquire about a specific facility shall be informed of the opportunity to be placed on the facility-specific mailing list.

H. Within 60 days after the department makes its administrative completeness determination and all required technical information is available, the department shall make available a proposed approval or disapproval of the application for a discharge permit, modification or renewal, including conditions for approval proposed by the department or the reasons for disapproval. The department shall mail by certified mail a copy of the proposed approval or disapproval to the applicant, and shall provide notice of the proposed approval or disapproval of the application for a discharge permit, modification or renewal by:

(1) posting on the department's website;

(2) publishing notice in a newspaper of general circulation in this state and a newspaper of general circulation in the location of the facility;

(3) mailing or e-mailing to those persons on a facility-specific mailing list;

(4) mailing to any affected local, state, or federal governmental agency, ditch associations and land grants, as identified by the department; and

(5) mailing to the governor, chairperson, or president of each Indian tribe, pueblo or nation within the state of New Mexico, as identified by the department.

I. The public notice issued under Subsection H shall include the information in Subsection F of 20.6.2.3108 NMAC and the following information:

(1) a brief description of the procedures to be followed by the secretary in making a final determination;

(2) a statement of the comment period and description of the procedures for a person to request a hearing on the application; and

(3) the address and telephone number at which interested persons may obtain a copy of the proposed approval or disapproval of an application for a discharge permit, modification or renewal.

J. In the event that the proposed approval or disapproval of an application for a discharge permit, modification or renewal is available for review within 30 days of deeming the application administratively complete, the department may combine the public notice procedures of Subsections E and H of 20.6.2.3108 NMAC.

K. Following the public notice of the proposed approval or disapproval of an application for a discharge permit, modification or renewal, and prior to a final decision by the secretary, there shall be a period of at least 30 days during which written comments may be submitted to the department and/or a public hearing may be requested in writing. The 30-day comment period shall begin on the date of publication of notice in the newspaper. All comments will be considered by the department. Requests for a hearing shall be in writing and shall set forth the reasons why a hearing should be held. A public hearing shall be held if the secretary determines there is substantial public interest. The department shall notify the applicant and any person requesting a hearing of the decision whether to hold a hearing and the reasons therefore in writing.

L. If a hearing is held, pursuant to Subsection K of 20.6.2.3108 NMAC, notice of the hearing shall be given by the department at least 30 days prior to the hearing in accordance with Subsection H of 20.6.2.3108 NMAC. The notice shall include the information identified in Subsection F of 20.6.2.3108 NMAC in addition to the time and place of the hearing and a brief description of the hearing procedures. The hearing shall be held pursuant to 20.6.2.3110 NMAC.

[2-18-77, 12-24-87, 12-1-95, 11-15-96; 20.6.2.3108 NMAC - Rn, 20 NMAC 6.2.III.3108, 1-15-01; A, 12-1-01; A, 9-15-02; A, 7-16-06]

20.6.2.3109 SECRETARY APPROVAL, DISAPPROVAL, MODIFICATION OR TERMINATION OF DISCHARGE PERMITS, AND REQUIREMENT FOR ABATEMENT PLANS:

A. The department shall evaluate the application for a discharge permit, modification or renewal based on information contained in the department's administrative record. The department may request from the discharger, either before or after the issuance of any public notice, additional information necessary for the evaluation of the application. The administrative record shall consist of the application, any additional information required by the department, any information submitted by the discharger or the general public, other information considered by the department, the proposed approval or disapproval of an application for a discharge permit, modification or renewal prepared pursuant to Subsection G of 20.6.2.3108 NMAC, and, if a public hearing is held, all of the documents filed with the hearing clerk, all exhibits offered into evidence at the hearing, the written transcript or tape recording of the hearing, any hearing officer report, and any post hearing submissions.

B. The secretary shall, within 30 days after the administrative record is complete and all required information is available, approve, approve with conditions or disapprove the proposed discharge permit, modification or renewal based on the administrative record. The secretary shall give written notice of the action taken to the applicant or permittee and any other person who participated in the permitting action who requests a copy in writing.

C. Provided that the other requirements of this part are met and the proposed discharge plan, modification or

renewal demonstrates that neither a hazard to public health nor undue risk to property will result, the secretary shall approve the proposed discharge plan, modification or renewal if the following requirements are met:

(1) ground water that has a TDS concentration of 10,000 mg/l or less will not be affected by the discharge; or

(2) the person proposing to discharge demonstrates that approval of the proposed discharge plan, modification or renewal will not result in either concentrations in excess of the standards of 20.6.2.3103 NMAC or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use, except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(3) the proposed discharge plan conforms to either Subparagraph (a) or (b) below and Subparagraph (c) below:

(a) municipal, other domestic discharges, and discharges from sewerage systems handling only animal wastes: the effluent is entirely domestic, is entirely from a sewerage system handling only animal wastes or is from a municipality and conforms to the following:

(i) the discharge is from an impoundment or a leach field existing on February 18, 1977 which receives less than 10,000 gallons per day and the secretary has not found that the discharge may cause a hazard to public health; or

(ii) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment will not exceed 200 pounds per acre per year and that the effluent will meet the standards of 20.6.2.3103 NMAC except for nitrates and except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(iii) the total nitrogen in effluent that is applied to a crop which is harvested shall not exceed by more than 25 percent the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrates and except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC;

(b) discharges from industrial, mining or manufacturing operations:

(i) the discharger has demonstrated that the amount of effluent that enters the subsurface from a surface impoundment will not exceed 0.5 acre-feet per acre per year; or

(ii) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment shall not exceed 200 pounds per acre per year and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrate and contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(iii) the total nitrogen in effluent that is applied to a crop that is harvested shall not exceed by more than 25 percent the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrate and contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC;

(c) all discharges:

(i) the monitoring system proposed in the discharge plan includes adequate provision for sampling of effluent and adequate flow monitoring so that the amount being discharged onto or below the surface of the ground can be determined;

(ii) the monitoring data is reported to the secretary at a frequency determined by the secretary.

D. The secretary shall allow the following unless he determines that a hazard to public health may result:

(1) the weight of water contaminants in water diverted from any source may be discharged provided that the discharge is to the aquifer from which the water was diverted or to an aquifer containing a greater concentration of the contaminants than contained in the water diverted; and provided further that contaminants added as a result of the means of diversion shall not be considered to be part of the weight of water contaminants in the water diverted;

(2) the water contaminants leached from undisturbed natural materials may be discharged provided that:

(a) the contaminants were not leached as a product or incidentally pursuant to a solution mining operation; and

(b) the contaminants were not leached as a result of direct discharge into the vadose zone from municipal or industrial facilities used for the storage, disposal, or treatment of effluent;

(3) the water contaminants leached from undisturbed natural materials as a result of discharge into ground water from lakes used as a source of cooling water.

E. If data submitted pursuant to any monitoring requirements specified in the discharge permit or other information available to the secretary indicates that this part is being or may be violated or that the standards of 20.6.2.3103 NMAC are being or will be exceeded, or a toxic pollutant as defined in 20.6.2.7 NMAC is present, in ground water at any place of withdrawal for present or reasonably foreseeable future use, or that the Water Quality Standards for Interstate and Intrastate Streams in New Mexico are being or may be violated in surface water, due to the discharge, except as provided in Subsection D of 20.6.2.3109 NMAC.

(1) The secretary may require a discharge permit modification within the shortest reasonable time so as to achieve compliance with this part and to provide that any exceeding of standards in ground water at any place of withdrawal for present or reasonably foreseeable future use, or in surface water, due to the discharge except as provided in Subsection D of 20.6.2.3109 NMAC will be abated or prevented. If the secretary requires a discharge permit modification to abate water pollution:

(a) the abatement shall be consistent with the requirements and provisions of 20.6.2.4101, 20.6.2.4103, Subsection C and E of 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC; and

(b) the discharger may request of the secretary approval to carry out the abatement under 20.6.2.4000 through 20.6.2.4115 NMAC, in lieu of modifying the discharge permit; the discharger shall make the request in writing and shall include the reasons for the request.

(2) The secretary may terminate a discharge permit when a discharger fails to modify the permit in accordance with Paragraph (1) of Subsection E of 20.6.2.3109 NMAC.

(3) The secretary may require modification, or may terminate a discharge permit for a class I non-hazardous waste injection well, a class III well or other type of well specified in Subsection A of 20.6.2.5101 NMAC, pursuant to the requirements of Subsection I of 20.6.2.5101 NMAC.

F. If a discharge permit expires or is terminated for any reason and the standards of 20.6.2.3103 NMAC are being or will be exceeded, or a toxic pollutant as defined in 20.6.2.7 NMAC is present in ground water, or that the Water Quality Standards for Interstate and Intrastate Streams in New Mexico are being or may be violated, the secretary may require the discharger to submit an abatement plan pursuant to 20.6.2.4104 and Subsection A of 20.6.2.4106 NMAC.

G. At the request of the discharger, a discharge permit may be modified in accordance with 20.6.2.3000 through 20.6.2.3114 NMAC.

H. The secretary shall not approve a proposed discharge plan, modification, or renewal for:

(1) any discharge for which the discharger has not provided a site and method for flow measurement and sampling;

(2) any discharge that will cause any stream standard to be violated;

(3) the discharge of any water contaminant which may result in a hazard to public health; or

(4) a period longer than five years, except that for new discharges, the term of the discharge permit approval shall commence on the date the discharge begins, but in no event shall the term of the approval exceed seven years from the date the permit was issued; for those permits expiring more than five years from the date of issuance, the discharger shall give prior written notification to the department of the date the discharge is to commence; the term of the permit shall not exceed five years from that date.

[2-18-77, 6-26-80, 9-20-82, 7-2-81, 3-3-86, 12-1-95, 11-15-96; 20.6.2.3109 NMAC - Rn, 20 NMAC 6.2.III.3109, 1-15-01; A, 12-1-01; A, 9-15-02; A, 7-16-06]

[Subsection 3109.A was added and subsequent subsections renumbered 11-15-96]

20.6.2.3110 PUBLIC HEARING PARTICIPATION:

A. The secretary may appoint an impartial hearing officer to preside over the hearing. The hearing officer may be a department employee other than an employee of the bureau evaluating the application.

B. The hearing shall be at a place in the area affected by the facility for which the discharge permit proposal, modification or renewal is sought.

C. Any person who wishes to present technical evidence at the hearing shall, no later than ten (10) days prior to the hearing, file with the department, and if filed by a person who is not the applicant, serve on the applicant, a statement of intent to present evidence. A person who does not file a statement of intent to present evidence may present a general non-technical statement in support of or in opposition to the proposed discharge plan, modification or renewal. The statement of intent to present technical evidence shall include:

(1) the name of the person filing the statement;

(2) indication of whether the person filing the statement supports or opposes the proposed discharge plan proposal, modification or renewal;

(3) the name of each witness;

(4) an estimate of the length of the direct testimony of each witness;

(5) a list of exhibits, if any, to be offered into evidence at the hearing; and

(6) a summary or outline of the anticipated direct testimony of each witness.

D. At the hearing, the New Mexico Rules of Civil Procedure, SCRA 1986, 1-001 to 1-102 and the New Mexico Rules of Evidence, SCRA 1986, 11-101 to 11-1102 shall not apply. At the discretion of the hearing officer, the rules may be used as guidance. Any reference to the Rules of Civil Procedure and the Rules of Evidence shall not be construed to extend or otherwise modify the authority and jurisdiction of the department under the Act.

E. The hearing officer shall conduct a fair and impartial proceeding, assure that the facts are fully elicited, and avoid delay. The hearing officer shall have authority to take all measures necessary for the maintenance of order and for the efficient, fair and impartial adjudication of issues arising in the proceedings.

F. At the hearing, all persons shall be given a reasonable chance to submit data, views or arguments orally or in writing and to examine witnesses testifying at the hearing.

G. Unless otherwise allowed by the hearing officer, testimony shall be presented in the following order:

(1) testimony by and examination of the applicant or permittee proving the facts relied upon to justify the proposed discharge plan, renewal or modification and meeting the requirements of the regulations;

(2) testimony by and examination of technical witnesses supporting or opposing approval, approval subject to conditions, or disapproval of the proposed discharge plan, renewal or modification, in any reasonable order;

(3) testimony by the general public; and
(4) rebuttal testimony, if appropriate.

H. The secretary may provide translation service at a public hearing conducted in a locale where the Department can reasonably expect to receive testimony from non-English speaking people.

I. If determined useful by the hearing officer, within thirty (30) days after conclusion of the hearing, or within such time as may be fixed by the hearing officer, the hearing officer may allow proposed findings of fact and conclusions of law and closing argument. All such submissions, if allowed, shall be in writing, shall be served upon the applicant or permittee, the department and all persons who request copies in advance in writing, and shall contain adequate references to the record and authorities relied on. No new evidence shall be presented unless specifically allowed by the hearing officer.

J. The department shall make an audio recording of the hearing. If the applicant or permittee, or a participant requests a written transcript or certified copy of the audio recording, the requestor shall pay the cost of the transcription or audio copying.

K. The hearing officer shall issue a report within thirty (30) days after the close of the hearing record. The report may include findings of fact, conclusions regarding all material issues of law or discretion, as well as reasons therefore. The report shall be served on the applicant or permittee, the department, and all persons who request copies in advance in writing. The report will be available for public inspection at the department's office in Santa Fe and at the field office closest to the point of the proposed discharge.

L. The secretary shall issue a decision in the matter no later than thirty (30) days of receipt of the hearing report. The decision shall be served and made available for inspection pursuant to Subsection K of this section.

M. Any person who testifies at the hearing or submits a written statement for the record will be considered a participant for purposes of Subsection 20.6.2.3113 NMAC and NMSA 1978, Section 74-6-5.N.

[2-18-77, 12-1-95, 11-15-96; 20.6.2.3110 NMAC - Rn, 20 NMAC 6.2.III.3110, 1-15-01; A, 12-1-01]

20.6.2.3111 TRANSFER OF DISCHARGE PERMIT: No purported transfer of any discharge permit shall be effective to create, alter or extinguish any right or responsibility of any person subject to this Part, unless the following transfer requirements are met:

A. Prior to any transfer of ownership, control, or possession (whether by lease, conveyance or otherwise) of a facility with a discharge permit, the transferror shall notify the transferee in writing of the existence of the discharge permit, and shall deliver or send by certified mail to the department a copy of such written notification, together with a certification or other proof that such notification has in fact been received by the transferee.

B. Upon receipt of such notification, the transferee shall have the duty to inquire into all of the provisions and requirements contained in such discharge permit, and the transferee shall be charged with notice of all such provisions and requirements as they appear of record in the department's file or files concerning such discharge permit.

C. Until both ownership and possession of the facility have been transferred to the transferee, the transferor shall continue to be responsible for any discharge from the facility.

D. Upon assuming either ownership or possession of the facility, the transferee shall have the same rights and responsibilities under the discharge permit as were applicable to the transferor.

E. Nothing in this section or in this part shall be construed to relieve any person of responsibility or liability for any act or omission which occurred while that person owned, controlled or was in possession of the facility.

[2-18-77, 12-24-87, 12-1-95, 11-15-96; 20.6.2.3111 NMAC - Rn, 20 NMAC 6.2.III.3111, 1-15-01; A, 12-1-01]

20.6.2.3112 APPEALS OF SECRETARY'S DECISIONS:

A. If the secretary approves, approves subject to conditions, or disapproves a proposed discharge plan, renewal or modification, or modifies or terminates a discharge permit, appeal therefrom shall be in accordance with the provisions of Sections 74-6-5(N), (O) and (P), NMSA 1978. The filing of an appeal does not act as a stay of any provision of the Act, the regulations, or any permit issued pursuant to the Act, unless otherwise ordered by the secretary or the commission.

B. If the secretary determines that a discharger is not exempt from obtaining a discharge permit, or that the material to be discharged contains any toxic pollutant as defined in 20.6.2.7 NMAC, which is not included in the numerical standards of 20.6.2.3103 NMAC, then the discharger may appeal such determination by filing with the commission's secretary a notice of appeal to the commission within thirty days after receiving the secretary's written determination, and the appeal therefrom and any action of the commission thereon shall be in accordance with the provisions of Sections 74-6-5(O), (P), (Q), (R) and (S) NMSA 1978.

C. Proceedings before the commission shall be conducted in accordance with the commission's adjudicatory procedures, 20 NMAC 1.3.

[2-18-77, 7-2-81, 12-1-95, 11-15-96; 20.6.2.3112 NMAC - Rn, 20 NMAC 6.2.III.3112, 1-15-01; A, 12-1-01; A, 7-16-06]

20.6.2.3113 APPEALS OF COMMISSION DECISIONS: An applicant, permittee or a person who participated in a permitting action and who is adversely affected by such action may appeal the decision of the com-mission in accordance with the provisions of Section 74-6-7(A), NMSA 1978.

[2-18-77, 12-1-95, 11-15-96; 20.6.2.3113 NMAC - Rn, 20 NMAC 6.2.III.3113, 1-15-01; A, 12-1-01]

20.6.2.3114 FEES:

A. FEE AMOUNT AND SCHEDULE OF PAYMENT - Every facility submitting a discharge permit application for approval or renewal shall pay the permit fees specified in Table 1 of this section and shall pay a filing fee as specified in Table 2 of this section to the Water Quality Management Fund. Every facility submitting a request for temporary permission to discharge pursuant to Subsection B of Section 20.6.2.3106 NMAC, or financial assurance pursuant to Paragraph 11 of Subsection A of Section 20.6.2.3107 NMAC shall pay the fees specified in Table 2 of this section to the Water Quality Management Fund.

B. Facilities applying for discharge permits which are subsequently withdrawn or denied shall pay one-half of the permit fee at the time of denial or withdrawal.

C. Every facility submitting an application for discharge permit modification will be assessed a filing fee plus one-half of the permit fee. Applications for both renewal and modification will pay the filing fee plus the permit fee.

D. If the secretary requires a discharge permit modification as a component of an enforcement action, the facility shall pay the applicable discharge permit modification fee. If the secretary requires a discharge permit modification outside the context of an enforcement action, the facility shall not be assessed a fee.

E. The secretary may waive or reduce fees for discharge permit modifications or renewals which require little or no cost for investigation or issuance.

F. Facilities shall pay the filing fee at the time of discharge permit application. The filing fee is nonrefundable. The required permit fees may be paid in a single payment at the time of discharge permit approval or in equal installments over the term of the discharge permit. Installment payments shall be remitted yearly, with the first installment due on the date of discharge permit approval. Subsequent installment payments shall be remitted yearly thereafter. The discharge permit or discharge permit application review of any facility shall be suspended or terminated if the facility fails to submit an installment payment by its due date.

G. Every three years beginning in 2004, the department shall review the fees specified in Table 1 and 2 of this section and shall provide a report to the commission. The department shall revise the fees as necessary in accordance with Section 74-6-5(J), NMSA 1978.

Permit Fee

20.6.2.3114 TABLE 1 (gpd=gallons per day)	
Agriculture <10,000 gpd	$ 1,150
Agriculture 10,000 to 49,999 gpd	$ 2,300
Agriculture 50,000 to 99,999 gpd	$ 3,450
Agriculture 100,000 gpd or greater	$ 4,600
Domestic Waste <10,000 gpd	$ 1,150
Domestic Waste 10,000 to 49,999 gpd	$ 2,300
Domestic Waste 50,000 to 99,999 gpd	$ 3,450
Domestic Waste 100,000 to 999,999 gpd	$ 4,600
Domestic Waste 1,000,000 to 9,999,999 gpd	$ 7,000
Domestic Waste 10,000,000 gpd or greater	$ 9,200
Food Processing <10,000 gpd	$ 1,150
Food Processing 10,000 to 49,999 gpd	$ 2,300
Food Processing 50,000 to 99,999 gpd	$ 3,450
Food Processing 100,000 to 999,999 gpd	$ 4,600
Food Processing 1,000,000 or greater	$ 7,000
Grease/Septage surface disposal <10,000 gpd	$ 1,725
Grease/Septage surface disposal 10,000 gpd or greater	$ 3,450
Industrial <10,000 gpd; or <10,000 yd^3 of contaminated solids	$ 1,725
Industrial 10,000 to 99,999 gpd; or 10,000 to 99,999 yd^3 of contaminated solids	$ 3,450
Industrial 100,000 to 999,999 gpd; or 100,000 to 999,999 yd^3 of contaminated solids or greater	$ 6,900
Industrial 1,000,000 gpd or greater; or 1,000,000 yd^3 of contaminated solids or greater	$10,350
Discharge of remediation system effluent - remediation plan approved under separate regulatory authority	$ 1,600
Mining dewatering	$ 3,250
Mining leach dump	$13,000
Mining tailings	$13,000
Mining waste rock	$13,000
Mining in-situ leach (except salt) and old stope leaching	$13,000
Mining other (mines with minimal environmental impact, post closure operation and maintenance, evaporation lagoons and land application at uranium mines)	$ 4,750
Gas Compressor Stations 0 to 1000 Horsepower	$ 400
Gas Compressor Stations >1001 Horsepower	$ 1,700
Gas Processing Plants	$ 4,000
Injection Wells: Class I	$ 4,500
Injection Wells: Class III and Geothermal	$ 1,700
Oil and Gas Service Companies	$ 1,700
Refineries	$ 8,400
Crude Pump Station	$ 1,200
Underground Gas Storage	$ 1,700
Abatement of ground water and vadose zone contamination at oil and gas Sites	$ 2,600
General permit	$ 600

***20.6.2.3114* Table 2**

	Fee Amount
Filing fee	$ 100

Temporary permission	$	150
Financial assurance: approval of instrument	greater of $250 or .01%	
Financial assurance: annual review	greater of $100 or .001%	

[8-17-91, 12-1-95; 20.6.2.3114, Rn & A, 20 NMAC 6.2.III.3114, 01-01-01]

20.6.2.3115 - 20.6.2.3999: [RESERVED]
[12-1-95; 20.6.2.3115 - 20.6.2.3999 NMAC - Rn, 20 NMAC 6.2.III.3115-4100, 1-15-01]

20.6.2.4000 PREVENTION AND ABATEMENT OF WATER POLLUTION:
[12-1-95; 20.6.2.4000 NMAC - Rn, 20 NMAC 6.2.IV, 1-15-01]

20.6.2.4001 - 20.6.2.4100: [RESERVED]
[12-1-95; 20.6.2.4001 - 20.6.2.4100 NMAC - Rn, 20 NMAC 6.2.III.3115-4100, 1-15-01]

20.6.2.4101 PURPOSE:

A. The purposes of Sections 20.6.2.4000 through 20.6.2.4115 NMAC are to:

(1) Abate pollution of subsurface water so that all ground water of the State of New Mexico which has a background concentration of 10,000 mg/L or less TDS, is either remediated or protected for use as domestic and agricultural water supply, and to remediate or protect those segments of surface waters which are gaining because of subsurface-water inflow, for uses designated in the Water Quality Standards for Interstate and Intrastate Streams in New Mexico (20.6.4 NMAC); and

(2) Abate surface-water pollution so that all surface waters of the State of New Mexico are remediated or protected for designated or attainable uses as defined in the Water Quality Standards for Interstate and Intrastate Streams in New Mexico (20.6.4 NMAC).

B. If the background concentration of any water contaminant exceeds the standard or requirement of Subsections A, B and C of Section 20.6.2.4103 NMAC, pollution shall be abated by the responsible person to the background concentration.

C. The standards and requirements set forth in Section 20.6.2.4103 NMAC are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.

[12-1-95; 20.6.2.4101 NMAC - Rn, 20 NMAC 6.2.IV.4101, 1-15-01]

20.6.2.4102: [RESERVED]
[12-1-95; 20.6.2.4102 NMAC - Rn, 20 NMAC 6.2.IV.4102, 1-15-01]

20.6.2.4103 ABATEMENT STANDARDS AND REQUIREMENTS:

A. The vadose zone shall be abated so that water contaminants in the vadose zone shall not be capable of contaminating ground water or surface water, in excess of the standards in Subsections B and C below, through leaching, percolation or as the water table elevation fluctuates.

B. Ground-water pollution at any place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/L or less, shall be abated to conform to the following standards:

(1) toxic pollutant(s) as defined in Section 20.6.2.1101 NMAC shall not be present; and

(2) the standards of Section 20.6.2.3103 NMAC shall be met.

C. Surface-water pollution shall be abated to conform to the Water Quality Standards for Interstate and Intrastate Streams in New Mexico (20.6.4 NMAC).

D. Subsurface-water and surface-water abatement shall not be considered complete until a minimum of eight (8) consecutive quarterly samples from all compliance sampling stations approved by the secretary meet the abatement standards of Subsections A, B and C of this section. Abatement of water contaminants measured in solid-matrix samples of the vadose zone shall be considered complete after one-time sampling from compliance stations approved by the secretary.

E. Technical Infeasibility.

(1) If any responsible person is unable to fully meet the abatement standards set forth in Subsections A and B of this section using commercially accepted abatement technology pursuant to an approved abatement plan, he may propose that abatement standards compliance is technically infeasible. Technical infeasibility proposals involving the use of experimental abatement technology shall be considered at the discretion of the secretary. Technical infeasibility may be demonstrated by a statistically valid extrapolation of the decrease in concentration(s) of any water contaminant(s) over the remainder of a twenty (20) year period, such that projected future reductions during that time would be less than 20 percent of the concentration(s) at the time technical infeasibility is proposed. A statistically valid decrease cannot be demonstrated by fewer than eight (8) consecutive quarters. The technical infeasibility proposal shall include a substitute abatement standard (s) for those contaminants that is/are technically feasible. Abatement standards for all other water contaminants not demonstrated to be technically infeasible shall be met.

(2) In no event shall a proposed technical infeasibility demonstration be approved by the secretary for any

water contaminant if its concentration is greater than 200 percent of the abatement standard for that contaminant.

(3) If the secretary cannot approve any or all portions of a proposed technical infeasibility demonstration because the water contaminant concentration(s) is/are greater than 200 percent of the abatement standard(s) for each contaminant, the responsible person may further pursue the issue of technical infeasibility by filing a petition with the commission seeking:

(a) approval of alternate abatement standard(s) pursuant to Subsection F of this section; or

(b) granting of a variance pursuant to Section 20.6.2.1210 NMAC.

F. Alternative Abatement Standards.

(1) At any time during or after the submission of a Stage 2 abatement plan, the responsible person may file a petition seeking approval of alternative abatement standard(s) for the standards set forth in Subsections A and B of this section. The commission may approve alternative abatement standard(s) if the petitioner demonstrates that:

(a) compliance with the abatement standard(s) is/are not feasible, by the maximum use of technology within the economic capability of the responsible person; OR there is no reasonable relationship between the economic and social costs and benefits (including attainment of the standard(s) set forth in Section 20.6.2.4103 NMAC) to be obtained;

(b) the proposed alternative abatement standard(s) is/are technically achievable and cost-benefit justifiable; and

(c) compliance with the proposed alternative abatement standard(s) will not create a present or future hazard to public health or undue damage to property.

(2) The petition shall be in writing, filed with the secretary. The petition shall specify, in addition to the information required by Subsection A of Section 20.6.2.1210 NMAC, the water contaminant(s) for which alternative standard(s) is/are proposed, the alternative standard(s) proposed, the three-dimensional body of water pollution for which approval is sought, and the extent to which the abatement standard(s) set forth in Section 20.6.2.4103 NMAC is/are now, and will in the future be, violated. The petition may include a transport, fate and risk assessment in accordance with accepted methods, and other information as the petitioner deems necessary to support the petition.

(3) The commission shall review a petition for alternative abatement standards in accordance with the procedures for review of a variance petition provided in the commission's adjudicatory procedures, 20.1.3 NMAC.

[12-1-95, 11-15-96; 20.6.2.4103 NMAC - Rn, 20 NMAC 6.2.IV.4103, 1-15-01]

20.6.2.4104 ABATEMENT PLAN REQUIRED:

A. Unless otherwise provided by this Part, all responsible persons who are abating, or who are required to abate, water pollution in excess of the standards and requirements set forth in Section 20.6.2.4103 NMAC of this Part shall do so pursuant to an abatement plan approved by the secretary. When an abatement plan has been approved, all actions leading to and including abatement shall be consistent with the terms and conditions of the abatement plan.

B. In the event of a transfer of the ownership, control or possession of a facility for which an abatement plan is required or approved, where the transferor is a responsible person, the transferee also shall be considered a responsible person for the duration of the abatement plan, and may jointly share the responsibility to conduct the actions required by this Part with other responsible persons. The transferor shall notify the transferee in writing, at least thirty (30) days prior to the transfer, that an abatement plan has been required or approved for the facility, and shall deliver or send by certified mail to the secretary a copy of such notification together with a certificate or other proof that such notification has in fact been received by the transferee. The transferor and transferee may agree to a designated responsible person who shall assume the responsibility to conduct the actions required by this Part. The responsible persons shall notify the secretary in writing if a designated responsible person is agreed upon. If the secretary determines that the designated responsible person has failed to conduct the actions required by this Part, the secretary shall notify all responsible persons of this failure in writing and allow them thirty (30) days, or longer for good cause shown, to conduct the required actions before issuing a compliance order pursuant to Section 20.6.2.1220 NMAC.

C. If the source of the water pollution to be abated is a facility that operated under a discharge plan, the secretary may require the responsible person(s) to submit a financial assurance plan which covers the estimated costs to conduct the actions required by the abatement plan. Such a financial assurance plan shall be consistent with any financial assurance requirements adopted by the commission.

[12-1-95; 20.6.2.4104 NMAC - Rn, 20 NMAC 6.2.IV.4104, 1-15-01]

20.6.2.4105 EXEMPTIONS FROM ABATEMENT PLAN REQUIREMENTS:

A. Except as provided in Subsection B of this Section, Sections 20.6.2.4104 and 20.6.2.4106 NMAC do not apply to a person who is abating water pollution:

(1) from a storage tank, under the authority of the Petroleum Storage Tank Regulations (20.5 NMAC) adopted by the New Mexico Environmental Improvement Board, or in accordance with the New Mexico Ground Water Protection Act;

(2) under the authority of the U.S. Environmental Protection Agency pursuant to either the federal Comprehensive Environmental Response, Compensation and Liability Act, and amendments, or the Resource Conservation and Recovery Act;

(3) under the authority of the secretary pursuant to the Hazardous Waste Management Regulations (20.4.1

NMAC) adopted by the New Mexico Environmental Improvement Board;

(4) under the authority of the U.S. Nuclear Regulatory Commission or the U.S. Department of Energy pursuant to the Atomic Energy Act;

(5) from a solid waste landfill, under the authority of the secretary pursuant to the Solid Waste Management Regulations (20.9.1 NMAC) adopted by the N.M. Environmental Improvement Board;

(6) under the authority of a ground-water discharge plan approved by the secretary, provided that such abatement is consistent with the requirements and provisions of Sections 20.6.2.4101, 20.6.2.4103, Subsections C and E of Section 20.6.2.4106, Sections 20.6.2.4107 and 20.6.2.4112 NMAC;

(7) under the authority of a Letter of Understanding, Settlement Agreement or Administrative Order on Consent signed by the secretary prior to December 1, 1995, provided that abatement is being performed in full compliance with the terms of the Letter of Understanding, Settlement Agreement or Administrative Order on Consent; and

(8) on an emergency basis, or while abatement plan approval is pending, or in a manner that will result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within one hundred and eighty (180) days after notice is required to be given pursuant to Paragraph (1) of Subsection A of Section 20.6.2.1203 NMAC, provided that the delegated agency does not object to the abatement action pursuant to Paragraphs (6) and (7) of Subsection A of Section 20.6.2.1203 NMAC.

B. If the secretary determines that abatement of water pollution subject to Subsection A of this section will not meet the standards of Subsections B and C of Section 20.6.2.4103 NMAC, or that additional action is necessary to protect health, welfare, environment or property, the secretary may notify a responsible person, by certified mail, to submit an abatement plan pursuant to Section 20.6.2.4104 and Subsection A of Section 20.6.2.4106 NMAC. The notification shall state the reasons for the secretary's determination. In any appeal of the secretary's determination under this Section, the secretary shall have the burden of proof.

C. Sections 20.6.2.4104 and 20.6.2.4106 NMAC do not apply to the following activities:

(1) Discharges subject to an effective and enforceable National Pollutant Discharge Elimination System (NPDES) permit;

(2) Land application of ground water contaminated with nitrogen originating from human or animal waste and not otherwise exceeding the standards of Subsection A of Section 20.6.2.3103 NMAC and not containing a toxic pollutant as defined in Section 20.6.2.1101 NMAC, provided that it is done in compliance with a discharge plan approved by the secretary;

(3) Abatement of water pollution resulting from the withdrawal and decontamination or blending of polluted water for use as a public or private drinking-water supply, by any person other than a responsible person, unless the secretary determines that a hazard to public health may result; and

(4) Reasonable operation and maintenance of irrigation and flood control facilities.

[12-1-95; 20.6.2.4105 NMAC - Rn, 20 NMAC 6.2.IV.4105, 1-15-01; A, 10/15/03]

20.6.2.4106 ABATEMENT PLAN PROPOSAL:

A. Except as provided for in Section 20.6.2.4105 NMAC, a responsible person shall, within sixty (60) days of receipt of written notice from the secretary that an abatement plan is required, submit an abatement plan proposal to the secretary for approval. For good cause shown, the secretary may allow for a total of one hundred and twenty (120) days to prepare and submit the abatement plan proposal.

B. Voluntary Abatement:

(1) Any person wishing to abate water pollution in excess of the standards and requirements set forth in Section 20.6.2.4103 NMAC may submit a Stage 1 abatement plan proposal to the secretary for approval. Following approval by the secretary of a final site investigation report prepared pursuant to Stage 1 of an abatement plan, any person may submit a Stage 2 abatement plan proposal to the secretary for approval.

(2) Following approval of a Stage 1 or Stage 2 abatement plan proposal under Paragraph (1) of Subsection B of this Section, the person submitting the approved plan shall be a responsible person under Sections 20.6.2.4000 through 20.6.2.4115 NMAC for the purpose of performing the approved Stage 1 or Stage 2 abatement plan. Nothing in this Section shall preclude the secretary from applying Paragraph (9) of Subsection A of Section 20.6.2.1203 NMAC to a responsible person if applicable.

C. Stage 1 Abatement Plan: The purpose of Stage 1 of the abatement plan shall be to design and conduct a site investigation that will adequately define site conditions, and provide the data necessary to select and design an effective abatement option. Stage 1 of the abatement plan may include, but not necessarily be limited to, the following information depending on the media affected, and as needed to select and implement an expeditious abatement option:

(1) Descriptions of the site, including a site map, and of site history including the nature of the discharge that caused the water pollution, and a summary of previous investigations;

(2) Site investigation workplan to define:

(a) site geology and hydrogeology, the vertical and horizontal extent and magnitude of vadose-zone and ground-water contamination, subsurface hydraulic parameters including hydraulic conductivity, transmissivity, storativity, and rate and direction of contaminant migration, inventory of water wells inside and within one (1) mile from the perimeter of the three-dimensional body where the standards set forth in Subsection B of Section 20.6.2.4103 NMAC are exceeded, and

location and number of such wells actually or potentially affected by the pollution; and

(b) surface-water hydrology, seasonal stream flow characteristics, ground-water/surface-water relationships, the vertical and horizontal extent and magnitude of contamination and impacts to surface water and stream sediments. The magnitude of contamination and impacts on surface water may be, in part, defined by conducting a biological assessment of fish, benthic macroinvertebrates and other wildlife populations. Seasonal variations should be accounted for when conducting these assessments.

(3) Monitoring program, including sampling stations and frequencies, for the duration of the abatement plan that may be modified, after approval by the secretary, as additional sampling stations are created;

(4) Quality assurance plan, consistent with the sampling and analytical techniques listed in Subsection B of Section 20.6.2.3107 NMAC and with Section 20.6.4.10 NMAC of the Water Quality Standards for Interstate and Intrastate Streams in New Mexico (20.6.4 NMAC), for all work to be conducted pursuant to the abatement plan;

(5) Site health and safety plan for all work to be performed pursuant to the abatement plan;

(6) A schedule for all Stage 1 abatement plan activities, including the submission of summary quarterly progress reports, and the submission, for approval by the secretary, of a detailed final site investigation report; and

(7) Any additional information that may be required to design and perform an adequate site investigation.

D. Stage 2 Abatement Plan: Any responsible person shall submit a Stage 2 abatement plan proposal to the secretary for approval within sixty (60) days, or up to one hundred and twenty (120) days for good cause shown, after approval by the secretary of the final site investigation report prepared pursuant to Stage 1 of the abatement plan.

E. The purpose of Stage 2 of the abatement plan shall be to select and design, if necessary, an abatement option that, when implemented, will result in attainment of the abatement standards and requirements set forth in Section 20.6.2.4103 NMAC, including post-closure maintenance activities. Stage 2 of the abatement plan should include, at a minimum, the following information:

(1) Brief description of the current situation at the site;

(2) Development and assessment of abatement options;

(3) Description, justification and design, if necessary, of preferred abatement option;

(4) Modification, if necessary, of the monitoring program approved pursuant to Stage 1 of the abatement plan, including the designation of pre and post abatement-completion sampling stations and sampling frequencies to be used to demonstrate compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC;

(5) Site maintenance activities, if needed, proposed to be performed after termination of abatement activities;

(6) A schedule for the duration of abatement activities, including the submission of summary quarterly progress reports;

(7) A public notification proposal designed to satisfy the requirements of Subsections B and C of Sections 20.6.2.4108 and 20.6.2.4108 NMAC; and

(8) Any additional information that may be reasonably required to select, describe, justify and design an effective abatement option.

[12-1-95; 20.6.2.4106 NMAC - Rn, 20 NMAC 6.2.IV.4106, 1-15-01]

20.6.2.4107 OTHER REQUIREMENTS:

A. Any responsible person shall allow any authorized representative of the secretary to:

(1) upon presentation of proper credentials, enter the facility at reasonable times;

(2) inspect and copy records required by an abatement plan;

(3) inspect any treatment works, monitoring and analytical equipment;

(4) sample any wastes, ground water, surface water, stream sediment, plants, animals, or vadose-zone material including vadose-zone vapor;

(5) use monitoring systems and wells under such responsible person's control in order to collect samples of any media listed in Paragraph (4) of Subsection A of this section; and

(6) gain access to off-site property not owned or controlled by such responsible person, but accessible to such responsible person through a third-party access agreement, provided that it is allowed by the agreement.

B. Any responsible person shall provide the secretary, or a representative of the secretary, with at least four (4) working days advance notice of any sampling to be performed pursuant to an abatement plan, or any well plugging, abandonment or destruction at any facility where an abatement plan has been required.

C. Any responsible person wishing to plug, abandon or destroy a monitoring or water supply well within the perimeter of the 3-dimensional body where the standards set forth in Subsection B of Section 20.6.2.4103 NMAC are exceeded, at any facility where an abatement plan has been required, shall propose such action by certified mail to the secretary for approval, unless such approval is required from the State Engineer. The proposed action shall be designed to prevent water pollution that could result from water contaminants migrating through the well or borehole. The proposed action shall not take place without written approval from the secretary, unless written approval or disapproval is not received by the responsible person within thirty (30) days of the date of receipt of the proposal.

[12-1-95; 20.6.2.4107 NMAC - Rn, 20 NMAC 6.2.IV.4107, 1-15-01]

20.6.2.4108 PUBLIC NOTICE AND PARTICIPATION:

A. Within thirty (30) days of filing of a Stage 1 abatement plan proposal, the secretary shall issue a news release summarizing:

(1) the source, extent, magnitude and significance of water pollution, as known at that time;

(2) the proposed Stage 1 abatement plan investigation; and

(3) the name and telephone number of an agency contact who can provide additional information.

B. Within thirty (30) days of filing of a Stage 2 abatement plan proposal, or proposed significant modification of Stage 2 of the abatement plan, any responsible person shall provide to the secretary proof of public notice of the abatement plan to the following persons:

(1) the public, who shall be notified through publication of a notice in newspapers of general circulation in this state and in the county where the abatement will occur and, in areas with large percentages of non-English speaking people, through the mailing of the public notice in English to a bilingual radio station serving the area where the abatement will occur with a request that it be aired as a public service announcement in the predominant non-English language of the area;

(2) those persons, as identified by the secretary, who have requested notification, who shall be notified by mail;

(3) the New Mexico Trustee for Natural Resources, and any other local, state or federal governmental agency affected, as identified by the secretary, which shall be notified by certified mail;

(4) owners and residents of surface property located inside, and within one (1) mile from, the perimeter of the geographic area where the standards and requirements set forth in Section 20.6.2.4103 NMAC are exceeded who shall be notified by a means approved by the secretary; and

(5) the Governor or President of each Indian Tribe, Pueblo or Nation within the state of New Mexico, as identified by the secretary, who shall be notified by mail.

C. The public notice shall include, as approved in advance by the secretary:

(1) name and address of the responsible person;

(2) location of the proposed abatement;

(3) brief description of the nature of the water pollution and of the proposed abatement action;

(4) brief description of the procedures followed by the secretary in making a final determination;

(5) statement on the comment period;

(6) statement that a copy of the abatement plan can be viewed by the public at the department's main office or at the department field office for the area in which the discharge occurred;

(7) statement that written comments on the abatement plan, and requests for a public meeting or hearing that include the reasons why a meeting or hearing should be held, will be accepted for consideration if sent to the secretary within sixty (60) days after the determination of administrative completeness; and

(8) address and phone number at which interested persons may obtain further information.

D. A public meeting or hearing may be held if the secretary determines there is significant public interest. Notice of the time and place of the meeting or hearing shall be given at least thirty (30) days prior to the meeting or hearing pursuant to Subsections A and B above. The secretary may appoint a meeting facilitator or hearing officer. The secretary may require the responsible person to prepare for approval by the secretary a fact sheet, to be distributed at the public meeting or hearing and afterwards upon request, written in English and Spanish, describing site history, the nature and extent of water pollution, and the proposed abatement. The record of the meeting or hearing, requested under this Section, consists of a tape recorded or transcribed session, provided that the cost of a court recorder shall be paid by the person requesting the transcript. If requested by the secretary, the responsible person will provide a translator approved by the secretary at a public meeting or hearing conducted in a locale where testimony from non-English speaking people can reasonably be expected. At the meeting or hearing, all interested persons shall be given a reasonable chance to submit data, views or arguments orally or in writing, and to ask questions of the secretary or the secretary's designee and of the responsible person, or their authorized representatives.

[12-1-95; 20.6.2.4108 NMAC - Rn, 20 NMAC 6.2.IV.4108, 1-15-01]

20.6.2.4109 SECRETARY APPROVAL OR NOTICE OF DEFICIENCY OF SUBMITTALS:

A. The secretary shall, within sixty (60) days of receiving a Stage 1 abatement plan proposal, a site investigation report, a technical infeasibility demonstration, or an abatement completion report, approve the document, or notify the responsible person of the document's deficiency, based upon the information available.

B. The secretary shall, within thirty (30) days of receiving a fact sheet, approve or notify the responsible person of the document's deficiency, based upon the information available.

C. If no public meeting or hearing is held pursuant to Subsection D of Section 20.6.2.4108 NMAC, then the secretary shall, within ninety (90) days of receiving a Stage 2 abatement plan proposal, approve the plan, or notify the responsible person of the plan's deficiency, based upon the information available.

D. If a public meeting or hearing is held pursuant to Subsection D of Section 20.6.2.4108, then the secretary shall, within sixty (60) days of receipt of all required information, approve Stage 2 of the abatement plan proposal, or notify the responsible person of the plan's deficiency, based upon the information contained in the plan and information submitted at the meeting or hearing.

E. If the secretary notifies a responsible person of any deficiencies in a site investigation report, or in a

Stage 1 or Stage 2 abatement plan proposal, the responsible person shall submit a modified document to cure the deficiencies specified by the secretary within thirty (30) days of receipt of the notice of deficiency. The responsible person shall be in violation of Sections 20.6.2.4000 through 20.6.2.4115 NMAC if he fails to submit a modified document within the required time, or if the modified document does not make a good faith effort to cure the deficiencies specified by the secretary.

F. Provided that the other requirements of this Part are met and provided further that Stage 2 of the abatement plan, if implemented, will result in the standards and requirements set forth in Section 20.6.2.4103 NMAC being met within a schedule that is reasonable given the particular circumstances of the site, the secretary shall approve the plan.
[12-1-95; 20.6.2.4109 NMAC - Rn, 20 NMAC 6.2.IV.4109, 1-15-01]

20.6.2.4110 INVESTIGATION AND ABATEMENT: Any responsible person who receives approval for Stage 1 and/or Stage 2 of an abatement plan shall conduct all investigation, abatement, monitoring and reporting activity in full compliance with Sections 20.6.2.4000 through 20.6.2.4115 NMAC and according to the terms and schedules contained in the approved abatement plans.
[12-1-95; 20.6.2.4110 NMAC - Rn, 20 NMAC 6.2.IV.4110, 1-15-01]

20.6.2.4111 ABATEMENT PLAN MODIFICATION:

A. Any approved abatement plan may be modified, at the written request of the responsible person, in accordance with Sections 20.6.2.4000 through 20.6.2.4115 NMAC, and with written approval of the secretary.

B. If data submitted pursuant to any monitoring requirements specified in the approved abatement plan or other information available to the secretary indicates that the abatement action is ineffective, or is creating unreasonable injury to or interference with health, welfare, environment or property, the secretary may require a responsible person to modify an abatement plan within the shortest reasonable time so as to effectively abate water pollution which exceeds the standards and requirements set forth in Section 20.6.2.4103 NMAC, and to abate and prevent unreasonable injury to or interference with health, welfare, environment or property.
[12-1-95; 20.6.2.4111 NMAC - Rn, 20 NMAC 6.2.IV.4111, 1-15-01]

20.6.2.4112 COMPLETION AND TERMINATION:

A. Abatement shall be considered complete when the standards and requirements set forth in Section 20.6.2.4103 NMAC are met. At that time, the responsible person shall submit an abatement completion report, documenting compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC, to the secretary for approval. The abatement completion report also shall propose any changes to long term monitoring and site maintenance activities, if needed, to be performed after termination of the abatement plan.

B. Provided that the other requirements of this Part are met and provided further that the standards and requirements set forth in Section 20.6.2.4103 NMAC have been met, the secretary shall approve the abatement completion report. When the secretary approves the abatement completion report, he shall also notify the responsible person in writing that the abatement plan is terminated.
[12-1-95; 20.6.2.4112 NMAC - Rn, 20 NMAC 6.2.IV.4112, 1-15-01]

20.6.2.4113 DISPUTE RESOLUTION: In the event of any technical dispute regarding the requirements of Paragraph (9) of Subsection A and Subsection E of Section 20.6.2.1203, Sections 20.6.2.4103, 20.6.2.4105, 20.6.2.4106, 20.6.2.4111 or 20.6.2.4112 NMAC, including notices of deficiency, the responsible person may notify the secretary by certified mail that a dispute has arisen, and desires to invoke the dispute resolution provisions of this Section, provided that such notification must be made within thirty (30) days after receipt by the responsible person of the decision of the secretary that causes the dispute. Upon such notification, all deadlines affected by the technical dispute shall be extended for a thirty (30) day negotiation period, or for a maximum of sixty (60) days if approved by the secretary for good cause shown. During this negotiation period, the secretary or his/her designee and the responsible person shall meet at least once. Such meeting(s) may be facilitated by a mutually agreed upon third party, but the third party shall assume no power or authority granted or delegated to the secretary by the Water Quality Act or by the commission. If the dispute remains unresolved after the negotiation period, the decision of secretary shall be final.
[12-1-95; 20.6.2.4113 NMAC - Rn, 20 NMAC 6.2.IV.4113, 1-15-01]

20.6.2.4114 APPEALS FROM SECRETARY'S DECISIONS:

A. If the secretary determines that an abatement plan is required pursuant to Paragraph (9) of Subsection A of 20.6.2.1203, Paragraph (4) of Subsection E of 20.6.2.3109, or Subsection B of 20.6.2.4105 NMAC, approves or provides notice of deficiency of a proposed abatement plan, technical infeasibility demonstration or abatement completion report, or modifies or terminates an approved abatement plan, he shall provide written notice of such action by certified mail to the responsible person and any person who participated in the action.

B. Any person who participated in the action before the secretary and who is adversely affected by the action listed in Subsection A of 20.6.2.4114 NMAC may file a petition requesting a review before the commission.

C. The petition shall be made in writing to the commission and shall be filed with the commission's secretary within thirty (30) days after receiving notice of the secretary's action. The petition shall specify the portions of the

action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered to the secretary, and to the applicant or permittee if the petitioner is not the applicant or permittee, and attach a copy of the action for which review is sought. Unless a timely petition for hearing is made, the secretary's action is final.

D. The proceedings before the commission shall be conducted as provided in the commission's adjudicatory procedures, 20 NMAC 1.3.

E. The cost of the court reporter for the hearing shall be paid by the petitioner.

F. The appeal provisions do not relieve the owner, operator or responsible person of their obligations to comply with any federal or state laws or regulations.

[12-1-95, 11-15-96; 20.6.2.4114 NMAC - Rn, 20 NMAC 6.2.IV.4114, 1-15-01; A, 7-16-06]

20.6.2.4115 COURT REVIEW OF COMMISSION DECISIONS: Court review of commission decisions shall be as provided by law.

[12-1-95; 20.6.2.4115 NMAC - Rn, 20 NMAC 6.2.IV.4115, 1-15-01]

20.6.2.4116 - 20.6.2.4999: [RESERVED]

[12-1-95; 20.6.2.4116 - 20.6.2.4999 NMAC - Rn, 20 NMAC 6.2.IV.4116-5100, 1-15-01]

20.6.2.5000 UNDERGROUND INJECTION CONTROL:

[12-1-95; 20.6.2.5000 NMAC - Rn, 20 NMAC 6.2.V, 1-15-01]

20.6.2.5001 PURPOSE: The purpose of Sections 20.6.2.5000 through 20.6.2.5299 NMAC controlling discharges from underground injection control wells is to protect all ground water of the State of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.5000 through 20.6.2.5299 NMAC include notification requirements, and requirements for discharges directly into the subsurface through underground injection control wells.

[20.6.2.5001 NMAC - N, 12-1-01]

20.6.2.5002 UNDERGROUND INJECTION CONTROL WELL CLASSIFICATIONS:

A. Underground injection control wells include the following.

(1) Any dug hole or well that is deeper than its largest surface dimension, where the principal function of the hole is emplacement of fluids.

(2) Any septic tank or cesspool used by generators of hazardous waste, or by owners or operators of hazardous waste management facilities, to dispose of fluids containing hazardous waste.

(3) Any subsurface distribution system, cesspool or other well which is used for the injection of wastes.

B. Underground injection control wells are classified as follows:

(1) Class I wells inject fluids beneath the lowermost formation that contains 10,000 milligrams per liter or less TDS. Class I hazardous or radioactive waste injection wells inject fluids containing any hazardous or radioactive waste as defined in 74-4-3 and 74-4A-4 NMSA 1978, including any combination of these wastes. Class I non-hazardous waste injection wells inject non-hazardous and non-radioactive fluids, and they inject naturally-occurring radioactive material (NORM) as provided by Section 20.3.1.1407 NMAC.

(2) Class II wells inject fluids associated with oil and gas recovery.

(3) Class III wells inject fluids for extraction of minerals or other natural resources, including sulfur, uranium, metals, salts or potash by in situ extraction. This classification includes only in situ production from ore bodies that have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.

(4) Class IV wells inject fluids containing any radioactive or hazardous waste as defined in 74-4-3 and 74-4A-4 NMSA 1978, including any combination of these wastes, above or into a formation that contains 10,000 mg/l or less TDS.

(5) Class V wells inject a variety of fluids and are those wells not included in Class I, II, III or IV. Types of Class V wells include, but are not limited to, the following:

(a) Domestic liquid waste injection wells

(i) domestic liquid waste disposal wells used to inject greater than 2,000 gallons per day of treated domestic liquid waste through subsurface fluid distribution systems or vertical wells;

(ii) septic system wells used to emplace greater than 2,000 gallons per day of domestic liquid waste into the subsurface, which are comprised of a septic tank and subsurface fluid distribution system;

(iii) large capacity cesspools used to inject greater than 2,000 gallons per day of domestic liquid waste, including drywells that sometimes have an open bottom and/or perforated sides.

(b) Industrial waste injection wells

(i) air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling;

(ii) dry wells used for the injection of wastes into a subsurface formation;

(iii) geothermal energy injection wells associated with the recovery of geothermal energy for

heating, aquaculture and production of electrical power;

(iv) stormwater drainage wells used to inject storm runoff from the surface into the subsurface;

(v) motor vehicle waste disposal wells that receive or have received fluids from vehicular repair or maintenance activities;

(vi) car wash waste disposal wells used to inject fluids from motor vehicle washing activities.

(c) Mining injection wells

(i) stopes leaching wells used for solution mining of conventional mines;

(ii) brine injection wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(iii) backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether water injected is a radioactive waste or not;

(iv) injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(d) Ground water management injection wells

(i) ground water remediation injection wells used to inject contaminated ground water that has been treated to ground water quality standards;

(ii) in situ ground water remediation wells used to inject a fluid that facilitates vadose zone or ground water remediation.

(iii) recharge wells used to replenish the water in an aquifer, including use to reclaim or improve the quality of existing ground water;

(iv) barrier wells used to inject fluids into ground water to prevent the intrusion of saline or contaminated water into ground water of better quality;

(v) subsidence control wells (not used for purposes of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(vi) wells used in experimental technologies.

(e) Agricultural injection wells - drainage wells used to inject fluids into ground water to prevent the intrusion of saline or contaminated water into ground water of better quality.

[20.6.2.5002 NMAC - N, 12-1-01]

20.6.2.5003 NOTIFICATION AND GENERAL OPERATION REQUIREMENTS FOR ALL UNDERGROUND INJECTION CONTROL WELLS: All operators of underground injection control wells, except those wells regulated under the Oil and Gas Act, the Geothermal Resources Conservation Act, and the Surface Mining Act, shall:

A. For existing underground injection control wells, submit to the secretary the information enumerated in Subsection C of Section 20.6.2.1201 NMAC of this Part; provided, however, that if the information in Subsection C of Section 20.6.2.1201 NMAC has been previously submitted to the secretary and acknowledged by him, the information need not be resubmitted; and

B. Operate and continue to operate in conformance with Sections 20.6.2.1 through 20.6.2.5299 NMAC.

C. For new underground injection control wells, submit to the secretary the information enumerated in Subsection C of Section 20.6.2.1201 NMAC of this Part at least 120 days prior to well construction.

[9-20-82, 12-1-95; 20.6.2.5300 NMAC - Rn, 20 NMAC 6.2.V.5300, 1-15-01; 20.6.2.5003 NMAC - Rn, 20.6.2.5300 NMAC, 12-1-01; A, 12-1-01; A, 9-15-02]

20.6.2.5004 PROHIBITED UNDERGROUND INJECTION CONTROL ACTIVITIES AND WELLS:

A. No person shall perform the following underground injection activities nor operate the following underground injection control wells:

(1) The injection of fluids into a motor vehicle waste disposal well is prohibited. Motor vehicle waste disposal wells are prohibited. Any person operating a new motor vehicle waste disposal well (for which construction began after April 5, 2000) must close the well immediately. Any person operating an existing motor vehicle waste disposal well must cease injection immediately and must close the well by December 31, 2002, except as provided in this Subsection.

(2) The injection of fluids into a large capacity cesspool is prohibited. Large capacity cesspools are prohibited. Any person operating a new large capacity cesspool (for which construction began after April 5, 2000) must close the cesspool immediately. Any person operating an existing large capacity cesspool must cease injection immediately and must close the cesspool by December 31, 2002.

(3) The injection of any hazardous or radioactive waste into a well is prohibited, except as provided in this Subsection.

(a) Class I hazardous or radioactive waste injection wells are prohibited, except naturally-occurring radioactive material (NORM) regulated under Section 20.3.1.1407 NMAC is allowed as a Class I non-hazardous waste injection well pursuant to Subsection B (1) of Section 20.6.2.5002 NMAC;

(b) Class IV wells are prohibited, except for wells re-injecting treated ground water into the same formation from which it was drawn as part of a removal or remedial action if the injection has prior approval from the Environmental Protection Agency (EPA) or the department under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA).

(4) Barrier wells, drainage wells, recharge wells, return flow wells, and motor vehicle waste disposal wells are prohibited, except when the discharger can demonstrate that the discharge will not adversely affect the health of persons, and

(a) the injection fluid does not contain a contaminant which may cause an exceedance at any place of present or reasonable foreseeable future use of any primary state drinking water maximum contaminant level as specified in the water supply regulations, "Drinking Water" (20 NMAC 7.1) [20.7.10 NMAC], adopted by the Environmental Improvement Board under the Environmental Improvement Act or the standard of Section 20.6.2.3103 NMAC, whichever is more stringent;

(b) the discharger can demonstrate that the injection will result in an overall or net improvement in water quality as determined by the secretary.

B. Closure of prohibited underground injection control wells shall be in accordance with Section 20.6.2.5005 NMAC and Section 20.6.2.5209 NMAC.

[20.6.2.5004 NMAC - N, 12-1-01]

20.6.2.5005 PRE-CLOSURE NOTIFICATION AND CLOSURE REQUIREMENTS:

A. Any person proposing to close a Class I, III, IV or V underground injection control well must submit pre-closure notification to the department at least 30 days prior to closure. Pre-closure notification must include the following information:

(1) Name of facility
(2) Address of facility
(3) Name of Owner/Operator
(4) Address of Owner/Operator
(5) Contact Person
(6) Phone Number
(7) Type of Well(s)
(8) Number of Well(s)
(9) Well Construction (e.g. drywell, improved sinkhole, septic tank, leachfield, cesspool, other...)
(10) Type of Discharge
(11) Average Flow (gallons per day)
(12) Year of Well Construction
(13) Proposed Well Closure Activities (e.g. sample fluids/sediment, appropriate disposal of remaining fluids/sediments, remove well and any contaminated soil, clean out well, install permanent plug, conversion to other type well, ground water and vadose zone investigation, other)
(14) Proposed Date of Well Closure
(15) Name of Preparer
(16) Date

B. Proposed well closure activities must be approved by the department prior to implementation.

[20.6.2.5005 NMAC - N, 12-1-01]

20.6.2.5006 DISCHARGE PERMIT REQUIREMENTS FOR CLASS V INJECTION WELLS

Class V injection wells must meet the requirements of Sections 20.6.2.3000 through 20.6.2.3999 NMAC and Sections 20.6.2.5000 through 20.6.2.5006 NMAC.

[20.6.2.5006 NMAC - N, 12-1-01]

20.6.2.5007 - 20.6.2.5100: [RESERVED]

[12-1-95; 20.6.2.5001 - 20.6.2.5100 NMAC - Rn, 20 NMAC 6.2.IV.4116-5100, 1-15-01; 20.6.2.5007 -20.6.2.5100 NMAC - Rn 20.6.2.5001 - 20.6.2.5100 NMAC, 12-1-01]

20.6.2.5101 DISCHARGE PERMIT AND OTHER REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Class I non-hazardous waste injection wells and Class III wells must meet the requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC in addition to other applicable requirements of the commission regulations. The secretary may also require that some Class IV and Class V wells comply with the requirements for Class I non-hazardous waste injection wells in Sections 20.6.2.5000 through 20.6.2.5299 NMAC if the secretary determines that the additional requirements are necessary to prevent the movement of water contaminants from a specified injection zone into ground water having 10,000 mg/l or less TDS. No Class I non-hazardous waste injection well or Class III well may be approved which allows for movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC, or pursuant to a temporary designation as provided in Paragraph (2) of Subsection C of Section 20.6.2.5101 NMAC.

B. Operation of a Class I non-hazardous waste injection well or Class III well must be pursuant to a discharge permit meeting the requirements of Sections 20.6.2.3000 through 20.6.2.3999 NMAC and Sections 20.6.2.5000 through 20.6.2.5299 NMAC.

C. Discharge permits for Class I non-hazardous waste injection wells, or Class III wells affecting ground water of 10,000 mg/l or less TDS submitted for secretary approval shall:

(1) Receive an aquifer designation if required in Section 20.6.2.5103 NMAC prior to discharge permit issuance; or

(2) For Class III wells only, address the methods or techniques to be used to restore ground water so that upon final termination of operations including restoration efforts, ground water at any place of withdrawal for present or reasonably foreseeable future use will not contain either concentrations in excess of the standards of Section 20.6.2.3103 NMAC or any toxic pollutant. Issuance of a discharge permit or project discharge permit for Class III wells that provides for restoration of ground water in accordance with the requirements of this Subsection shall substitute for the aquifer designation provisions of Section 20.6.2.5103 NMAC. The approval shall constitute a temporary aquifer designation for a mineral bearing or producing aquifer, or portion thereof, to allow injection as provided for in the discharge permit. Such temporary designation shall expire upon final termination of operations including restoration efforts.

D. The exemptions from the discharge permit requirement listed in Section 20.6.2.3105 NMAC do not apply to underground injection control wells except as provided below:

(1) Wells regulated by the Oil Conservation Division under the exclusive authority granted under Section 70-2-12 NMSA 1978 or under other Sections of the "Oil and Gas Act";

(2) Wells regulated by the Oil Conservation Division under the "Geothermal Resources Act";

(3) Wells regulated by the New Mexico Coal Surface Mining Bureau under the "Surface Mining Act";

(4) Wells for the disposal of effluent from systems which receive less than 2,000 gallons per day of domestic sewage effluent and are regulated under the "Liquid Waste Disposal Regulations" (20 NMAC 7.3) [20.7.3 NMAC] adopted by the Environmental Improvement Board under the "Environmental Improvement Act".

E. Project permits for Class III wells.

(1) The secretary may consider a project discharge permit for Class III wells, if the wells are:

(a) Within the same well field, facility site or similar unit,

(b) Within the same aquifer and ore deposit,

(c) Of similar construction,

(d) Of the same purpose, and

(e) Operated by a single owner or operator.

(2) A project discharge permit does not allow the discharger to commence injection in any individual operational area until the secretary approves an application for injection in that operational area (operational area approval).

(3) A project discharge permit shall:

(a) Specify the approximate locations and number of wells for which operational area approvals are or will be sought with approximate time frames for operation and restoration (if restoration is required) of each area; and

(b) Provide the information required under the following Sections of this Part, except for such additional site-specific information as needed to evaluate applications for individual operational area approvals: Subsection C of Section 20.6.2.3106, Sections 20.6.2.3107, 20.6.2.5204 through 20.6.2.5209, and Subsection B of Section 20.6.2.5210 NMAC.

(4) Applications for individual operational area approval shall include the following:

(a) Site-specific information demonstrating that the requirements of this Part are met, and

(b) Information required under Sections 20.6.2.5202 through 20.6.2.5210 NMAC and not previously provided pursuant to Subparagraph (b) of Paragraph (3) of Subsection E of this Section.

(5) Applications for project discharge permits and for operational area approval shall be processed in accordance with the same procedures provided for discharge permits under Sections 20.6.2.3000 through 20.6.2.3114 NMAC, allowing for public notice on the project discharge permit and on each application for operational area approval pursuant to Section 20.6.2.3108 NMAC with opportunity for public hearing prior to approval or disapproval.

(6) The discharger shall comply with additional requirements that may be imposed by the secretary pursuant to this Part on wells in each new operational area.

F. If the holder of a discharge permit for a Class I non-hazardous waste injection well, or Class III well submits an application for discharge permit renewal at least 120 days before discharge permit expiration, and the discharger is in compliance with his discharge permit on the date of its expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved. An application for discharge permit renewal must include and adequately address all of the information necessary for evaluation of a new discharge permit. Previously submitted materials may be included by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

G. Discharge Permit Signatory Requirements: No discharge permit for a Class I non-hazardous waste injection well or Class III well may be issued unless:

(1) The application for a discharge permit has been signed as follows:

(a) For a corporation: by a principal executive officer of at least the level of vice-president, or a representative who performs similar policy-making functions for the corporation who has authority to sign for the corporation; or

(b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(c) For a municipality, state, federal, or other public agency: by either a principal executive officer who has authority to sign for the agency, or a ranking elected official; and

(2) The signature is directly preceded by the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

H. Transfer of Class I non-hazardous waste injection well and Class III well Discharge Permits.

(1) The transfer provisions of Section 20.6.2.3111 NMAC do not apply to a discharge permit for a Class I non-hazardous waste injection well or Class III well.

(2) A Class I non-hazardous waste injection well or Class III well discharge permit may be transferred if:

(a) The secretary receives written notice 30 days prior to the transfer date; and

(b) The secretary does not object prior to the proposed transfer date. The secretary may require modification of the discharge permit as a condition of transfer, and may require demonstration of adequate financial responsibility.

(3) The written notice required by Subparagraph (b) of Paragraph (2) of Subsection I above shall:

(a) Have been signed by the discharger and the succeeding discharger, including an acknowledgement that the succeeding discharger shall be responsible for compliance with the discharge permit upon taking possession of the facility; and

(b) Set a specific date for transfer of discharge permit responsibility, coverage and liability; and

(c) Include information relating to the succeeding discharger's financial responsibility required by Paragraph (17) of Subsection B of Section 20.6.2.5210 NMAC.

I. Modification or Termination of a Discharge Permit for a Class I non-hazardous waste injection well or Class III well: If data submitted pursuant to any monitoring requirements specified in the discharge permit or other information available to the secretary indicate that this Part are being or may be violated, the secretary may require modification or, if it is determined by the secretary that the modification may not be adequate, may terminate a discharge permit for a Class I non-hazardous waste injection Well, or Class III well or well field, that was approved pursuant to the requirements of this under Sections 20.6.2.5000 through 20.6.2.5299 NMAC for the following causes:

(1) Noncompliance by the discharger with any condition of the discharge permit; or

(2) The discharger's failure in the discharge permit application or during the discharge permit review process to disclose fully all relevant facts, or the discharger's misrepresentation of any relevant facts at any time; or

(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 permit modification or termination.

[9-20-82, 12-1-95, 11-15-96; 20.6.2.5101 NMAC - Rn, 20 NMAC 6.2.V.5101, 1-15-01; A, 12-1-01; A, 9-15-02]

20.6.2.5102 PRE-CONSTRUCTION REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Discharge Permit Requirement for Class I non-hazardous waste injection wells.

(1) Prior to construction of a Class I non-hazardous waste injection well or conversion of an existing well to a Class I non-hazardous waste injection well, an approved discharge permit is required that incorporates the requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC, except Subsection C of Section 20.6.2.5210 NMAC. As a condition of discharge permit issuance, the operation of the Class I non-hazardous waste injection well under the discharge permit will not be authorized until the secretary has:

(a) Reviewed the information submitted for his consideration pursuant to Subsection C of Section 20.6.2.5210 NMAC, and

(b) Determined that the information submitted demonstrates that the operation will be in compliance with this Part and the discharge permit.

(2) If conditions encountered during construction represent a substantial change which could adversely impact ground water quality from those anticipated in the discharge permit, the secretary shall require a discharge permit modification or may terminate the discharge permit pursuant to Subsection I of Section 20.6.2.5101 NMAC, and the secretary shall publish public notice and allow for comments and hearing in accordance with Section 20.6.2.3108 NMAC.

B. Notification Requirement for Class III wells.

(1) The discharger shall notify the secretary in writing prior to the commencement of drilling or construction of wells which are expected to be used for in situ extraction, unless the discharger has previously received a discharge permit or project discharge permit for the Class III well operation.

(a) Any person, proposing to drill or construct a new Class III well or well field, or convert an existing well to a Class III well, shall file plans, specifications and pertinent documents regarding such construction or conversion, with the Ground Water Quality Bureau of the Environment Department.

(b) Plans, specifications, and pertinent documents required by this Section, if pertaining to geothermal installations, carbon dioxide facilities, or facilities for the exploration, production, refinement or pipeline transmission of oil and natural gas, shall be filed instead with the Oil Conservation Division.

(c) Plans, specifications and pertinent documents required to be filed under this Section must be filed 90 days prior to the planned commencement of construction or conversion.

(d) The following plans, specifications and pertinent documents shall be provided with the notification:

(i) Information required in Subsection C of Section 20.6.2.3106 NMAC;

(ii) A map showing the Class III wells which are to be constructed. The map must also show, in so far as is known or is reasonably available from the public records, the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells and other pertinent surface features, including residences and roads, that are within the expected area of review (Section 20.6.2.5202 NMAC) of the Class III well or well field perimeter;

(iii) Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site, the position of such ground water within this area relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation;

(iv) Maps and cross-sections detailing the geology and geologic structure of the local area, including faults, if known or suspected;

(v) The proposed formation testing program to obtain an analysis or description, whichever the secretary requires, of the chemical, physical, and radiological characteristics of, and other information on, the receiving formation;

(vi) The proposed stimulation program;

(vii) The proposed injection procedure;

(viii) Schematic or other appropriate drawings of the surface and subsurface construction details of the well;

(ix) Proposed construction procedures, including a cementing and casing program, logging procedures, deviation checks, and a drilling, testing, and coring program;

(x) Information, as described in Paragraph (17) of Subsection B of Section 20.6.2.5210 NMAC, showing the ability of the discharger to undertake measures necessary to prevent groundwater contamination; and

(xi) A plugging and abandonment plan showing that the requirements of Subsections B, C and D of Section 20.6.2.5209 NMAC will be met.

(2) Prior to construction, the discharger shall have received written notice from the secretary that the information submitted under item 10 of Subparagraph (d) of Paragraph (1) of Subsection B of Section 20.6.2.5102 NMAC is acceptable. Within 30 days of submission of the above information the secretary shall notify the discharger that the information submitted is acceptable or unacceptable.

(3) Prior to construction, the secretary shall review said plans, specifications and pertinent documents and shall comment upon their adequacy of design for the intended purpose and their compliance with pertinent Sections of this Part. Review of plans, specifications and pertinent documents shall be based on the criteria contained in Section 20.6.2.5205, Subsection E of Section 20.6.2.5209, and Subparagraph (d) of Paragraph (1) of Subsection B of Section 20.6.2.5102 NMAC.

(4) Within thirty (30) days of receipt, the secretary shall issue public notice, consistent with Subsection B of Section 20.6.2.3108 NMAC, that notification was submitted pursuant to Subsection B of Section 20.6.2.5102 NMAC. The secretary shall allow a period of at least thirty (30) days during which comments may be submitted. The public notice shall include:

(a) Name and address of the proposed discharger;

(b) Location of the discharge;

(c) Brief description of the proposed activities;

(d) Statement of the public comment period; and

(e) Address and telephone number at which interested persons may obtain further information.

(5) The secretary shall comment in writing upon the plans and specifications within sixty (60) days of their receipt by the secretary.

(6) Within thirty (30) days after completion, the discharger shall submit written notice to the secretary that the construction or conversion was completed in accordance with submitted plans and specifications, or shall submit as-built plans detailing changes from the originally submitted plans and specifications.

(7) In the event a discharge permit application is not submitted or approved, all wells which may cause groundwater contamination shall be plugged and abandoned by the applicant pursuant to the plugging and abandonment plan submitted in the notification; these measures shall be consistent with any comments made by the secretary in his review. If the wells are not to be permanently abandoned and the discharger demonstrates that plugging at this time is unnecessary to prevent groundwater contamination, plugging pursuant to the notification is not required. Financial responsibility established pursuant to Sections 20.6.2.5000 through 20.6.2.5299 NMAC will remain in effect until the discharger permanently abandons and plugs the wells in accordance with the plugging and abandonment plan.

[9-20-82, 12-24-87, 12-1-95; 20.6.2.5102 NMAC - Rn, 20 NMAC 6.2.V.5102, 1-15-01; A, 12-1-01]

20.6.2.5103 DESIGNATED AQUIFERS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Any person may file a written petition with the secretary seeking commission consideration of certain aquifers or portions of aquifers as "designated aquifers". The purpose of aquifer designation is:

(1) For Class I non-hazardous waste injection wells, to allow as a result of injection, the addition of water contaminants into ground water, which before initiation of injection has a concentration between 5,000 and 10,000 mg/l TDS; or

(2) For Class III wells, to allow as a result of injection, the addition of water contaminants into ground water, which before initiation of injection has a concentration between 5,000 and 10,000 mg/l TDS, and not provide for restoration or complete restoration of that ground water pursuant to Paragraph (2) of Subsection C of Section 20.6.2.5101 NMAC.

B. The applicant shall identify (by narrative description, illustrations, maps or other means) and describe such aquifers, in geologic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite.

C. An aquifer or portion of an aquifer may be considered for aquifer designation under Subsection A. of this Section, if the applicant demonstrates that the following criteria are met:

(1) It is not currently used as a domestic or agricultural water supply; and

(2) There is no reasonable relationship between the economic and social costs of failure to designate and benefits to be obtained from its use as a domestic or agricultural water supply because:

(a) It is situated at a depth or location which makes recovery of water for drinking or agricultural purposes economically or technologically impractical at present and in the reasonably foreseeable future; or

(b) It is already so contaminated that it would be economically or technologically impractical to render that water fit for human consumption or agricultural use at present and in the reasonably foreseeable future.

D. The petition shall state the extent to which injection would add water contaminants to ground water and why the proposed aquifer designation should be approved. For Class III wells, the applicant shall state whether and to what extent restoration will be carried out.

E. The secretary shall either transmit the petition to the commission within sixty (60) days recommending that a public hearing be held, or refuse to transmit the petition and notify the applicant in writing citing reasons for such refusal.

F. If the secretary transmits the petition to the commission, the commission shall review the petition and determine to either grant or deny a public hearing on the petition. If the commission grants a public hearing, it shall issue a public notice, including the following information:

(1) Name and address of the applicant;

(2) Location, depth, TDS, areal extent, general description and common name or other identification of the aquifer for which designation is sought;

(3) Nature of injection and extent to which the injection will add water contaminants to ground water; and

(4) Address and telephone number at which interested persons may obtain further information.

G. If the secretary refuses to transmit the petition to the commission, then the applicant may appeal the secretary's disapproval of the proposed aquifer designation to the commission within thirty (30) days, and address the issue of whether the proposed aquifer designation meets the criteria of Subsections A, B, C, and D of this Section.

H. If the commission grants a public hearing, the hearing shall be held in accordance with the provisions of Section 74-6-6, NMSA 1978.

I. If the commission does not grant a public hearing on the petition, the aquifer designation shall not be approved.

J. After public hearing and consideration of all facts and circumstances included in Section 74-6-4(D), NMSA 1978, the commission may authorize the secretary to approve a proposed designated aquifer if the commission determines that the criteria of Subsection A, B, C, and D of this section are met.

K. Approval of a designated aquifer petition does not alleviate the applicant from complying with other Sections of Sections 20.6.2.5000 through 20.6.2.5299 NMAC, or of the responsibility for protection, pursuant to this part, of other nondesignated aquifers containing ground water having 10,000 mg/l or less TDS.

L. Persons other than the petitioner may add water contaminants as a result of injection into an aquifer designated for injection, provided the person receives a discharge permit pursuant to the requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC. Persons, other than the original petitioner or his designee, requesting addition of water contaminants as a result of injection into aquifers previously designated only for injection with partial restoration shall file a petition with the commission pursuant to the requirements of Subsections A, B, C, and D of this Section.

[9-20-82, 12-1-95; 20.6.2.5103 NMAC - Rn, 20 NMAC 6.2.V.5103, 1-15-01; A, 12-1-01]

20.6.2.5104 WAIVER OF REQUIREMENT BY SECRETARY FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Where a Class I non-hazardous waste injection well or a Class III well or well field, does not penetrate, or inject into or above, and which will not affect, ground water having 10,000 mg/l of less TDS, the secretary may:

(1) Issue a discharge permit for a well or well field with less stringent requirements for area of review, construction, mechanical integrity, operation, monitoring, and reporting than required by Sections 20.6.2.5000 through 20.6.2.5299 NMAC; or

(2) For Class III wells only, issue a discharge permit pursuant to the requirements of Sections 20.6.2.3000 through 20.6.2.3114 NMAC.

B. Authorization of a reduction in requirements under Subsection A of this Section shall be granted only if injection will not result in an increased risk of movement of fluids into ground water having 10,000 mg/l or less TDS, except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

[9-20-82, 12-1-95; 20.6.2.5104 NMAC - Rn & A, 20 NMAC 6.2.V.5104, 1-15-01; A, 12-1-01]

20.6.2.5105 - 20.6.2.5199: [RESERVED]

[12-1-95; 20.6.2.5105 - 20.6.2.5199 NMAC - Rn, 20 NMAC 6.2.V.5105-5199, 1-15-01]

20.6.2.5200 TECHNICAL CRITERIA AND PERFORMANCE STANDARDS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

[12-1-95; 20.6.2.5200 NMAC - Rn, 20 NMAC 6.2.V.5200, 1-15-01; A, 12-1-01]

20.6.2.5201 PURPOSE: Sections 20.6.2.5200 through 20.6.2.5210 NMAC provide the technical criteria and performance standards for Class I non-hazardous waste injection wells and Class III wells.

[9-20-82; 20.6.2.5201 NMAC - Rn, 20 NMAC 6.2.V.5201, 1-15-01; A, 12-1-01]

20.6.2.5202 AREA OF REVIEW:

A. The area of review is the area surrounding a Class I non-hazardous waste injection well or Class III well or the area within and surrounding a well field that is to be examined to identify possible fluid conduits, including the location of all known wells and fractures which may penetrate the injection zone.

B. The area of review for each Class I non-hazardous waste injection well, or each Class III well or well field shall be an area which extends:

(1) Two and one half (2 1/2) miles from the well, or well field; or

(2) One-quarter (1/4) mile from a well or well field where the area of review is calculated to be zero pursuant to Paragraph (3) of Subsection B below, or where the well field production at all times exceeds injection to produce a net withdrawal; or

(3) A suitable distance, not less than one-quarter (1/4) mile, proposed by the discharger and approved by the secretary, based upon a mathematical calculation to determine the area of review. Computations to determine the area of review may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the Class I non-hazardous waste injection well, or Class III well or well field. The following modified Theis equation illustrates one form which the mathematical model may take to compute the area of review; the discharger must demonstrate that any equation or simulation used to compute the area of review applies to the hydrogeologic conditions in the area of review.

$$r = \left(\frac{2.25KHt}{S10^{x}} \right)^{1/2}$$

Where:

$$x = \frac{4BKH\,(H_w - H_{bo})x\ S_pG_b}{2.3\ Q}$$

r = Radius of the area of review for a Class I non-hazardous waste injection well or Class III well (length)

K = Hydraulic conductivity of the injection zone (length/time)

H = Thickness of the injection zone (length)

t = Time of injection (time)

S = Storage coefficient (dimensionless)

Q = Injection rate (volume/time)

H_{bo} = Observed original hydrostatic head of injection zone (length) measured from the base of the lowest aquifer containing ground water of 10,000 mg/l or less TDS

H_w = Hydrostatic head of underground source of drinking water (length) measured from the base of the lowest aquifer containing ground water of 10,000 mg/l or less TDS

S_pG_b = Specific gravity of fluid in the injection zone (dimensionless)

B = 3.142 (dimensionless)

(4) The above equation is based on the following assumptions:

(a) The injection zone is homogenous and isotropic;

(b) The injection zone has infinite areal extent;

(c) The Class I non-hazardous waste injection well or Class III well penetrates the entire thickness of the injection zone;

(d) The well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and

(e) The emplacement of fluid into the injection zone creates an instantaneous increase in pressure.

C. The secretary shall require submittal by the discharger of information regarding the area of review including the information to be considered by the secretary in Subsection B of Section 20.6.2.5210 NMAC.

[9-20-82, 12-1-95; 20.6.2.5202 NMAC - Rn, 20 NMAC 6.2.V.5202, 1-15-01; A, 12-1-01]

20.6.2.5203 CORRECTIVE ACTION FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Persons applying for approval of a Class I non-hazardous waste injection well, or a Class III well or well field shall identify the location of all known wells, drill holes, shafts, stopes and other conduits within the area of review which may penetrate the injection zone, in so far as is known or is reasonably available from the public records. For such wells or other conduits which are improperly sealed, completed, or abandoned, or otherwise provide a pathway for the migration of contaminants, the discharger shall address in the proposed discharge plan such steps or modifications (corrective action) as are necessary to prevent movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

B. Prior to operation, or continued operation of a well for which corrective action is required pursuant to Subsections A or D of Section 20.6.2.5203 NMAC, the discharger must demonstrate that:

(1) All required corrective action has been taken; or

(2) Injection pressure is to be limited so that pressure in the injection zone does not cause fluid movement through any well or other conduit within the area of review into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC. This pressure limitation may be removed after all required corrective action has been taken.

C. In determining the adequacy of corrective action proposed in the discharge permit application, the following factors will be considered by the secretary:

(1) Chemical nature and volume of the injected fluid;

(2) Chemical nature of native fluids and by-products of injection;

(3) Geology and hydrology;

(4) History of the injection and production operation;

(5) Completion and plugging records;

(6) Abandonment procedures in effect at the time a well, drill hole, or shaft was abandoned; and

(7) Hydraulic connections with waters having 10,000 mg/l or less TDS

D. In the event that, after approval for a Class I non-hazardous waste injection well or Class III well has been granted, additional information is submitted or it is discovered that a well or other conduit within the applicable area of review might allow movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC, the secretary may require action in accordance with Subsection I of Section 20.6.2.5101 and Subsection B Section 20.6.2.5203 NMAC.

[9-20-82, 12-1-95; 20.6.2.5203 NMAC - Rn, 20 NMAC 6.2.V.5203, 1-15-01; A, 12-1-01]

20.6.2.5204 MECHANICAL INTEGRITY FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. A Class I non-hazardous waste injection well or Class III well has mechanical integrity if there is no detectable leak in the casing, tubing or packer which the secretary considers to be significant at maximum operating temperature and pressure; and no detectable conduit for fluid movement out of the injection zone through the well bore or vertical channels adjacent to the well bore which the secretary considers to be significant.

B. Prior to well injection and at least once every five years or more frequently as the secretary may require for good cause during the life of the well, the discharger must demonstrate that a Class I non-hazardous waste injection well or Class III well has mechanical integrity. The demonstration shall be made through use of the following tests:

(1) For evaluation of leaks,

(a) Monitoring of annulus pressure (after an initial pressure test with liquid or gas before operation commences), or

(b) Pressure test with liquid or gas;

(2) For determination of conduits for fluid movement,

(a) The results of a temperature or noise log, or

(b) Where the nature of the casing used for Class III wells precludes use of these logs, cementing records and an appropriate monitoring program as the secretary may require which will demonstrate the presence of adequate

cement to prevent such movement;

(3) Other appropriate tests as the secretary may require.

C. The secretary may consider the use by the discharger of equivalent alternative test methods to determine mechanical integrity. The discharger shall submit information on the proposed test and all technical data supporting its use. The secretary may approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. For Class III wells this demonstration may be made by submission of adequate monitoring data after the initial mechanical integrity tests.

D. In conducting and evaluating the tests enumerated in this Section or others to be allowed by the secretary, the discharger and the secretary shall apply methods and standards generally accepted in the affected industry. When the discharger reports the results of mechanical integrity tests to the secretary, he shall include a description of the test(s), the method(s) used, and the test results. In making an evaluation, the secretary's review shall include monitoring and other test data submitted since the previous evaluation.

[9-20-82, 12-1-95; 20.6.2.5204 NMAC - Rn, 20 NMAC 6.2.V.5204, 1-15-01; A, 12-1-01]

20.6.2.5205 CONSTRUCTION REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. General Construction Requirements Applicable to Class I non-hazardous waste injection wells and Class III wells.

(1) Construction of all Class I non-hazardous waste injection wells and all new Class III wells shall include casing and cementing. Prior to well injection, the discharger shall demonstrate that the construction and operation of:

(a) Class I non-hazardous waste injection 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 20.6.2.5103 NMAC;

(b) Class III wells will not cause or allow movement of fluids out of the injection zone into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

(2) The construction of each newly drilled well shall be designed for the proposed life expectancy of the well.

(3) In determining if the discharger has met the construction requirements of this Section and has demonstrated adequate construction, the secretary shall consider the following factors:

(a) Depth to the injection zone;

(b) Injection pressure, external pressure, annular pressure, axial loading, and other stresses that may cause well failure;

(c) Hole size;

(d) Size and grade of all casing strings, including wall thickness, diameter, nominal weight, length, joint specification, and construction material;

(e) Type and grade of cement;

(f) Rate, temperature, and volume of injected fluid;

(g) Chemical and physical characteristics of the injected fluid, including corrosiveness, density, and temperature;

(h) Chemical and physical characteristics of the formation fluids including pressure and temperature;

(i) Chemical and physical characteristics of the receiving formation and confining zones including lithology and stratigraphy, and fracture pressure; and

(j) Depth, thickness and chemical characteristics of penetrated formations which may contain ground water.

(4) To demonstrate adequate construction, appropriate logs and other tests shall be conducted during the drilling and construction of new Class I non-hazardous waste injection wells or Class III wells or during work-over of existing wells in preparation for reactivation or for change to injection use. A descriptive report interpreting the results of such logs and tests shall be prepared by a knowledgeable log analyst and submitted to the secretary for review prior to well injection. The logs and tests appropriate to each type of injection well shall be based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses.

(a) The discharger shall demonstrate through use of sufficiently frequent deviation checks, or another equivalent method, that a Class I non-hazardous waste injection well or Class III well drilled using a pilot hole then enlarged by reaming or another method, does not allow a vertical avenue for fluid migration in the form of diverging holes created during drilling.

(b) The secretary may require use by the discharger of the following logs to assist in characterizing the formations penetrated and to demonstrate the integrity of the confining zones and the lack of vertical avenues for fluid migration:

(i) For casing intended to protect ground water having 10,000 mg/l or less TDS: Resistivity, spontaneous potential, and caliper logs before the casing is installed; and a cement bond, or temperature log after the casing is set and cemented.

(ii) For intermediate and long strings of casing intended to facilitate injection: Resistivity, spontaneous potential, porosity, and gamma ray logs before the casing is installed; and fracture finder or spectral logs; and a

cement bond or temperature log after the casing is set and cemented.

(5) In addition to the requirements of Section 20.6.2.5102 NMAC, the discharger shall provide notice prior to commencement of drilling, cementing and casing, well logging, mechanical integrity tests, and any well work-over to allow opportunity for on-site inspection by the secretary or his representative.

B. Additional Construction Requirements for Class I non-hazardous waste injection wells.

(1) All Class I non-hazardous waste injection wells shall be sited in such a manner that they inject into a formation which is beneath the lowermost formation containing, within one quarter mile of the well bore, ground water having 10,000 mg/l TDS or less except as approved pursuant to Section 20.6.2.5103 NMAC.

(2) All Class I non-hazardous waste injection wells shall be cased and cemented by circulating cement to the surface.

(3) All Class I non-hazardous waste injection wells, except those municipal wells injecting noncorrosive wastes, shall inject fluids through tubing with a packer set in the annulus immediately above the injection zone, or tubing with an approved fluid seal as an alternative. The tubing, packer, and fluid seal shall be designed for the expected length of service.

(a) The use of other alternatives to a packer may be allowed with the written approval of the secretary. To obtain approval, the operator shall submit a written request to the secretary which shall set forth the proposed alternative and all technical data supporting its use. The secretary may approve the request if the alternative method will reliably provide a comparable level of protection to ground water. The secretary may approve an alternative method solely for an individual well or for general use.

(b) In determining the adequacy of the specifications proposed by the discharger for tubing and packer, or a packer alternative, the secretary shall consider the following factors:

(i) Depth of setting;

(ii) Characteristics of injection fluid (chemical nature or characteristics, corrosiveness, and density);

(iii) Injection pressure;

(iv) Annular pressure;

(v) Rate, temperature and volume of injected fluid; and

(vi) Size of casing.

C. Additional Construction Requirements for Class III wells.

(1) Where injection is into a formation containing ground water having 10,000 mg/l or less TDS, monitoring wells shall be completed into the injection zone and into the first formation above the injection zone containing ground water having 10,000 mg/l or less TDS which could be affected by the extraction operation. If ground water having 10,000 mg/l or less TDS below the injection zone could be affected by the extraction operation, monitoring of such ground water may be required. These wells shall be of sufficient number, located and constructed so as to detect any excursion of injection fluids, process byproducts, or formation fluids outside the extraction area or injection zone. The requirement for monitoring wells in aquifers designated pursuant to Section 20.6.2.5103 NMAC may be waived by the secretary, provided that the absence of monitoring wells does not result in an increased risk of movement of fluids into protected ground waters having 10,000 mg/l or less TDS.

(2) Where injection is into a formation which does not contain ground water having 10,000 mg/l or less TDS, no monitoring wells are necessary in the injection zone. However, monitoring wells may be necessary in adjoining zones with ground water having 10,000 mg/l or less TDS that could be affected by the extraction operation.

(3) In an area that the secretary determines is subject to subsidence or collapse, the required monitoring wells may be required to be located outside the physical influence of that area.

(4) In determining the adequacy of monitoring well location, number, construction and frequency of monitoring proposed by the discharger, the secretary shall consider the following factors:

(a) The local geology and hydrology;

(b) The operating pressures and whether a negative pressure gradient to the monitor well is being maintained;

(c) The nature and volume of injected fluid, formation water, and process by-products; and

(d) The number and spacing of Class III wells in the well field.

[9-20-82, 12-1-95; 20.6.2.5205 NMAC - Rn, 20 NMAC 6.2.V.5205, 1-15-01; A, 12-1-01]

20.6.2.5206 OPERATING REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. General Operating Requirements Applicable to Class I non-hazardous waste injection wells and Class III wells.

(1) The maximum injection pressure at the wellhead shall not initiate new fractures or propagate existing fractures in the confining zone, or cause the movement of injection or formation fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

(2) Injection between the outermost casing and the well bore is prohibited in a zone other than the authorized injection zone.

B. Additional Operating Requirements for Class I non-hazardous waste injection wells.

(1) Except during well stimulation, the maximum injection pressure shall not initiate new fractures or propagate existing fractures in the injection zone.

(2) Unless an alternative to a packer has been approved under Subparagraph (c) of Paragraph (3) of Subsection B of Section 20.6.2.5205 NMAC, the annulus between the tubing and the long string of casing shall be filled with a fluid approved by the secretary and a pressure, also approved by the secretary shall be maintained on the annulus.

C. Additional Operating Requirements for Class III wells: Initiation of new fractures or propagation of existing fractures in the injection zone will not be approved by the secretary as part of a discharge permit unless it is done during well stimulation and the discharger demonstrates:

(1) That such fracturing will not cause movement of fluids out of the injection zone into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC, and

(2) That the provisions of Subsection C of Section 20.6.2.3109 and Subsection C of Section 20.6.2.5101 NMAC for protection of ground water are met.

[9-20-82, 12-1-95; 20.6.2.5206 NMAC - Rn, 20 NMAC 6.2.V.5206, 1-15-01; A, 12-1-01]

20.6.2.5207 MONITORING REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. The discharger shall demonstrate mechanical integrity for each Class I non-hazardous waste injection well or Class III well at least once every five years during the life of the well pursuant to Section 20.6.2.5204 NMAC.

B. Additional Monitoring Requirements for Class I non-hazardous waste injection wells.

(1) The discharger shall provide analysis of the injected fluids at least quarterly or, if necessary, more frequently to yield data representative of their characteristics.

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

(3) The discharger shall provide wells within the area of review as required by the discharge permit to be used by the discharger to monitor pressure in, and possible fluid movement into, ground water having 10,000 mg/l or less TDS except for such ground waters designated pursuant to Section 20.6.2.5103 NMAC. This Section does not require monitoring wells for Class I non-hazardous waste injection wells unless monitoring wells are necessary due to possible flow paths within the area of review.

C. Additional Monitoring Requirements for Class III wells.

(1) The discharger shall provide an analysis or description, whichever the secretary requires, of the injected fluids at least quarterly or, if necessary, more frequently to yield representative data.

(2) The discharger shall perform:

(a) Appropriate monitoring of injected and produced fluid volumes by whichever of the following methods the secretary requires:

(i) Recording injection pressure and either flow rate or volume every two weeks; or

(ii) Metering and daily recording of fluid volumes;

(b) Monitoring every two weeks, or more frequently as the secretary determines, of the monitor wells, required in Subsection C of Section 20.6.2.5205 NMAC for:

(i) Water chemistry parameters used to detect any migration from the injection zone;

(ii) Fluid levels adjacent to the injection zone; and

(c) Other necessary monitoring as the secretary for good cause may require to detect movement of fluids from the injection zone into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

(3) With the approval of the secretary, all Class III wells may be monitored on a well field basis by manifold monitoring rather than on an individual well basis. Manifold monitoring to determine the quality, pressure, and flow rate of the injected fluid may be approved in cases of facilities consisting of more than one Class III well, operating with a common manifold, provided that the discharger demonstrates that manifold monitoring is comparable to individual well monitoring.

[9-20-82, 12-1-95; 20.6.2.5207 NMAC - Rn, 20 NMAC 6.2.V.5207, 1-15-01; A, 12-1-01]

20.6.2.5208 REPORTING REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. Reporting Requirements for Class I non-hazardous waste injection wells.

(1) If a Class I non-hazardous waste injection well is found to be discharging or is suspected of discharging fluids into a zone or zones other than the permitted or authorized injection zone, the discharger shall within 24 hours notify the secretary of the circumstances and action taken. The discharger shall provide subsequent written reports as required by the secretary.

(2) The discharger shall provide reports quarterly to the secretary on:

(a) The physical, chemical and other relevant characteristics of injection fluids;

(b) Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure; and

(c) The results of monitoring prescribed under Subsection B of Section 20.6.2.5207 NMAC.

(3) The discharger shall report, no later than the first quarterly report after completion, the results of:

(a) Periodic tests of mechanical integrity as required in Sections 20.6.2.5204 and 20.6.2.5207 NMAC;

(b) Any other test of the Class I non-hazardous waste injection well conducted by the discharger if required by the secretary;

(c) Any well work-over; and

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

B. Reporting Requirements for Class III wells.

(1) The discharger shall notify the secretary within 48 hours of the detection or suspected detection of a leachate excursion, and provide subsequent reports as required by the secretary.

(2) The discharger shall provide to the secretary:

(a) Reports on required monitoring quarterly, or more frequently as required by the secretary; and

(b) Results of mechanical integrity testing as required in Sections 20.6.2.5204 and 20.6.2.5207 NMAC and any other periodic tests required by the secretary. These results are to be reported no later than the first regular report after the completion of the test.

(3) Where manifold monitoring is permitted, monitoring results may be reported on a well field basis, rather than individual well basis.

C. Report Signatory Requirements.

(1) All reports submitted pursuant to this Section shall be signed and certified as provided in Subsection G of Section 20.6.2.5101 NMAC, or by a duly authorized representative.

(2) For a person to be a duly authorized representative, authorization must:

(a) Be made in writing by a signatory described in Paragraph (1) of Subsection G of Section 20.6.2.5101 NMAC;

(b) Specify either an individual or a position having responsibility for the overall operation of that regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility; and

(c) Have been submitted to the secretary.

[9-20-82, 12-1-95; 20.6.2.5208 NMAC - Rn, 20 NMAC 6.2.V.5208, 1-15-01; A, 12-1-01]

20.6.2.5209 PLUGGING AND ABANDONMENT FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. The discharger shall submit as part of the discharge permit application, a plan for plugging and abandonment of a Class I non-hazardous waste injection well or a Class III well that meets the requirements of Subsection C of Section 20.6.2.3109 and Subsection C of Section 20.6.2.5101 NMAC and 20.6.2.5005 NMAC for protection of ground water. If requested, a revised or updated abandonment plan shall be submitted for approval prior to closure. The obligation to implement the plugging and abandonment plan as well as the requirements of the plan survives the termination or expiration of the permit.

B. Prior to abandonment of a well used in a Class I non-hazardous waste injection well or Class III well operation, the well shall be plugged in a manner which will not allow the movement of fluids through the well bore out of the injection zone or between other zones of ground water. Cement plugs shall be used unless a comparable method has been approved by the secretary for the plugging of Class III wells at that site.

C. Prior to placement of the plugs, the well to be abandoned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method approved by the secretary.

D. Placement of the plugs shall be accomplished by one of the following:

(1) The Balance Method; or

(2) The Dump Bailer Method; or

(3) The Two-Plug Method; or

(4) An equivalent method with the approval of the secretary.

E. The following shall be considered by the secretary in determining the adequacy of a plugging and abandonment plan.

(1) The type and number of plugs to be used;

(2) The placement of each plug, including the elevation of the top and bottom;

(3) The type, grade and quantity of cementing slurry to be used;

(4) The method of placement of the plugs;

(5) The procedure to be used to plug and abandon the well; and

(6) Such other factors that may affect the adequacy of the plan.

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

[9-20-82, 12-1-95; 20.6.2.5209 NMAC - Rn, 20 NMAC 6.2.V.5209, 1-15-01; A, 12-1-01]

20.6.2.5210 INFORMATION TO BE CONSIDERED BY THE SECRETARY FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS AND CLASS III WELLS:

A. This Section sets forth the information to be considered by the secretary in authorizing construction and use of a Class I non-hazardous waste injection well or Class III well or well field. Certain maps, cross-sections, tabulations of all wells within the area of review, and other data may be included in the discharge permit application submittal by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

B. Prior to the issuance of a discharge permit or project discharge permit allowing construction of a new Class I non-hazardous waste injection well, operation of an existing Class I non-hazardous waste injection well, or operation of a new or existing Class III well or well field, or conversion of any well to injection use, the secretary shall consider the following:

(1) Information required in Subsection C of Section 20.6.2.3106 NMAC;

(2) A map showing the Class I non-hazardous waste injection well, or Class III well or well fields, for which approval is sought and the applicable area of review. Within the area of review, the map must show, in so far as is known or is reasonably available from the public records, the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells and other pertinent surface features, including residences and roads;

(3) A tabulation of data on all wells within the area of review which may penetrate into the proposed injection zone. Such data shall include, as available, a description of each well's type, the distance and direction to the injection well or well field, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the secretary may require;

(4) For wells within the area of review which penetrate the injection zone, but are not properly completed or plugged, the corrective action proposed to be taken under Section 20.6.2.5203 NMAC;

(5) Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within the area of review, the position of such ground water within the area of review relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation;

(6) Maps and cross-sections detailing the geology and geologic structure of the local area, including faults, if known or suspected;

(7) Generalized maps and cross-sections illustrating the regional geologic setting;

(8) Proposed operating data, including:

(a) Average and maximum daily flow rate and volume of the fluid to be injected;

(b) Average and maximum injection pressure;

(c) Source of injection fluids and an analysis or description, whichever the secretary requires, of their chemical, physical, radiological and biological characteristics;

(9) Results of the formation testing program to obtain an analysis or description, whichever the secretary requires, of the chemical, physical, and radiological characteristics of, and other information on, the receiving formation, provided that the secretary may issue a conditional approval of a discharge permit if he finds that further formation testing is necessary for final approval;

(10) Expected pressure changes, native fluid displacement, and direction of movement of the injected fluid;

(11) Proposed stimulation program;

(12) Proposed or actual injection procedure;

(13) Schematic or other appropriate drawings of the surface and subsurface construction details of the well;

(14) Construction procedures, including a cementing and casing program, logging procedures, deviation checks, and a drilling, testing, and coring program;

(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 20.6.2.5103 NMAC;

(16) Plans, including maps, for meeting the monitoring requirements of Section 20.6.2.5207 NMAC; and

(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 the cessation of operation, 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 secretary, 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 permit issuance 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 secretary shall consider this bond as satisfying the bonding requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC 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.

C. Prior to the secretary's approval that allows the operation of a new or existing Class I non-hazardous

waste injection well or Class III well or well field, the secretary shall consider the following:

(1) Update of pertinent information required under Subsection B of Section 20.6.2.5210 NMAC;
(2) All available logging and testing program data on the well;
(3) The demonstration of mechanical integrity pursuant to Section 20.6.2.5204 NMAC;
(4) The anticipated maximum pressure and flow rate at which the permittee will operate;
(5) The results of the formation testing program;
(6) The physical, chemical, and biological interactions between the injected fluids and fluids in the injection zone, and minerals in both the injection zone and the confining zone; and
(7) The status of corrective action on defective wells in the area of review.

[9-20-82, 12-24-87, 12-1-95; 20.6.2.5210 NMAC - Rn, 20 NMAC 6.2.V.5210, 1-15-01; A, 12-1-01]

20.6.2.5211 - 20.6.2.5299: [RESERVED]

[12-1-95; 20.6.2.5211 - 20.6.2.5299 NMAC - Rn, 20 NMAC 6.2.V.5211-5299, 1-15-01]

HISTORY of 20.6.2 NMAC:

Pre-NMAC History:

Material in this Part was derived from that previously filed with the commission of public records - state records center and archives:

WQC 67-2, Regulations Governing Water Pollution Control in New Mexico, filed 12-5-67, effective 1-4-68
WQC 72-1, Water Quality Control Commission Regulations, filed 8-4-72, effective 9-3-72
WQC 77-1, Amended Water Quality Control Commission Regulations, filed 1-18-77, effective 2-18-77
WQC 81-2, Water Quality Control Commission Regulations, filed 6-2-81, effective 7-2-81
WQC 82-1, Water Quality Control Commission Regulations, filed 8-19-82, effective 9-20-82

History of Repealed Material: [Reserved]

Other History:

20 NMAC 6.2, Water Quality - Ground and Surface Water Protection, filed 10-27-95, effective 12-1-95
20 NMAC 6.2, Water Quality - Ground and Surface Water Protection, filed 10-15-96, effective 11-15-96
20 NMAC 6.2, Water Quality - Ground and Surface Water Protection, filed 11-30-00, effective 1-15-01
20 NMAC 6.2, Water Quality - Ground and Surface Water Protection, filed 9-16-01, effective 12-1-01
20 NMAC 6.2, Water Quality - Ground and Surface Water Protection, filed 8-1-02, effective 9-15-02

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TITLE 16	ECONOMIC REGULATION
PART 1	RAILROAD COMMISSION OF TEXAS
CHAPTER 3	OIL AND GAS DIVISION
RULE §3.81	**Brine Mining Injection Wells**

(a) Definitions. The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Affected person--A person who, as a result of the activity sought to be permitted, has suffered or may suffer actual injury or economic damage other than as a member of the general public.

(2) Brine mining facility or facility--The brine mining injection well, and the pits, tanks, fresh water wells, pumps, and other structures and equipment that are or will be used in conjunction with the brine mining injection well.

(3) Brine mining injection well--A well used to inject fluid for the purpose of extracting brine by the solution of a subsurface salt formation. The term "brine mining injection well" does not include a well used to inject fluid for the purpose of leaching a cavern for the underground storage of hydrocarbons or the disposal of waste, or a well used to inject fluid for the purpose of extracting sulphur by the thermofluid mining process.

(4) Commission--The Railroad Commission of Texas.

(5) Director--The director of the Oil and Gas Division or a staff delegate designated in writing by the director of the Oil and Gas Division or the commission.

(6) Existing brine mining injection well--A brine mining injection well in which injection operations began prior to the effective date of this section.

(7) Fresh water--Water having bacteriological, physical, and chemical properties that make it suitable and feasible for beneficial use for any lawful purpose.

(8) New brine mining injection well--A brine mining injection well in which injection operations begin on or after the effective date of this section.

(9) Permit--A written authorization issued by the commission under this section for the operation of a brine mining injection well.

(10) Person--A natural person, corporation, organization, government or governmental subdivision or agency, business trust, estate, trust partnership, association, or any other legal entity.

(11) Pollution--The alteration of the physical, chemical, or biological quality of, or the contamination of, water that makes it harmful, detrimental, or injurious to humans, animal life, vegetation or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(b) Prohibitions.

(1) Unauthorized injection. No person may operate a brine mining injection well without obtaining a permit from the commission under this section. No person may begin constructing a new brine mining injection well until the commission has issued a permit to operate the well under this section and a permit to drill, deepen, plug back, or reenter the well under §3.5 of this title (relating to Application to Drill, Deepen, Reenter, or Plug Back) (Statewide Rule 5).

(2) Fluid migration. No person may operate a brine mining injection well in a manner that allow fluids to escape from the permitted injection zone. If fluids are migrating from the permitted injection zone, the operator shall immediately cease injection operations.

(3) Falsifying documents and tampering with gauges. No person may knowingly make any false statement, representation, or certification in any application, report, record, or other document submitted or required to be maintained under this section or under any permit issued pursuant to this section, or falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under this section or under any permit issued pursuant to this section.

(c) Standards for permit issuance. A permit may be issued only if the commission determines that the operation of the brine mining injection well will not result in the pollution of fresh water. All permits issued under this section will contain the conditions required by subsections (f) and (g) of this section, and all other conditions reasonably necessary to prevent the pollution of fresh water.

(d) Permit application.

(1) Duty to apply. Any person who operates or proposes to operate a brine mining injection well shall file a permit application with the commission in Austin within the time provided in paragraph (2) of this subsection. The applicant shall mail or deliver a copy of the application to the appropriate district office on the same day the application is mailed or delivered to the commission in Austin. A permit application will be considered filed with the commission on the date it is received by the commission in Austin.

(2) Time to apply.

(A) Any person who proposes to operate a new brine mining injection well shall file a permit application at least 180 days before the date on which injection is to begin, unless a later date has been authorized by the director.

(B) Any person who is operating an existing brine injection well shall file a permit application within 90 days of the effective date of this section.

(C) Any person who has obtained a permit under this section and who wishes to continue to operate the brine mining injection well after the permit expires shall file an application for new permit at least 180 days before the existing permit expires, unless a later date has been authorized by the director.

(3) Who applies. When a brine mining facility is owned by one person but is operated by another person, it is the operator's duty to file an application for a permit.

(4) Application requirements for all applicants. All applicants shall submit the following information, using application forms supplied by the commission:

(A) name, mailing address, and location of the brine mining facility for which the application is submitted;

(B) the operator's name, mailing address, telephone number, and status as federal, state, private, public, or other entity, and a statement indicating whether the operator is the owner of the facility;

(C) the proposed uses for the brine mined at the facility;

(D) a listing of all permits or construction approvals for the facility received or applied for under federal or state environmental programs;

(E) a topographic map, or other map if the topographic map is unavailable, extending one mile beyond the property boundaries of the facility, depicting the facility and those springs, other surface water bodies, drinking water wells, and other wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary;

(F) a plat showing the oil and gas operators of the tract on which the facility is located and the tracts adjacent to the tract on which the facility is located. On the plat or on a separate sheet attached to the plat, the applicant shall list the names and addresses of the oil and gas operators;

(G) a plat showing the surface ownership of the tract on which the facility is located and the tracts adjacent to the tract on which the facility is located. On the plat or on a separate sheet attached to the plat, the applicant shall list the names and addresses of the surface owners, as determined from the current county tax rolls or other reliable sources, and shall identify the source of the list. If the director determines that, after diligent efforts, the applicant has been unable to ascertain the name and address of one or more surface owners, the director may waive the requirements of this subparagraph with respect to those surface owners;

(H) a map with surveys marked showing the type, location, and depth of all wells of public record within a 1/4 mile radius of the brine mining injection well that penetrate the salt formation. The applicant shall attach the following information to the map:

(i) a tabulation of the wells showing the dates the wells were drilled and the present status of the wells; and

(ii) plugging records for plugged and abandoned wells and completion records for other wells;

(I) a letter from the Texas Commission on Environmental Quality stating the depth to which fresh water strata should be protected;

(J) a complete electric log of the brine mining injection well or a nearby well. On the log, the applicant shall identify the geologic formations between the land surface and the top of the salt formation and the depths at which they occur;

(K) a drawing of the surface and subsurface construction details of the brine mining injection well;

(L) the proposed maximum daily injection rate and maximum injection pressure;

(M) the proposed injection procedure;

(N) the proposed mechanical integrity testing procedure;

(O) the source of mining water to be used at the facility. If the source is groundwater, the following information must be included:

(i) the groundwater formation name;

(ii) an depth of the groundwater formation; and

(iii) an analysis of the groundwater;

(P) the direction of the hydraulic gradient in the area; and

(Q) the proposed groundwater monitoring plan, or an alternate plan for assuring that fluids are not escaping from the permitted injection zone.

(5) Additional information. The applicant shall submit any other information required on the application form supplied by the commission. In addition to the information reported on the application form, the applicant shall submit, at the director's request, any other information the commission may reasonably require to assess the brine mining injection well and to determine whether to issue a permit.

(e) Signatories to applications and reports.

(1) Applications. All applications shall be signed as follows:

(A) for a corporation, by a responsible corporate officer. A responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or

(B) for a partnership or sole proprietorship, by a general partner or the proprietor, respectively.

(2) Reports. All reports required by permits and other information requested by the commission shall be signed by a person described in paragraph (1) of this subsection or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(A) the authorization is made in writing by a person described in paragraph (1) of this subsection;

(B) the authorization specifies an individual or position having responsibility for the overall operation of the regulated facility; and

(C) the authorization is submitted to the commission before or together with any report of information signed by the authorized representative.

(3) Certification. Any person signing a document under paragraph (1) or (2) of this subsection shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or who are directly responsible for gathering the

information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information."

(f) Conditions applicable to all permits. The conditions specified in this subsection apply to all permits.

(1) Duty to comply. The operator shall comply with all conditions of the permit. Any permit noncompliance is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

(2) Duty to reapply. If the operator wishes to continue a permitted activity after the expiration date of the permit, the operator shall apply for and obtain a new permit.

(3) Need to halt or reduce activity not a defense. It is not a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(4) Duty to mitigate. The operator shall take all reasonable steps to minimize and correct any adverse effect on the environment resulting from noncompliance with the permit.

(5) Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control, and related appurtenances, that are installed or used by the operator to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up and auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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