

SUMMARY OF PROPOSED WATER CONSERVATION RULE

Navajo Refining Company LLC (Navajo Refining) has petitioned the New Mexico Water Quality Control Commission (WQCC) to amend several existing Sections of 20.6.2.3000 NMAC and 20.6.2.5000 NMAC and to adopt several new Sections of 20.6.2.5300 NMAC (collectively the Water Conservation Rule (WCR) or proposed regulations).¹ The proposed regulations would authorize the New Mexico Oil Conservation Division (OCD) to regulate underground injection control (UIC) Class I hazardous waste injection wells for refineries in New Mexico. The UIC program is part of the federal Safe Drinking Water Act (SDWA), and New Mexico has been delegated authority to administer this program. As a condition of that delegated authority, New Mexico's UIC regulations must be at least as stringent as the U.S. Environmental Protection Agency's (EPA's) regulations.

In general, the proposed regulations are based on federal regulations for Class I hazardous waste injection wells found in 40 C.F.R. Parts 144 and 146. The proposed regulations draw from these federal provisions in two ways. First, in many cases, entire Code of Federal Regulation (C.F.R.) provisions have been incorporated verbatim (with minor conforming changes discussed below) and, as a result, are as stringent as the federal regulations. Minor adjustments were made to reflect the fact that (1) the regulations would be administered by OCD rather than by EPA and (2) the regulations will become a part of the NMAC. As a result, names, titles, and cross references have been adjusted to refer to New Mexico agencies and existing provisions in the NMAC. Second, where practicable, the proposed regulations incorporate relevant C.F.R. provisions by reference.

In most cases, New Mexico's existing UIC requirements are functionally equivalent to EPA's regulations. In turn, the proposed regulations are, at a minimum, as stringent as EPA's regulations. In several cases, however, the proposed regulations are more stringent than EPA's regulations, due in part to the stringency of New Mexico's existing UIC regulations. Finally, the proposed regulations would amend several existing sections of the NMAC because Class I hazardous waste injection wells would no longer be prohibited under New Mexico law.

The sections below describe the changes and additions that Navajo Refining is proposing and explains their relevance to the Class I hazardous waste injection well program. Two exhibits are attached to this Summary of the Proposed Water Conservation Rule. The first is a Cross Reference Table that shows each C.F.R. provision included in the proposed regulations along with the corresponding NMAC citation. The second is a draft of the portions of the proposed WCR that were adapted from the C.F.R. provisions. It shows in redline the changes that were made to the original C.F.R. provisions.

20.6.2.3106 NMAC APPLICATION FOR DISCHARGE PERMITS AND RENEWALS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.3106 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect new fee provisions for Class I hazardous waste

¹ The summary is based on the Second Amended Petition, as further revised according to the proposed changes outlined in the Direct Testimony of Robert O'Brien.



injection wells located in 20.6.2.5302 NMAC. The amount of the fees was developed based on discussions with OCD. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.3107 NMAC MONITORING, REPORTING, AND OTHER REQUIREMENTS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.3107 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the new well closure requirements for Class I hazardous waste injection wells located in 20.6.2.5361 NMAC. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.3109 NMAC SECRETARY APPROVAL, DISAPPROVAL, MODIFICATION OR TERMINATION OF DISCHARGE PERMITS, AND REQUIREMENTS FOR ABATEMENT PLANS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.3109 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5001 NMAC PURPOSE:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5000 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5002 NMAC UNDERGROUND INJECTION CONTROL WELL CLASSIFICATIONS:

Navajo Refining has proposed an administrative change to Section 20.6.2.5001 NMAC to expand the scope of hazardous or radioactive waste regulated under 20.6.2.5000 *et seq.* to include those materials listed in Section 20.4.1.200 NMAC (incorporating 40 C.F.R. § 261.3). This change is necessary to ensure that New Mexico's Class I hazardous waste injection well regulations are as stringent as the federal requirements.

20.6.2.5003 NMAC NOTIFICATION AND GENERAL OPERATION REQUIREMENTS FOR ALL UNDERGROUND INJECTION CONTROL WELLS:

Navajo Refining has proposed an administrative change to Section 20.6.2.5003 NMAC to reflect the fact that New Mexico's Ground and Surface Water Protection regulations would encompass Sections 20.6.2.1 through 20.6.2.5399 NMAC. This change is necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5004 NMAC PROHIBITED UNDERGROUND INJECTION CONTROL ACTIVITIES:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5004 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5101 NMAC DISCHARGE PERMIT AND OTHER REQUIREMENTS FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5101 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. Navajo Refining has also proposed new signatory requirements for reports required by Class I hazardous waste injection well permits. These signatory requirements are the same as existing requirements for UIC permit applications. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5102 NMAC PRE-CONSTRUCTION REQUIREMENTS FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5102 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5103 NMAC DESIGNATED AQUIFERS FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5103 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5104 NMAC WAIVER OF REQUIREMENT BY SECRETARY FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5104 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5200 NMAC TECHNICAL CRITERIA AND PERFORMANCE STANDARDS FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed an administrative change to Section 20.6.2.5200 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. This change is necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5201 NMAC PURPOSE:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5201 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited and to reference additional requirements for Class I hazardous waste injection wells located in Sections 20.6.2.5300 through 20.6.2.5399 NMAC. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5204 NMAC MECHANICAL INTEGRITY FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5204 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5209 NMAC PLUGGING AND ABANDONMENT FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5209 NMAC to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5210 NMAC INFORMATION TO BE CONSIDERED BY THE SECRETARY FOR CLASS I WELLS AND CLASS III WELLS:

Navajo Refining has proposed several administrative changes to Section 20.6.2.5210 NMAC to reflect the fact that New Mexico's UIC regulations would encompass Sections 20.6.2.5000 through 20.6.2.5399 NMAC and to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited. These changes are necessary to reflect substantive changes proposed in other NMAC provisions.

20.6.2.5300 NMAC REQUIREMENTS FOR CLASS I HAZARDOUS WASTE INJECTION WELLS:

Section 20.6.2.5300 NMAC provides an overview of the Class I hazardous waste injection well program. Subsection A explains that Class I hazardous waste injection wells are subject to the general UIC regulations in Sections 20.6.2.5000 through 20.6.2.5299 NMAC as well as the specific Class I hazardous waste injection wells provisions located in 20.6.2.5300 through 5399 NMAC. It also clarifies that, in the event that regulatory provisions conflict, Class I hazardous waste injection wells must comply with Sections 20.6.2.5300 through 20.6.2.5399 NMAC. Subsection B limits the scope of New Mexico's Class I hazardous water injection well program

to injection wells that are operated by petroleum refineries for the sole purpose of disposing of wastes generated by the refineries. As a result of this limitation, commercial hazardous waste injection wells would still be prohibited in New Mexico. Subsection C delegates authority to administer the Class I hazardous waste injection well program to the New Mexico energy, minerals, and natural resources department, oil conservation division (OCD), in accordance with NMSA 1978, § 70-2-12 and the 1982 Joint Powers Agreement Between the Environmental Improvement Division, the Oil Conservation Division, and the Mining and Minerals Division.

These provisions are intended to provide for the orderly administration of the Class I hazardous waste injection well program for oil refineries in New Mexico.

20.6.2.5301 NMAC DEFINITIONS

Section 20.6.2.5301 NMAC defines seven terms used in Sections 20.6.2.5300 through 20.6.2.5399 NMAC. Six of those terms—cone of influence, director, existing well, injection interval, new well, and transmissive fault or fracture—are copied verbatim from the EPA Class I hazardous waste injection regulations on which Sections 5300 through 5399 NMAC are based. The seventh term, “groundwater of the State of New Mexico” replaces the term “underground source of drinking water” that is used in EPA’s regulations. Groundwater of the State of New Mexico defines a broader range of groundwater aquifers because it includes all groundwater with a total dissolved solid (TDS) of 10,000 mg/l or less, regardless of their size or current use. In contrast underground sources of drinking water are limited to those aquifers with a TDS of 10,000 or less that are used or have the potential to be used to supply a public water system. *See, e.g.,* 40 C.F.R. § 144.3. In this respect, the proposed regulations are more stringent than EPA’s Class I hazardous waste injection well regulations because they are designed to protect a broader range of groundwater formations.

These definitions are intended to ensure that terms used in Sections 20.6.2.5300 through 20.6.2.5399 NMAC are properly understood and given a consistent meaning.

20.6.2.5302 NMAC FEES FOR CLASS I HAZARDOUS WASTE INJECTION WELLS:

Section 20.6.2.5302 NMAC prescribes a series of fees that are applicable to Class I hazardous waste injection well permit applicants and operators in lieu of the generally applicable fee provisions found in Section 20.6.2.3114 NMAC. It includes provisions for filing fees, permit fees, annual administration fees, renewal fees, modification fees, and financial assurance fees. All fees must be paid to the Water Quality Management Fund. The permit fee and renewal fees may be paid in annual installments over the life of the permit. The amounts were developed in coordination with OCD. A summary of the fees is provided in the table below:

Fee	Amount
Filing Fee	\$100
Permit Fee	\$30,000
Annual Administration Fee	\$20,000
Renewal Fee	\$10,000
Modification Fee	\$10,000
Minor Modification Fee	\$1,000

Financial Assurance Fee (approval)	Greater of \$250 or 0.01%
Financial Assurance Fee (annual review)	Greater of \$100 or 0.001%
Corporate Guarantee Financial Assurance Fee	\$5,000

These fee provisions are intended ensure that the New Mexico OCD has adequate resources to administer the Class I hazardous waste injection well program.

20.6.2.5303 NMAC CONVERSION OF EXISTING INJECTION WELLS:

Section 20.6.2.5303 NMAC authorizes the conversion of existing Class I non-hazardous waste injection wells into Class I hazardous waste injection wells, provided that the well meets the requirements of Sections 20.6.2.5300 through 20.6.2.5399 NMAC and the well operator obtains a Class I hazardous waste injection well permit.

This provision is intended to allow refineries to begin siting and constructing Class I injection wells and, if necessary, using them to dispose of non-hazardous waste prior to the conclusion of the WQCC's consideration of this proposal and any subsequent approval that may be required by EPA before the New Mexico OCD is authorized to administer a Class I hazardous waste injection well program.

20.6.2.5310 NMAC REQUIREMENTS FOR WELLS INJECTING HAZARDOUS WASTE REQUIRED TO BE ACCOMPANIED BY A MANIFEST:

Section 20.6.2.5310 NMAC is based on 40 C.F.R. § 144.14 and, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions is not materially different from 40 C.F.R. § 144.14.

This Section applies to hazardous waste that is transported from the place of generation to the hazardous waste injection well by trucking or some other means that must be accompanied by a manifest under the federal Resource Conservation and Recovery Act (RCRA). It directs owners of hazardous waste injection wells accepting such waste to apply for authorization to inject such wastes within six months after approval of a State UIC program. In addition to Class I hazardous waste injection well regulations, the permittee must also comply with RCRA provisions regarding notification, identification numbers, manifest system, manifest discrepancies, operating records, annual reports, unmanifested waste reports, personnel training, and certification of closure.

This provisions is intended to ensure that wells injecting hazardous waste comply with New Mexico's Class I hazardous waste injection well program and that New Mexico's Class I hazardous waste injection well program is as stringent as EPA's class I hazardous waste injection well program.

20.6.2.5311 through 20.6.2.5319 NMAC [RESERVED]

20.6.2.5320 NMAC ADOPTION OF 40 CFR PART 144, SUBPART F (FINANCIAL RESPONSIBILITY: CLASS I HAZARDOUS WASTE INJECTION WELLS):

Section 20.6.2.5320 NMAC incorporates by reference EPA's financial assurance requirements for Class I hazardous waste injection wells found in 40 C.F.R. Part 144, Subpart F and thus is as stringent as EPA's regulations. Section 144.60 is an introductory provision that makes 40 C.F.R. Part 144, Subpart F applicable to all Class I hazardous waste injection wells. Section 144.61 defines a series of terms used in 40 C.F.R. Part 144, Subpart F. Section 144.62 requires Class I hazardous waste injection well permittees to estimate, and revise as necessary, the costs required to plug and abandon their wells when operations cease. These cost estimates provide the basis for the financial assurance requirements applicable to each well. Section 144.63 requires each Class I hazardous waste injection well permittee to provide financial assurance that is sufficient to cover the estimated plugging and abandonment costs. Options for providing financial assurance include a trust fund, surety bond, letter of credit, insurance, or a corporate parent guarantee. Section 144.64 requires the permittee of a Class I hazardous waste injection well to notify the Director of OCD if the entity providing the financial assurance becomes insolvent or if the instrument providing financial assurance is otherwise compromised. If such an event occurs, the permittee is also required to establish an alternative form of financial assurance. Section 144.70 provides forms for each specific type of financial assurance that must be utilized by permittees of Class I hazardous waste injection wells. The language included in the forms must be used verbatim in the financial assurance instruments.

These provisions are intended to ensure that sufficient funds are available to plug and abandon Class I hazardous waste injection wells in the event that the well operator lacks the financial capacity to do so when well operations cease.

20.6.2.5321 NMAC MODIFICATIONS, EXCEPTIONS, AND OMISSIONS:

Section 20.6.2.5321 NMAC provides modifications, exceptions, and omissions to the incorporation by reference of 40 C.F.R. Part 144, Subpart F. Subsections A and B modify the meaning of certain terms to refer to New Mexico agencies, officials, and definitions in lieu of their federal counterparts. This is necessary to reflect the fact that the permitting program will be administered by OCD rather than by EPA. Subsection C modifies certain provision to refer to NMAC provisions in lieu of equivalent CFR provisions, replaces references to EPA Identification Numbers with API Well Numbers, eliminates the option for a permittee-based financial test, and requires that trust agreements used for financial assurance be subject to New Mexico law. The elimination of a permittee-based financial assurance test narrows the scope of available financial assurance options and, therefore, makes the proposed regulations more stringent than EPA's requirements. Subpart D eliminates certain provisions of 40 C.F.R. Part 144, Subpart F that are inapplicable to Class I hazardous waste UIC programs administered by the States. It also eliminates the State assumption of liability provisions in 40 C.F.R. § 144.66, which makes the provisions more stringent by eliminating a permittee's option to rely on the State to assume responsibility for plugging and abandonment under certain circumstances.

20.6.2.5341 NMAC CONDITIONS APPLICABLE TO ALL PERMITS:

Section 20.6.2.5341 NMAC is based on 40 C.F.R. § 144.51. Unless otherwise specified below, Section 20.6.2.5341 NMAC is not materially different from 40 C.F.R. § 144.51, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides a series of conditions that must be included in all permits for Class I hazardous waste injection wells.

Subsection A requires permittees to comply with all permit conditions. This section explains that failure to comply with a permit condition is a violation of the Water Quality Act and provides a grounds for an enforcement action and penalties for noncompliance that may include permit modification or termination.

Subsection B requires permittees to apply for and obtain a permit renewal to continue operations after the expiration of a Class I hazardous waste injection well permit. Permit renewal applications are subject to the requirements of Subpart F of Section 20.6.2.3106 NMAC.

Subsection C provides that the need to halt or reduce injection to remain in compliance with permit conditions is not an available defense in an enforcement action.

Subsection D requires permittees to take all reasonable steps to mitigate any adverse impacts that may occur as the result of a failure to comply with permit conditions.

Subsection E requires permittees to properly operate and maintain all facilities and systems of treatment and control to ensure compliance with permit conditions. This includes providing adequate funding, staffing, training and quality assurance procedures. Permittees are also required to prepare and, if necessary, employ back-up or auxiliary facilities to maintain compliance with permit conditions.

Subsection F states that a Class I hazardous waste injection well permit may be modified, revoked and reissued, or terminated for cause. It further states that all permit conditions continue to apply while a request for modification, revocation and reissuance, or termination is pending. Thus, a permittee must continue to comply with all permit conditions until changes are approved by the Director of OCD.

Subsection G states that a Class I hazardous waste injection well permit does not convey any property rights to the permittee.

Subsection H requires a permittee to respond in a timely fashion to information requests made by the Director of OCD. This includes requests to determine whether cause exists to modify, revoke and reissue, or terminate a Class I hazardous waste injection well permit. It also applies to any records that a permittee is required to keep as a condition of its permit.

Subsection I requires a permit applicant to provide notice of the permit application to the public in accordance with Section 20.6.2.3108 NMAC. In addition, written notice must be mailed,

return receipt requested, to all surface and mineral owners within a half-mile of the proposed well site.

Subsection J requires a permittee to allow the Director of OCD or an authorized representative to enter and inspect any Class I hazardous waste injection well premises. The Director is authorized to enter the well site as well as any facility where records are kept and must be given access to the records and to the facilities themselves. The Director is also authorized to collect samples or monitor operations for the purpose of ensuring compliance with permit conditions.

Subsection K requires permittees to ensure that all samples and measurements are representative and to maintain records of monitoring activities. Records associated with the nature and composition of injected fluids must be maintained until three years after plugging and abandonment of the wells; all other records, including calibration and maintenance records, must be maintained for a period of three years.

Subsection L requires that all applications, reports, and other information submitted to the Director of OCD must be signed and certified in accordance with the requirements in Section 20.6.2.5101 NMAC.

Subsection M require permittees to report, within specific time limits, any planned changes to Class I hazardous waste injection wells, any anticipated noncompliance, periodic monitoring reports, all noncompliance events that may endanger public health or the environment, all other instances of noncompliance, and other information related to incomplete or inaccurate permit applications. Any noncompliance event that may endanger public health or the environment must be reported within 24 hours. Subsection M is more stringent than 40 C.F.R. § 144.51(l) because it imposes additional reporting requirements for noncompliance events that may endanger public health or the environment that are not included in the federal requirements.

Subsection N requires a permittee to provide notice of well completion to the Director of OCD before commencing injection at the well site. The Director of OCD is given an opportunity to inspect the new well and verify compliance with permit conditions before injection begins. Subsection N is more stringent than 40 C.F.R. § 144.51(m) because New Mexico does not allow area permitting of UIC wells.

Subsection O requires a permittee to notify the Director of OCD before conversion or abandonment of a Class I hazardous waste injection well. Subsection O is more stringent than 40 C.F.R. § 144.51(n) because New Mexico does not allow area permitting of UIC wells.

Subsection P requires a permittee to meet the well plugging and abandonment requirements in Section 20.6.2.5209 NMAC when closing a well.

Subsection Q provides deadlines for the submission of a plugging and abandonment report to the Director of OCD after closure of a Class I hazardous waste injection well. The plan must state that the well was plugged in accordance with the well closure plan or provide an explanation of any deviations from the previously submitted well closure plan.

Subsection R requires a permittee to comply with the mechanical integrity provisions in Section 20.6.2.5204 NMAC. If the Director determines that well lacks mechanical integrity, injection

must cease with 48 hours. A permittee then has the option to close the well or to undertake the necessary corrective action to prevent the migration of fluid into groundwater of the state of New Mexico. Injection cannot be restarted until approval is obtained from the Director of OCD.

Subsection S provides requirements for the transfer of a Class I hazardous waste injection well permit. A request for transfer must list all officers, directors, and owners of 25% or greater in the transferee. This provision is more stringent than 40 C.F.R. § 144.51(l)(3) because it requires the Director of OCD's written approval before a permit can be transferred. The transferrer's financial assurance will not be released until the transfer is approved by the Director of OCD and the transferee's financial assurance is in place.

These provisions are intended to ensure that Class I hazardous waste injection wells are constructed, operated, and closed in a manner that is consistent with permit conditions and New Mexico regulations and is protective of human health, the environment, and groundwater of the state of New Mexico.

20.6.2.5342 NMAC ESTABLISHING PERMIT CONDITIONS:

Section 20.6.2.5342 NMAC is based on 40 C.F.R. § 144.52. Section 20.6.2.5342 NMAC is not materially different from 40 C.F.R. § 144.52, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

Subsection A requires the Director of OCD to establish permit conditions for Class I hazardous waste injection wells that are consistent with Sections 20.6.2.3019(H), 20.6.2.5343 (A), 20.6.2.5310, and 20.6.2.5351 through 20.6.2.5353 NMAC. These sections address the duration of permits, schedules of compliance, reporting and recordkeeping, and specific Class I hazardous waste injection well requirements described below. Subsection A also requires the Director of OCD to establish permit conditions for financial assurance for well plugging and abandonment as well as any additional conditions that may be necessary to prevent migration of fluids into groundwater of the state of New Mexico.

Subsection B requires the Director of OCD to establish permit conditions for Class I hazardous waste injection wells that will assure compliance with all applicable requirements in Part 20.6.2 NMAC. An applicable requirement is defined as any requirement which takes effect prior to the final disposition of a permit, including applications for the issuance, modification, or revocation and reissuance of a permit.

Subsection C allows the Director of OCD to incorporate permit conditions expressly in the permit or to incorporate permit conditions by reference using specific citations to the NMAC.

These provisions are intended to ensure that all requirements imposed on Class I hazardous waste injection wells in Part 20.6.2. NMAC are included in an operator's Class I hazardous waste injection well permit.

20.6.2.5343 NMAC SCHEDULE OF COMPLIANCE:

Section 20.6.2.5343 NMAC is based on 40 C.F.R. § 144.53. Section 20.6.2.5343 NMAC is not materially different from 40 C.F.R. § 144.53, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section authorizes the Director of OCD to include in a Class I hazardous waste injection well permit a schedule of compliance leading to full compliance with Part 20.6.2 NMAC. The time for compliance cannot exceed three years from issuance of the permit. If the schedule of compliance exceeds one year, interim targets must be established to ensure the permittee is making progress toward full compliance. This Section also allows the Director of OCD to establish a schedule under which an existing Class I hazardous waste injection well can cease operations through plugging and abandonment rather than complying with new permit conditions. Finally, in cases where a permittee is undecided, the Director of OCD can establish a two-track compliance option that gives the permittee discretion to decide whether to comply with new permit requirements or cease operations and close the well.

These provisions are intended to provide a process through which Class I hazardous waste injection well operators can adjust operations to comply with new regulatory requirements that may be imposed on a Class I hazardous waste injection well.

20.6.2.5344 NMAC REQUIREMENTS FOR RECORDING AND REPORTING OF MONITORING RESULTS:

Section 20.6.2.5344 NMAC is based on 40 C.F.R. § 144.54. Section 20.6.2.5344 NMAC is not materially different from 40 C.F.R. § 144.54, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section requires the Director of OCD to include conditions in Class I hazardous waste injection well permits that specify the requirements for monitoring the injection of hazardous waste into the well and for reporting those monitoring results to OCD. Monitoring requirements must address the use, maintenance, installation of monitoring equipment and must also include sufficient detail to ensure that monitored samples are representative of operations at the facility. Reporting requirements must comply with the time intervals provided in Section 20.6.2.5359 NMAC.

These provisions are intended to ensure that monitoring data is accurate and representative of the regulated activity and that OCD is provided with monitoring data in a timely manner.

20.6.2.5345-20.6.2.5350 NMAC [RESERVED]

20.6.2.5351 NMAC APPLICABILITY

Section 20.6.2.5351 NMAC is based on 40 C.F.R. § 146.61(a). Section 20.6.2.5351 NMAC is not materially different from 40 C.F.R. § 146.61(a), with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions. The definitions included in 40 C.F.R. § 146.61(b) can be found in 20.6.2.5301 NMAC.

This Section explains that Sections 20.6.2.5351 through 20.6.2.5363 NMAC provide the standards and criteria for Class I hazardous waste injection wells. It further explains that, unless otherwise noted, these regulations that are specifically designed for Class I hazardous waste injection wells must be applied in place of any inconsistent provisions found in Sections 20.6.2.5000 through 20.6.2.5299 NMAC.

These provisions are intended to ensure that Class I hazardous waste injection well operators will comply with all applicable provisions designed specifically for Class I hazardous waste injections wells.

20.6.2.5352 NMAC MINIMUM CRITERIA FOR SITING:

Section 20.6.2.5352 NMAC is based on 40 C.F.R. § 146.62. Unless otherwise specified below, Section 20.6.2.5352 NMAC is not materially different from 40 C.F.R. § 146.62, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides the minimum criteria that must be applied when siting a Class I hazardous waste injection well. Subsection A states that Class I hazardous waste injection wells must be sited so that they inject into a formation that is below any formation that contains groundwater of the state of New Mexico and is located within one quarter mile of the well bore.

Subsection B provides a number of criteria that the Director of OCD must use to ensure that the area for a proposed Class I hazardous waste injection well is geologically suitable for the injection of hazardous waste. These include an analysis of the structure and stratigraphic geology, hydrogeology, and seismicity of both the region and the well site. The Director of OCD must also ensure that the local geology is sufficiently understood so that the limits of waste fate and transport can be accurately predicted by modeling.

Subsection C requires that the injection zone have necessary characteristics, including permeability, porosity, thickness, and areal extent to prevent the movement of fluids into groundwater of the state of New Mexico. The well site must also have a confining zone that is free of cracks, faults, or fractures and is capable of preventing vertical propagation of vertical fractures that could allow migration of fluids from the injection zone.

Subsection D requires the owner or operator of a Class I hazardous waste injection well to demonstrate at least one secondary feature to provide further protection of groundwater of the state of New Mexico. These secondary features include a sequence of permeable and less permeable strata between the confining zone and groundwater of the State of New Mexico, a comparison of the piezometric surfaces of the injection zone and the lowermost groundwater of the state of New Mexico, or a demonstration that there is no groundwater of the state of New Mexico present at the well site.

These provisions are intended to ensure that hazardous waste disposed of at the target location and geologic formation will not migrate from the injection zone into groundwater of the state of New Mexico.

20.6.2.5353 NMAC AREA OF REVIEW

Section 20.6.2.5353 NMAC is based on 40 C.F.R. § 146.63. Section 20.6.2.5353 NMAC is not materially different from 40 C.F.R. § 146.63, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section requires Class I hazardous waste injection wells to employ an area of review that is defined as a two-mile radius around the well bore, unless the Director of OCD determines that a larger area of review is necessary. The area of review is used to evaluate other wells and geologic features that could potentially serve as conduits for migration of fluids out of the injection zone. This is a larger area of review than is used for the permitting of other UIC wells in New Mexico.

This provision is intended to ensure that Class I hazardous waste injection well permit applicants review an area that is sufficiently large to exceed the expected lateral migration or cone of influence from each proposed Class I hazardous waste injection well.

20.6.2.5354 NMAC CORRECTIVE ACTION

Section 20.6.2.5354 NMAC is based on 40 C.F.R. § 146.64. Section 20.6.2.5354 NMAC is not materially different from 40 C.F.R. § 146.64, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section describes the steps that a permit applicant must take to avoid the migration of injected fluid through other existing well bores located within the area of review. Class I hazardous waste injection well permit applicants are required to identify all wells that penetrate the confining zone or injection within the area of review and to determine whether the wells are adequately completed or plugged. Information related to the location, description, and records of plugging or completion for each well must be provided to the Director of OCD in a tabular form. If any wells are determined to be improperly plugged and abandoned, or if such information cannot be determined, the permit applicant must submit for the Director of OCD's approval a corrective action plan that outlines the steps it will take to prevent movement of fluids through such wells. For existing wells, all corrective actions must be completed within two years after issuance of a Class I hazardous waste injection well permit. For new wells, all corrective actions must be completed before injection may commence. The Director of OCD must evaluate adequacy of a corrective action plan based on a series of criteria including the type of fluid to be injected, the geology and hydrology at the site, the history of injection operations, the closure procedures when the wells were closed, the reliability of procedure used to identify abandoned wells, along with other factors that could affect the movement of fluids from the injection zone into groundwater of the United States.

These provisions are intended to ensure that a Class I hazardous waste injection well permit applicant identifies all wells in the area of review that could provide a path for the movement of fluids out of the injection zone and takes any corrective action necessary to isolate the injection zone.

20.6.2.5355 NMAC CONSTRUCTION REQUIREMENTS:

Section 20.6.2.5355 NMAC is based on 40 C.F.R. § 146.65. Section 20.6.2.5355 NMAC is not materially different from 40 C.F.R. § 146.65, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides the requirements that a Class I hazardous waste injection well permittee must comply with when constructing a well.

Subsection A requires that Class I hazardous waste injection wells must be constructed and completed to prevent the movement of fluids from the injection zone to groundwater of the state of New Mexico. In addition, wells must be constructed in a manner that allow for the use of testing devices, and workover tools as well as the continuous monitoring of injection tubing and long string casing.

Subsection B requires that the permittee ensure compatibility between the injection fluids and all materials with which such fluids will come into contact. Compatibility will be evaluated based on standards developed by the American Petroleum Institute, ASTM, or similar organizations.

Subsection C requires that well casing and cementing must be designed to prevent movement of fluids into groundwater of the state of New Mexico during the life of the Class I hazardous waste injection well (including post-closure care) and provides a series of criteria that the Director of OCD must consider when evaluating the sufficiency of the well casing and cementing program. It requires a surface casing string, at least one long string casing into the injection zone, cementing between casings, and requirements to ensure that well integrity will be maintained for the life of the well.

Subsection D provides a number of criteria that the Director of OCD must consider when establishing requirements for the tubing and packer through which fluids will be injected. These criteria include depth, characteristics of the injection fluid, injection and annular pressure, injection rate, and the size and strength of the casing and tubing. It also authorizes the Director of OCD to approve a fluid seal if certain criteria are met.

These provisions are intended to ensure that the design and construction of a Class I hazardous waste well will include all of necessary components to prevent migration of fluid from the injection zone or the well bore into groundwater of the state of New Mexico.

20.6.2.5356 NMAC LOGGING, SAMPLING, AND TESTING PRIOR TO WELL OPERATION:

Section 20.6.2.5356 NMAC is based on 40 C.F.R. § 146.66. Section 20.6.2.5356 NMAC is not materially different from 40 C.F.R. § 146.66, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides a series of tests that a Class I hazardous waste injection well permittee must conduct prior to commencing injection.

Subsection A requires a Class I hazardous waste injection well permittee to conduct a series of logs and tests during the well construction process to determine the geologic and hydrologic features of the well bore. Logs and tests must be run after installation of the surface casing and the long string casing. In addition, prior to well operation, the permittee must conduct a mechanical integrity test that consists of a pressure test, radioactive tracer survey, temperature or noise log, and any other test required by the Director of OCD.

Subsection B requires a permittee to collect whole cores or sidewall cores from the confining and injection zones, along with formation fluid samples from the injection zone. The Director of OCD approves the substitution of representative cores from nearby wells if the well owner or operator can demonstrate that core retrieval is not possible.

Subsection C requires the permittee to record the temperature, pH, conductivity, pressure, and static fluid level of the injection zone fluid.

Subsection D requires the permittee to determine the fracture pressure and other chemical and physical characteristics of the injection and confining zones. The permittee must also determine the physical and chemical characteristics of the formation fluids in the injection zone.

Subsection E requires the permittee to conduct a pump test or injectivity test to verify the characteristics of the injection zone prior to operation of the well.

Subsection F requires the permittee to provide notice to the Director of OCD before conducting tests under Section 20.6.2.5351 through 20.6.2.5363 NMAC to allow the Director of OCD an opportunity to witness such tests. The notice must be provided at least 30 days before testing begins and must include a schedule of all logging and testing activities.

These provisions are intended to ensure that fluids will not migrate from the injection zone or well bore by verifying information about the suitability of the injection zone, confining zone, and well bore prior to operation of a Class I hazardous waste injection well.

20.6.2.5357 NMAC OPERATING REQUIREMENTS:

Section 20.6.2.5357 NMAC is based on 40 C.F.R. § 146.67. Section 20.6.2.5357 NMAC is not materially different from 40 C.F.R. § 146.67, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides a series of requirements that Class I hazardous waste injection well permittees must comply with during operation of the well.

Subsection A requires permittees to maintain an injection pressure at the wellhead that will avoid initiation of new fractures or propagation of existing fractures in the injection zone. The permittee must also ensure that the injection pressure will not initiate new fractures or propagate existing fractures in the confining zone above the injection zone.

Subsection B prohibits injection between the outermost well casing and the well bore in order to protect groundwater of the state of New Mexico.

Subsection C provides requirements for maintaining annulus pressure in the well to allow monitoring for leaks in the injection tubing. It also requires that the fluid in the annulus be noncorrosive.

Subsection D requires the permittee to maintain the mechanical integrity of the well at all times.

Subsection E requires the Director of OCD to impose additional permit requirements for Class I hazardous waste injection wells that may inject wastes that have the potential to react with the injection formation to generate gases. Conditions can include limits on temperature and pH and other procedures to avoid pressure imbalances.

Section F requires the permittee to install continuous monitoring systems for injection pressure, flow rate, volume, and temperature of the injection fluid and annulus pressure. The permittee must also install an automatic alarm and automatic shut-off system that is triggered (or certify the presence of a trained operator to respond) when pressures, flow rates, and other parameters fall outside of acceptable ranges.

If an automatic alarm or shutdown is triggered, Subsection G requires the permittee to investigate the cause of the alarm or shutdown. If the well lacks mechanical integrity, the permittee must cease operations, determine whether any leaks are present, and provide notice to the Director of OCD within 24 hours.

If a loss of mechanical integrity is discovered at a Class I hazardous waste injection well, Subsection H requires the permittee to immediately cease operations and take reasonable steps to determine whether hazardous waste was injected into any unauthorized zone. The permittee must also provide notice to the Director of OCD of the loss of mechanical integrity, and restore and demonstrate mechanical integrity of the well prior to resuming injection.

If the permittee obtains evidence of a release of injected waste outside of the injection zone, Subsection I requires the permittee to cease operations, notify the Director of OCD, characterize the release, and, if necessary, remediate the release and notify the public of any release into groundwater of the state of New Mexico. Injection may resume after the permittee demonstrates that injection will not endanger groundwater of the state of New Mexico.

Subsection J requires the permittee of a Class I hazardous waste injection well to obtain approval from the Director of OCD prior to conducting a well workover.

These provisions are intended to ensure that wells are operated in a manner that prevents migration of injected fluids out of the injection zone and to provide protocol to protect groundwater water of the state of New Mexico in the event that an incident occurs at the well site.

20.6.2.5358 NMAC TESTING AND MONITORING REQUIREMENTS:

Section 20.6.2.5358 NMAC is based on 40 C.F.R. § 146.68. Section 20.6.2.5358 NMAC is not materially different from 40 C.F.R. § 146.68, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides testing and monitoring requirements that Class I hazardous waste injection well permittees must comply with during operation of the well.

Subsection A requires the permittee to develop and follow a waste analysis plan to obtain a detailed physical and chemical analysis of representative samples of the injected waste. The plan must specify the parameters to be measured, the test methods that will be applied, and the sampling measures used to ensure representativeness. The permittee must repeat this analysis on a regular basis as required by the waste analysis plan and the Director of OCD.

Subsection B requires the permittee to demonstrate to the Director of OCD that the injected waste stream and any reaction products will not alter the chemical or physical properties of the injection or confining zone in a manner that would threaten the minimum siting criteria in Section 20.6.2.5352 NMAC.

Subsection C requires the permittee to demonstrate that all well materials that will come into contact with the injection fluid will be constructed of compatible materials. It also requires the Director of OCD to impose additional corrosion monitoring requirements for Class I hazardous waste injection wells that will dispose of corrosive waste.

Subsection D requires the permittee to conduct periodic mechanical integrity tests during operation of the well. Mechanical integrity tests must evaluate the long string casing, injection tube, annular seal, and bottom hole cement. The permittee is also required to run casing inspection logs whenever the permittee conducts a workover in which the injection string is pulled.

Subsection E requires the permittee to annual ambient monitoring to assess the potential for fluid movement from the well or injection zone. The monitoring program must be based on a site-specific assessment of potential fluid movement from the well or injection zone. The Director of OCD has discretion to require additional monitoring including monitoring of pressure in formations above the confining zone and monitoring of the groundwater quality in aquifers above the confining zone.

Subsection F authorizes the Director of OCD to require seismicity monitoring if the Class I hazardous waste injection well has the capacity to cause seismic disturbances.

These provisions are intended to require permittees to collect sufficient information during the operation of Class I hazardous waste injection wells to ensure that injected fluids do not migrate out of the injection zone into groundwater of the state of New Mexico.

20.6.2.5359 NMAC REPORTING REQUIREMENTS:

Section 20.6.2.5359 NMAC is based on 40 C.F.R. § 146.69. Section 20.6.2.5359 NMAC is not materially different from 40 C.F.R. § 146.69, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section provides reporting requirements that Class I hazardous waste injection well permittees must comply with during operations. Permittees are required to submit quarterly reports that contain information regarding maximum injection pressure, volume of fluid injected,

the characteristics of the injected fluids and the results of any required monitoring. The permittee must also report any event that exceeds operating parameters or triggers an alarm or shutdown. The permittee must also comply with reporting requirements for mechanical integrity tests, well workovers, and other tests of the injection well required by the Director of OCD.

These provisions are intended to ensure that the Director of OCD is provided with necessary information about each Class I hazardous waste injection well in a timely manner.

20.6.2.5360 NMAC INFORMATION TO BE EVALUATED BY THE DIRECTOR:

Section 20.6.2.5360 NMAC is based on 40 C.F.R. § 146.70. Section 20.6.2.5360 NMAC is not materially different from 40 C.F.R. § 146.70, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section describes the information that the Director of OCD must consider when evaluating the design, construction, operation, and closure of Class I hazardous waste injection wells.

Subsection A describes a series of criteria and documents that the Director of OCD must review and evaluate before issuing a Class I hazardous waste injection well permit to ensure that the permittee will meet the requirements of Sections 20.6.2.5000 through 20.6.2.5399 NMAC. These include maps, cross-sections and tabulations showing wells located within the area of review, groundwater of the state of New Mexico, and geologic features at the proposed well site. The permit applicant must also provide information on the proposed construction and operation of the Class I hazardous waste injection well.

Subsection B describes the information that Class I hazardous waste injection well permittee must include in a well completion report before the Director of OCD can grant approval for operation of a Class I hazardous waste injection well. These include logging and testing data, proposed operating parameters, and the status of corrective action activities. The permittee must also provide evidence that that is has obtained a no migration exclusion from EPA Region 6.

Subsection C requires the Director of OCD to review the information regarding well closure and post-closure care in Subsection A(4) of Section 20.6.2.6361 NMAC and Subsection A of Section 20.6.2.5362 NMAC before granting approval of the plugging and abandonment of a Class I hazardous waste injection well.

Subsection D requires that the permittee of a Class I hazardous waste injection well must certify that it has established a program to reduce the volume and toxicity of the injected waste and that injection is the method of disposal that minimizes the threat to human health and the environment.

These provisions are designed to ensure that the Director of OCD has the necessary information to determine that Class I hazardous waste injection wells will be sited, constructed, operated, and closed in a manner that is protective of human health and the environment and that injected wastes will not migrate from the injection zone or well bore into groundwater of the state of New Mexico.

20.6.2.5361 NMAC CLOSURE:

Section 20.6.2.5361 NMAC is based on 40 C.F.R. § 146.71. Section 20.6.2.5361 NMAC is not materially different from 40 C.F.R. § 146.71, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section describes the requirements that Class I hazardous waste injection well permittees must comply with regarding closure of wells after the injection ceases.

Subsection A requires a permit applicant to submit and revise as necessary a well closure plan, which must be included as a permit condition for any Class I hazardous waste injection well. The plan must identify the type of number of plugs to be used, the method of placement of the plugs, any wells casing or other materials that will remain in the well bore, testing and measurement procedures, as well as other criteria. Subsection A also requires a permittee to maintain financial assurance that is sufficient to cover the cost of well closure. Finally, it also provides a procedure for Class I hazardous waste injection well permittees to temporarily cease operations for up to two years while keeping a well open.

Subsection B requires a permittee to provide the Director of OCD with at least 60 days' notice prior to closing a Class I hazardous waste injection well.

Subsection C requires a Class I hazardous waste injection well permittee to submit a closure report to the Director of OCD after closing a well. The report must be certified by the permittee and by the person who performed the closure operations. The report must describe any deviations from the previously filed well closure plan.

Subsection D provides the standards that a Class I hazardous waste injection well permittee must meet when closing a well. These standards include an analysis of pressure decay over time, mechanical testing of long string casing and cement that will remain in the well bore, flushing with a buffer fluid, and the placement of cement plugs.

These provisions are intended to ensure that Class I hazardous waste injection wells are properly closed so that there will be no migration of fluids from the injection zone when injection ceases.

20.6.2.5362 NMAC POST-CLOSURE CARE:

Section 20.6.2.5362 NMAC is based on 40 C.F.R. § 146.72. Section 20.6.2.5362 NMAC is not materially different from 40 C.F.R. § 146.72, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section describes the requirements that Class I hazardous waste injection well permittees must comply with regarding post-closure care of wells after the injection ceases.

Subsection A requires a permittee to prepare, modify as necessary, and provide financial assurance for a post-closure care plan. The plan must include information regarding the pressure before and after injection and the projected decay of pressure in the injection zone, the predicted position of the waste front at closure, and the status of any required cleanup efforts. The

obligation to implement the post-closure care plan survives termination of the Class I hazardous waste injection well permit.

Subsection B requires a permittee to complete any cleanup activities required under Section 20.6.2.5354 NMAC and to conduct groundwater monitoring until the well's cone of influence no longer intersects the base of the lowermost groundwater of the state of New Mexico. The permittee must also provide notice of the injection and confining zones to state and local agencies with authority over drilling activities, and retain records of injected fluids for three years after well closure.

Subsection C requires the permittee to record a notation in the deed of all surface and subsurface owners on whose property the Class I hazardous waste injection well is located to inform future purchasers that hazardous waste was injected at the site. The notation must state that the property was used to manage hazardous waste, provide contact information to government agencies with information regarding the Class I hazardous waste injection well, and must describe the materials that were disposed of, along with the identity of the formation into which they were injected and the time period over which injection occurred.

These provisions are intended to prevent migration of fluids from the injection zone into groundwater of the state of New Mexico both through post-closure care of the well and by providing notice to future parties that hazardous waste was injected.

20.6.2.5363 NMAC FINANCIAL RESPONSIBILITY FOR POST-CLOSURE CARE

Section 20.6.2.5363 NMAC is based on 40 C.F.R. § 146.73. Section 20.6.2.5363 NMAC is not materially different from 40 C.F.R. § 146.73, with the exception of substituted cross references to NMAC provisions in lieu of equivalent cross references to federal CFR provisions.

This Section requires permittees to demonstrate and maintain financial responsibility for the costs of post-closure care using one of the instruments specified in Section 20.6.2.5320 NMAC. This obligation survives termination of a Class I hazardous waste injection well permit.

These provisions are intended to ensure that regardless of the solvency of the Class I hazardous waste injection well permittee, sufficient funds are set aside for post-closure care to prevent the movement of fluids from the injection zone into groundwater of the state of New Mexico.

**Exhibit 1 - Cross Reference Table
for Proposed NM Class I Hazardous Waste UIC Program Rules—New Rule Sections**

CFR Cite/Title	NMAC Cite	Notes
40 CFR Part 144 Subpart A - General Provisions (one section)		
§ 144.14 Requirements for wells injecting hazardous waste.	20.6.2.5310	Federal text adopted with conforming changes
40 CFR Part 144 Subpart E - Permit Conditions (all sections)		
§ 144.51 Conditions applicable to all permits.	20.6.2.5341	Federal text adopted with conforming changes
§ 144.52 Establishing permit conditions.	20.6.2.5342	Federal text adopted with conforming changes
§ 144.53 Schedule of compliance.	20.6.2.5343	Federal text adopted with conforming changes
§ 144.54 Requirements for recording and reporting of monitoring results.	20.6.2.5344	Federal text adopted with conforming changes
§ 144.55 Corrective action.	N/A	N/A
40 CFR Part 144 Subpart F - Financial Responsibility: Class I Hazardous Waste Injection Wells (all sections)		
§ 144.60 Applicability.	20.6.2.5320	Incorporated By Reference
§ 144.61 Definitions of terms as used in this subpart.	20.6.2.5320	Incorporated By Reference
§ 144.62 Cost estimate for plugging and abandonment.	20.6.2.5320	Incorporated By Reference
§ 144.63 Financial assurance for plugging and abandonment.	20.6.2.5320	Incorporated By Reference
§ 144.64 Incapacity of owners or operators, guarantors, or financial institutions.	20.6.2.5320	Incorporated By Reference
§ 144.65 Use of State-required mechanisms.	N/A	N/A
§ 144.66 State assumption of responsibility.	N/A	N/A
§ 144.70 Wording of the instruments.	20.6.2.5320	Incorporated By Reference
40 CFR Part 146 Subpart G - Criteria and Standards Applicable to Class I Hazardous Waste Injection Wells (all sections)		
§ 146.61 Applicability.	20.6.2.5351	Federal text adopted with conforming changes
§ 146.62 Minimum criteria for siting.	20.6.2.5352	Federal text adopted with conforming changes
§ 146.63 Area of review.	20.6.2.5353	Federal text adopted with conforming changes
§ 146.64 Corrective action for wells in the area of review.	20.6.2.5354	Federal text adopted with conforming changes
§ 146.65 Construction requirements.	20.6.2.5355	Federal text adopted with conforming changes

CFR Cite/Title	NMAC Cite	Notes
§ 146.66 Logging, sampling, and testing prior to new well operation.	20.6.2.5356	Federal text adopted with conforming changes
§ 146.67 Operating requirements.	20.6.2.5357	Federal text adopted with conforming changes
§ 146.68 Testing and monitoring requirements.	20.6.2.5358	Federal text adopted with conforming changes
§ 146.69 Reporting requirements.	20.6.2.5359	Federal text adopted with conforming changes
§ 146.70 Information to be evaluated by the Director.	20.6.2.5360	Federal text adopted with conforming changes
§ 146.71 Closure.	20.6.2.5361	Federal text adopted with conforming changes
§ 146.72 Post-closure care.	20.6.2.5362	Federal text adopted with conforming changes
§ 146.73 Financial responsibility for post-closure care.	20.6.2.5363	Federal text adopted with conforming changes

**EXHIBIT 2 - COMPARISON OF PROPOSED WATER CONSERVATION RULE
SECTIONS 20.6.2.5300 THROUGH 20.6.2.5399 AGAINST U.S. EPA REQUIREMENTS**

The following shows a redline comparison of proposed Sections 20.6.2.5300 through 20.6.2.5399 NMAC against the minimum U.S. EPA requirements set forth in the Code of Federal Regulations. Any text not in redline is identical to the federal text, and any text in redline represents additional text and other changes. Also, footnotes have been added to explain some of the NMAC provisions, including differences between the U.S. EPA regulations and the proposed rule.

20.6.2.5300¹

REQUIREMENTS FOR CLASS I HAZARDOUS WASTE INJECTION WELLS:

A. Except as otherwise provided for in Sections 20.6.2.5300 through 20.6.2.5399 NMAC, Class I hazardous waste wells are subject to the minimum permit requirements for all Class I- wells in Sections 20.6.2.5000 through 20.6.2.5299 NMAC, in addition to the requirements of Sections 20.6.2.5300 through 20.6.2.5399 NMAC. To the extent any requirement in Sections 20.6.2.5300 through 20.6.2.5399 NMAC conflicts with a requirement of Sections 20.6.2.5000 through 20.6.2.5299 NMAC, Class I hazardous waste injection wells must comply with Sections 20.6.2.5300 through 20.6.2.5399 NMAC.

B. Class I hazardous waste injection wells are only authorized for use by petroleum refineries for the waste generated by the refinery (“generator”).

C. The New Mexico energy, minerals and natural resources department, oil conservation division will administer and oversee all permitting of Class I hazardous waste wells pursuant to Sections 20.6.2.5300 through 20.6.2.5399 NMAC.

20.6.2.5301

DEFINITIONS As used in Sections 20.6.2.5300 through 20.6.2.5399 NMAC:

A. “cone of influence” means that area around the well within which increased injection zone pressures caused by injection into the hazardous waste injection well would be sufficient to drive fluids into groundwater of the State of New Mexico.

B. “director” means the Director of the New Mexico energy, minerals and natural resources department, oil conservation division or his/her designee.²

C. “existing well” means a Class I hazardous waste injection well which has become a Class I hazardous waste injection well as a result of a change in the definition of the injected

¹ This provision is not in the CFR per se but is a necessary predicate to the CFR provisions and to tie the Class I hazardous well provisions to the pre-existing state program regulations.

² This addition is necessary because the term is not otherwise defined (Defined in 20.6.2.7 as secretary or director).

waste which would render the waste hazardous under Section 20.4.1.200 NMAC (incorporating 40 C.F.R. § 261.3).³

D. “groundwater of the State of New Mexico” means, consistent with Section 20.6.2.5001 NMAC, an aquifer that contains ground water having a TDS concentration of 10,000 mg/l or less.⁴

E. “injection interval” means that part of the injection zone in which the well is screened, or in which the waste is otherwise directly emplaced.

F. “new well” means any Class I hazardous waste injection well which is not an existing well.

G. “transmissive fault or fracture” is a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.

20.6.2.5302

FEES FOR CLASS I HAZARDOUS WASTE INJECTION WELLS:

For the purposes of Class I hazardous waste wells, this section shall apply to the exclusion of Section 20.6.2.3114 NMAC.

A. *Filing Fee.* Every facility submitting a discharge permit application for approval of a UIC Class I hazardous waste injection well shall pay a filing fee of \$100 to the Water Quality Management Fund at the time the permit application is submitted. The filing fee is nonrefundable.

B. *Permit Fee.*

(1) Every facility submitting a discharge permit application for approval of a UIC Class I hazardous waste injection well shall pay a permit fee of \$30,000 to the Water Quality Management Fund. The permit fee may be paid in a single payment at the time of permit approval or in equal installments over the term of the permit. Installment payments shall be remitted yearly, with the first installment due on the date of permit approval. Subsequent installment permits shall be remitted yearly thereafter. The permit or permit application review of any facility shall be suspended or terminated if the facility fails to submit an installment payment by its due date.

(2) Facilities applying for permits which are subsequently withdrawn or denied shall pay one-half of the permit fee at the time of denial or withdrawal.

³ New Mexico has incorporated 40 CFR 261 by reference. See 20.4.1.200, 201. For clarity the CFR citation is retained. The provision at issue is entitled “Definition of hazardous waste.”

⁴ “Waters of the State of New Mexico” is a term used by the State in lieu of underground source of drinking water. It is more protective than USDW because it includes both drinking water and agricultural uses.

C. Annual Administration Fee. Every facility that receives a UIC Class I hazardous waste injection well permit shall pay an annual administrative fee of \$20,000 to the Water Quality Management Fund. The initial administrative fee shall be remitted one year after commencement of disposal operations pursuant to the permit. Subsequent administrative fees shall be remitted annually thereafter.

D. Renewal Fee.

(1) Every facility submitting a discharge permit application for renewal of a UIC Class I hazardous waste injection well shall pay a renewal fee of \$10,000 to the Water Quality Management Fund. The renewal fee may be paid in a single payment at the time of permit renewal or in equal installments over the term of the permit. Installment payments shall be remitted yearly, with the first installment due on the date of permit renewal. Subsequent installment permits shall be remitted yearly thereafter. The permit or permit renewal review of any facility shall be suspended or terminated if the facility fails to submit an installment payment by its due date.

(2) The Director may waive or reduce fees for discharge permit renewals which require little or no cost for investigation or issuance.

E. Modification Fees.

(1) Every facility submitting an application for a discharge permit modification of a UIC Class I hazardous waste injection well will be assessed a filing fee plus a modification fee of \$10,000 to the Water Quality Management Fund.

(2) Every facility submitting an application for other changes to a UIC Class I hazardous waste injection well discharge permit will be assessed a filing fee plus a minor modification fee of \$1,000 to the Water Quality Management Fund.

(3) Applications for both renewal and modification shall pay a filing fee plus renewal fee.

(4) If the Director requires a discharge permit change as a component of an enforcement action, the facility shall pay the applicable modification fee. If the Director requires a discharge permit change outside the context of an enforcement action, the facility shall not be assessed a fee.

(5) The Director may waive or reduce fees for discharge permit changes which require little or no cost for investigation or issuance.

F. Financial Assurance Fees.

(1) Facilities with approved UIC Class I hazardous waste injection well permits shall pay the financial assurance fees specified in Section 20.6.2.3114, Table 2 NMAC.

(2) Facilities relying on the corporate guarantee for financial assurance shall pay an additional fee of \$ 5,000 to the Water Quality Management Fund.

20.6.2.5303

CONVERSION OF EXISTING INJECTION WELLS:

An existing Class I non-hazardous waste injection well may be converted to a Class I hazardous waste injection well provided the well meets the modeling, design, compatibility, and other requirements set forth in Sections 20.6.2.5300 through 20.6.2.5399 NMAC and the permittee receives a Class I hazardous waste permit pursuant to those Sections.

20.6.2.5304 – 20.6.2.5309: [RESERVED]

§ 144.1420.6.2.5310

REQUIREMENTS FOR WELLS INJECTING HAZARDOUS WASTE REQUIRED TO BE ACCOMPANIED BY A MANIFEST:

~~(a)~~ A. Applicability. The regulations in this section apply to all generators of hazardous waste, and to the owners or operators of all hazardous waste management facilities, using any class of well to inject hazardous wastes accompanied by a manifest. (See also ~~§144.13~~ Subsection A(3)(b) of Section 20.6.2.5004 NMAC⁵.)

~~(b)~~ B. Authorization. The owner or operator of any well that is used to inject hazardous waste required to be accompanied by a manifest or delivery document shall apply for authorization to inject as specified in ~~§144.31~~ Section 20.6.2.5102 NMAC⁶ within 6 months after the approval or promulgation of the State UIC program.

~~(c)~~ C. Requirements. In addition to complying with the applicable requirements of this ~~p~~Part⁷ and ~~40 CFR part 146~~, the owner or operator of each facility meeting the requirements of Subsection B paragraph (b) of this section, shall comply with the following:

(1) Notification. The owner or operator shall comply with the notification requirements of ~~42 U.S.C. § 6930~~ section 3010 of Public Law 94-580⁸.

(2) Identification number. The owner or operator shall comply with the requirements of Section 20.4.1.500 NMAC (incorporating 40 CFR Section 264.11)⁹.

⁵ § 144.13 is entitled “Prohibition of Class IV wells;” and 20.6.2.5004 NMAC in general, and A(3)(b) specifically, are the state corollary Class IV prohibitions.

⁶ § 144.31 is entitled “Application for a permit; authorization for a permit.” There is no complete state corollary because 20.6.2.5102 NMAC, which covers the same topic, does not cover Class I hazardous waste wells. In order to allow this cross reference to work, 20.6.2.5102 NMAC has been amended to include hazardous waste wells.

⁷ “This Part” includes all of 20.6.2 NMAC and would cover all of New Mexico’s UIC program which, by law, must be as stringent as the requirements EPA imposes under 40 CFR Parts 144 and 146. Therefore, it is the appropriate corollary to Part 146

⁸ This is the federal provision for listing materials as hazardous waste (using the U.S.C. rather than Public Law citation). There is no state corollary to EPA’s listing authority, so the federal provision has been retained.

(3) *Manifest system.* The owner or operator shall comply with the applicable recordkeeping and reporting requirements for manifested wastes in [Section 20.4.1.500 NMAC \(incorporating 40 CFR Section 264.71\)](#).¹⁰

(4) *Manifest discrepancies.* The owner or operator shall comply with [Section 20.4.1.500 NMAC \(incorporating 40 CFR Section 264.72\)](#).¹¹

(5) *Operating record.* The owner or operator shall comply with [Section 20.4.1.500 NMAC \(incorporating 40 CFR Sections 264.73\(a\), \(b\)\(1\), and \(b\)\(2\)\)](#).¹²

(6) *Annual report.* The owner or operator shall comply with [Section 20.4.1.500 NMAC \(incorporating 40 CFR Section 264.75\)](#).¹³

(7) *Unmanifested waste report.* The owner or operator shall comply with [Section 20.4.1.500 NMAC \(incorporating 40 CFR Section 264.75\)](#).¹⁴

(8) *Personnel training.* The owner or operator shall comply with the applicable personnel training requirements of [Section 20.4.1.500 NMAC \(incorporating 40 CFR Section 264.16\)](#).¹⁵

(9) *Certification of closure.* When abandonment is completed, the owner or operator must submit to the Director certification by the owner or operator and certification by an independent registered professional engineer that the facility has been closed in accordance with the specifications in ~~§144.52(a)(6)~~[Section 20.6.2.5209 NMAC](#).¹⁶

20.6.2.5311 – 20.6.2.5319: [RESERVED]

(cont.)

⁹ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Identification number."

¹⁰ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Use of manifest system."

¹¹ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Manifest discrepancies."

¹² New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Personnel training."

¹³ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Biennial report."

¹⁴ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Biennial report."

¹⁵ New Mexico has incorporated 40 CFR 264 by reference. See 20.4.1.500, 501. For clarity the CFR citation is retained. The provision at issue is entitled "Personnel training."

¹⁶ The nearest state corollary to 40 CFR § 144.52 is 20.6.2.5209 NMAC. That section was amended to cover Class I hazardous wells.

20.6.2.5320 ADOPTION OF 40 CFR PART 144, SUBPART F (FINANCIAL RESPONSIBILITY: CLASS I HAZARDOUS WASTE INJECTION WELLS). Except as otherwise provided, the regulations of the EPA set forth in 40 CFR Part 144, Subpart F [insert current effective date] are hereby incorporated by reference.

20.6.2.5321 MODIFICATIONS, EXCEPTIONS, AND OMISSIONS. Except as otherwise provided, the following modifications, exceptions, and omissions are made to the incorporated federal regulations.

A. The following terms defined in 40 CFR Section 144.61 have the meanings set forth herein, in lieu of the meaning set forth in 40 CFR Section 144.61:

(1) “plugging and abandonment plan” means the plan for plugging and abandonment prepared in accordance with the requirements of 20.6.2.5341 NMAC.

B. The following terms not defined in 40 CFR Part 144, Subsection F have the meanings set forth herein when the terms are used in this part:

(1) “administrator,” “regional administrator” and other similar variations means the Director of the New Mexico energy, minerals and natural resources department, oil conservation division or his/her designee;

(2) “United States Environmental Protection Agency” or “EPA” means New Mexico energy, minerals and natural resources department, oil conservation division or OCD, except when used in 40 CFR Section 144.70(f).

C. The following provisions of 40 CFR Part 144, Subpart F are modified in Section 20.6.2.5321 NMAC:

(1) cross references to 40 CFR Part 144 shall be replaced by cross references to Sections 20.6.2.5300 through 20.6.2.5399 NMAC

(2) the cross reference to §§ 144.28 and 144.51 in Section 144.62(a) shall be replaced by a cross reference to Section 20.6.2.5341 NMAC;

(3) the cross references to 40 CFR Parts 264, Subpart H and 265, Subpart H shall be modified to include cross references to 40 CFR Parts 264, Subpart H and 265, Subpart H and Sections 20.4.2.500 and 20.4.2.600 NMAC.

(4) references to EPA Identification Numbers in financial assurance documents shall be replaced by references to API Well Numbers (US Well Numbers);

(5) the first sentence of 40 CFR Section 144.63(f)(1) shall be replaced with the following sentence: “An owner or operator may satisfy the requirements of this section by obtaining a guarantee from a corporate parent that meets the requirements of 40 CFR Section 144.63(f)(10), including the guarantor meeting the requirements for the owner or operator under the financial test specified in this paragraph.”

(6) trust agreements prepared in accordance with 40 CFR Section 144.70(a) must state that they will be administered, construed, and enforced according to the laws of New Mexico;

(7) surety companies issuing bonds prepared in accordance with 40 CFR Section 144, Subpart F must be registered with the New Mexico Office of Superintendent of Insurance;

D. The following provisions of 40 CFR Part 144, Subpart F are omitted from Section 20.6.2.5320 NMAC:

(1) Section 144.65;

(2) Section 144.66;

(3) the third sentence in 40 CFR Section 144.63(h);

20.6.2.5322 – 20.6.2.5340 [RESERVED]

§ 20.6.2.5341-144.51

CONDITIONS APPLICABLE TO ALL PERMITS:

The following conditions apply to all Class I hazardous¹⁷ ~~UIC~~ permits. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations ~~(or the corresponding approved State regulations)~~¹⁸ must be given in the permit.

~~(a)~~ A. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the New Mexico Water Quality Act Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in ~~an emergency permit under § 144.34a~~ variance issued under Section 20.6.2.1210 NMAC.¹⁹

~~(b)~~ B. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a ~~new~~ permit renewal pursuant to Subpart F of Section 20.6.2.3106 NMAC.²⁰

¹⁷ The rules at issue only apply to Class I hazardous waste well permits.

¹⁸ “These regulations” now refer to the approved State regulations.

¹⁹ There is no exact state corollary to this CFR provision. The variance provision in 20.6.2.1210 appears to be the closest state corollary to this CFR provision, and we would argue is its functional equivalent.

²⁰ The purpose of this addition is to make clear that timely renewal applications can authorize the permittee to continue to operate after the expiration date of the original permit.

~~(e)~~ C. *Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee 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 this permit.

~~(d)~~ D. *Duty to mitigate.* The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

~~(e)~~ E. *Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this 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 or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

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

~~(g)~~ G. *Property rights.* This permit does not convey any property rights of any sort, or any exclusive privilege.

~~(h)~~ H. *Duty to provide information.* The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

I. *Duty to provide notice. Public notice, when required, shall be provided as set forth in 20.6.2.3108 NMAC except that the following notice shall be provided in lieu of the notice required by 20.6.2.3108(B)(2):*

A written notice must be sent by certified mail, return receipt requested, to all surface and mineral owners of record within a ½ mile radius of the proposed well or wells.

~~(i)~~ J. *Inspection and entry.* The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Sections 20.6.2.5300 through 20.6.2.5399 NMAC~~SDWA~~,²¹ any substances or parameters at any location.

⊕ K. *Monitoring and records.*

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

(2) The permittee shall retain records of all monitoring information, including the following:

(i) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and

(ii) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under § ~~144.52(a)(6)~~ Subsection A(6) of Section 20.6.2.5342 NMAC²², or under ~~part 146 subpart G~~ Sections 20.6.2.5351 through 20.6.2.5363 NMAC²³ as appropriate. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period. ~~For EPA administered programs, the owner or operator shall continue to retain the records after the three year retention period unless he delivers the records to the Regional Administrator or obtains written approval from the Regional Administrator to discard the records.~~²⁴

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

²¹ Reference to the state rules is necessary in lieu of the SDWA.

²² Internal cross reference (see cross reference table for details).

²³ Internal cross reference (see cross reference table for details). The cited sections are the corollary to Subpart G.

²⁴ This sentence is unnecessary as the Class I hazardous program will be administered by New Mexico, not EPA.

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

~~(4) Owners or operators of Class VI wells shall retain records as specified in subpart H of part 146, including §§ 146.84(g), 146.91(f), 146.92(d), 146.93(f), and 146.93(h) of this chapter.²⁵~~

~~(k)~~ L. *Signatory requirement.* All applications, reports, or information submitted to the Director Administrator shall be signed and certified. (See Subsection G of 20.6.2.5101 NMAC § 144.32.²⁶)

~~(j)~~ M. *Reporting requirements—*

(1) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

~~(3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act. (See § 144.38); in some cases, modification or revocation and reissuance is mandatory.²⁷~~

(43) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(54) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.

(65) *Twenty-four hour reporting.* The permittee shall report any noncompliance which may endanger health or the environment, including:

(i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to groundwater of the State of New Mexico ~~USDW~~; or

²⁵ Section 144.51(j)(4) is unnecessary as it applies to Class VI wells.

²⁶ Section 144.32 is entitled "Signatories to permit applications and reports." Section 20.6.2.5101 is the closest state corollary to the CFR provision and has been amended to apply to Class I hazardous waste wells and to apply the certification requirement to reports.

²⁷ Section 144.51(l)(3), "Transfers," has been replaced with 20.6.2.5341(R) below.

(ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between groundwater of the State of New Mexico USDWs. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the area affected by the noncompliance, including any groundwater of the State of New Mexico underground sources of drinking water; 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; the date and time the permittee became aware of the noncompliance; and steps taken or planned to reduce, remediate, eliminate, and prevent reoccurrence of the noncompliance.

~~(76)~~ *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under ~~paragraphs (1)~~ Subsections M(34), (45), and (56) of this sSection, at the time monitoring reports are submitted. The reports shall contain the information listed in ~~paragraph~~ Subsection M(1)(65)²⁸ of this sSection.

~~(87)~~ *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

~~(m)~~ N. *Requirements prior to commencing injection.* ~~Except for all new wells authorized by an area permit under § 144.33(e), a~~²⁹ A new injection well may not commence injection until construction is complete, and

(1) The permittee has submitted notice of completion of construction to the Director; and

(2)

(i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

(ii) The permittee has not received notice ~~from~~ ~~from~~ the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in ~~paragraph (m)~~ Subsection N(1) of this sSection, in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.

²⁸ Subsection references were updated to reflect deletion of Subsection L(3), above.

²⁹ The state has not adopted area well permitting and thus this clause is unnecessary.

~~(n) O.~~ The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well, ~~or in the case of area permits before closure of the project.~~³⁰

~~(o) OP.~~ A Class I, II or III permit shall include and a Class V permit may include conditions which meet the applicable requirements of § 146.10 of this chapter to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the plan meets the requirements of § 146.10 of this chapter, the Director shall incorporate the plan into the permit as a permit condition. Where the Director's review of an application indicates that the permittee's plan is inadequate, the Director may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the permit. A Class VI permit shall include conditions which meet the requirements set forth in § 146.92 of this chapter. Where the plan meets the requirements of § 146.92 of this chapter, the Director shall incorporate it into the permit as a permit condition. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment. The permittee shall meet the requirements of Section 20.6.2.5209 NMAC.³¹

~~(p) PQ.~~ *Plugging and abandonment report.* For EPA administered programs, ~~w~~Within 60 days after plugging a well or at the time of the next quarterly report (whichever is less) the owner or operator shall submit a report to the ~~Regional Administrator~~Director. If the quarterly report is due less than 15 days before completion of plugging, then the report shall be submitted within 60 days. The report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

(1) A statement that the well was plugged in accordance with the plan previously submitted to the ~~Regional Administrator~~Director; or

(2) Where actual plugging differed from the plan previously submitted, and updated version of the plan on the form supplied by the ~~regional administrator~~Director, specifying the differences.

~~(q) QR.~~ *Duty to establish and maintain mechanical integrity.*

(1) ~~The permittee shall meet the requirements of Section 20.6.2.5204 NMAC.~~³²~~The owner or operator of a Class I, II, III or VI well permitted under this part shall establish mechanical integrity prior to commencing injection or on a schedule determined by the Director. Thereafter the owner or operator of Class I, II, and III wells must maintain mechanical integrity as defined in § 146.8 of this chapter and the owner or operator of Class VI wells must maintain mechanical integrity as defined in § 146.89 of this chapter. For EPA administered programs, the Regional Administrator may require by written~~

³⁰ The state has not adopted area well permitting and thus this clause is unnecessary.

³¹ Section 20.6.2.5209 is the State corollary and has been amended to cover Class I hazardous waste wells.

³² The state already has mechanical integrity requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5204 has been amended to cover Class I hazardous waste wells.

~~notice that the owner or operator comply with a schedule describing when mechanical integrity demonstrations shall be made.~~

(2) When the Director determines that a Class I ~~hazardous, II, III or VI~~ well lacks mechanical integrity pursuant to ~~Section 20.6.2.5204 NMAC³³ § 146.8 or § 146.89 of this chapter for Class VI of this chapter,~~ he/she shall give written notice of his/her determination to the owner or operator. Unless the Director requires immediate cessation, the owner or operator shall cease injection into the well within 48 hours of receipt of the Director's determination. The Director may allow plugging of the well pursuant to the requirements of ~~Section 20.6.2.5209 NMAC³⁴ § 146.10 of this chapter~~ or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between ~~groundwater of the State of New Mexico~~underground sources of drinking water caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to ~~Sections 20.6.2.5204 and 20.6.2.5358 NMAC³⁵ § 146.8 of this chapter.~~

(3) The Director may allow the owner or operator of a well which lacks mechanical integrity pursuant to ~~Subsection A of Section 20.6.2.5204 NMAC³⁶ § 146.8(a)(1) of this chapter~~ to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between ~~groundwater of the State of New Mexico~~underground sources of drinking water.

RS. *Transfer of a permit.* The operator shall not transfer a permit without the Director's prior written approval. A request for transfer of a permit shall identify officers, directors and owners of 25 percent or greater in the transferee. Unless the director otherwise orders, public notice or hearing are not required for the transfer request's approval. If the Director denies the transfer request, it shall notify the operator and the proposed transferee of the denial by certified mail, return receipt requested, and either the operator or the proposed transferee may request a hearing with 10 days after

³³ The state already has mechanical integrity requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5204 has been amended to cover Class I hazardous waste wells.

³⁴ The state already has well plugging and abandonment requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5209 has been amended to cover Class I hazardous waste wells.

³⁵ The state already has mechanical integrity requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5204 has been amended to cover Class I hazardous waste wells. Section 20.6.5358 (internal cross reference) provides additional mechanical integrity testing requirements for Class I hazardous wells.

³⁶ The state already has mechanical integrity requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5204 has been amended to cover Class I hazardous waste wells.

receipt of the notice. Until the Director approves the transfer and the required financial assurance is in place, the Director shall not release the transferor's financial assurance.³⁷

§ 20.6.2.5342~~144.52~~

ESTABLISHING PERMIT CONDITIONS:

~~(a) A.~~ In addition to conditions required in Section 20.6.2.5341 NMAC~~§ 144.51~~,³⁸ the Director shall establish conditions, as required on a case-by-case basis under Subsection H of Section 20.6.2.3109 NMAC~~§ 144.36~~³⁹ (duration of permits), Subsection A of Section 20.3.2.5343 NMAC~~§ 144.53(a)~~⁴⁰ (schedules of compliance), and Section 20.3.2.5344 NMAC~~§ 144.54~~ (monitoring), and for EPA permits only ~~§ 144.53(b) (alternate schedules of compliance), and § 144.4 (considerations under Federal law).~~⁴¹ Permits for owners or operators of hazardous waste injection wells shall also include conditions meeting the requirements of Section 20.6.2.5310 NMAC~~§ 144.14~~⁴² (requirements for wells injecting hazardous waste), Subsections paragraphs (a)A(71) and (a)A(92) of this section,⁴³ and Sections 20.6.2.5351 through 20.6.2.5363 NMAC~~subpart G of part 146.~~⁴⁴ Permits for owners or operators of Class VI injection wells shall include conditions meeting the requirements of subpart H of part 146. Permits for other wells shall contain the following requirements, when applicable.⁴⁵

~~(1) Construction requirements as set forth in part 146. Existing wells shall achieve compliance with such requirements according to a compliance schedule established as a permit condition. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. Except as authorized by an area permit, no construction may commence until a permit has been issued containing construction requirements (see § 144.11). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Administrator as minor modifications (§ 144.41). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director.~~

³⁷ This provision, which requires OCD's written approval for a transfer, is more stringent than 40 CFR 144.51(l)(3).

³⁸ Internal cross reference (see cross reference table for details).

³⁹ This CFR section is entitled "Duration of Permits." Subsection H of 20.6.2.3109 is not an exact corollary, but appears to be at least as stringent, since the permit duration is 5 years. 40 CFR 144.36 allows a period of up to 10 years, but with review after 5 years. 20.6.3109 is incorporated by reference into Subsection B of Section 20.6.2.5101 for other UIC wells.

⁴⁰ Internal cross reference (see cross reference table for details).

⁴¹ This clause is not necessary for permit programs administered by New Mexico.

⁴² Internal cross reference (see cross reference table for details).

⁴³ Internal cross references (see cross reference table for details). These cross references are updated to reflect the fact that subsections 1-6 and 8 have been deleted as inapplicable.

⁴⁴ Internal cross reference (see cross reference table for details).

⁴⁵ Because this section sets out specific requirements for Class I hazardous wells, the general requirements for "other wells" are not applicable unless explicitly incorporated above.

~~(2) Corrective action as set forth in §§ 144.55, 146.7, and 146.84 of this chapter.~~

~~(3) Operation requirements as set forth in 40 CFR part 146; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any underground source of drinking water, and to assure compliance with the part 146 operating requirements.~~

~~(4) Requirements for wells managing hazardous waste, as set forth in § 144.14.~~

~~(5) Monitoring and reporting requirements as set forth in 40 CFR part 146. The permittee shall be required to identify types of tests and methods used to generate the monitoring data. For EPA administered programs, monitoring of the nature of injected fluids shall comply with applicable analytical methods cited and described in table I of 40 CFR 136.3 or in appendix III of 40 CFR part 261 or in certain circumstances by other methods that have been approved by the Regional Administrator.~~

~~(6) After a cessation of operations of two years the owner or operator shall plug and abandon the well in accordance with the plan unless he:~~

~~(i) Provides notice to the Regional Administrator;~~

~~(ii) Describes actions or procedures, satisfactory to the Regional Administrator, that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Regional Administrator.~~

~~(7) Financial responsibility.~~

(i) The permittee, including the transferor of a permit, is required to demonstrate and maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until:

(A) The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to Subsection O of Section 20.6.2.5341 NMAC §§ 144.51(e),⁴⁶ and Section 20.6.2.5209 NMAC⁴⁷ 146.10, and 146.92 of this chapter,⁴⁸ and submitted a plugging

⁴⁶ Internal cross reference (see cross reference table for details).

⁴⁷ The state already has plugging and abandonment requirements generally that EPA has apparently already determined are sufficient to meet the cited CFR provision. Section 20.6.2.5209 has been amended to cover Class I hazardous waste wells.

⁴⁸ 40 CFR § 146.92 applies to Class IV wells and is inapplicable here.

and abandonment report pursuant to Subsection P of Section 20.6.2.5341 NMAC § 144.51(p);⁴⁹ or

(B) The well has been converted in compliance with the requirements of Subsection N of Section 20.6.2.5341 NMAC § 144.51(n);⁵⁰ or

(C) ~~The transferor of a permit has received notice from the Director that the transfer has been approved and that the transferee's required financial assurance is in place. the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well.~~

~~(ii) The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as a financial statement or other materials acceptable to the Director.⁵¹ For EPA administered programs, the Regional Administrator may on a periodic basis require the holder of a lifetime permit to submit an estimate of the resources needed to plug and abandon the well revised to reflect inflation of such costs, and a revised demonstration of financial responsibility, if necessary.⁵² The owner or operator of a well injecting hazardous waste must comply with the financial responsibility requirements of Section 20.6.2.5320 NMAC subpart F of this part.⁵³ For Class VI wells, the permittee shall show evidence of such financial responsibility to the Director by the submission of a qualifying instrument (see § 146.85(a) of this chapter), such as a financial statement or other materials acceptable to the Director. The owner or operator of a Class VI well must comply with the financial responsibility requirements set forth in § 146.85 of this chapter.⁵⁴~~

~~(8) *Mechanical integrity.* A permit for any Class I, II, III or VI well or injection project which lacks mechanical integrity shall include, and for any Class V well may include, a condition prohibiting injection operations until the permittee shows to the satisfaction of the Director under § 146.8, or § 146.89 of this chapter for Class VI, that the well has mechanical integrity.~~

~~(29) *Additional conditions.* The Director shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.~~

⁴⁹ Internal cross reference (see cross reference table for details).

⁵⁰ Internal cross reference (see cross reference table for details).

⁵¹ This sentence is not necessary given the specific reference to Class I hazardous wells below.

⁵² Inapplicable to New Mexico-administered programs.

⁵³ Internal cross reference (see cross reference table for details).

⁵⁴ Inapplicable to Class I hazardous wells.

(b) B.

(1) In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of ~~the SDWA and this part~~ parts 144, 145, 146 and 124.⁵⁵

(2) ~~For a State issued permit, a~~ An applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. ~~For a permit issued by EPA, an applicable requirement is a statutory or regulatory requirement (including any interim final regulation) which takes effect prior to the issuance of the permit. Section 124.14 (reopening of comment period) provides a means for reopening EPA permit proceedings at the discretion of the Director where new requirements become effective during the permitting process and are of sufficient magnitude to make additional proceedings desirable.~~⁵⁶ For State and EPA administered programs, a An applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, ~~to the extent allowed in § 144.39.~~⁵⁷

(3) New or ~~renewed~~reissued permits, and to the extent allowed under Section 20.6.2.3109 NMAC⁵⁸ ~~§ 144.39~~ modified or ~~terminated~~revoked and reissued permits, shall incorporate each of the applicable requirements referenced in Section 20.6.2.5342 NMAC ~~§ 144.52.~~⁵⁹

(c) *Incorporation.* All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.

§ 20.6.2.5343~~144.53~~

SCHEDULE OF COMPLIANCE:

(a) A. *General.* The permit may, when appropriate, specify a schedule of compliance leading to compliance with ~~the SDWA and this part~~⁶⁰ s 144, 145, 146, and 124.

⁵⁵ 20 NMAC 6.2 covers the same requires as 40 CFR parts 144 (Underground Injection Control Program), 145 (State UIC Program Requirements), 146 (Underground Injection Control Program: Criteria and Standards), and 124 (Procedures for Decisionmaking).

⁵⁶ Inapplicable to New Mexico-issued permits.

⁵⁷ Section 144.39(a)(3) includes provisions for inclusion of new regulations when permits are modified or revoked and reissued. There is no limit on inclusion of new regulations that are applicable to Class I hazardous wells. In contrast there are limits on new regulations applicable to Class I nonhazardous, Class II, Class III, and Class IV wells. There does not appear to be an existing corollary in the NMAC and deleting the clause with the cross reference may be the simplest way to address the issue since the limitations are not applicable to Class I hazardous wells.

⁵⁸ Section 144.39 is entitled "Modification or revocation and reissuance of permits." Section 20.6.2.3109 NMAC is entitled "Secretary approval, disapproval, modification, or termination of discharge permits, and requirements for abatement plans is the State corollary to this provision

⁵⁹ Internal cross reference (see cross reference table for details).

(1) *Time for compliance.* Any schedules of compliance shall require compliance as soon as possible, and in no case later than 3 years after the effective date of the permit.

(2) *Interim dates.* Except as provided in Subsection paragraph (Bb)(1)(ii) of this section, if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.

(i) The time between interim dates shall not exceed 1 year.

(ii) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

(3) *Reporting.* The permit shall be written to require that if Subsection paragraph (Aa)(1) of this section is applicable, progress reports be submitted no later than 30 days following each interim date and the final date of compliance.

~~(b)~~ B. *Alternative schedules of compliance.* A permit applicant or permittee may cease conducting regulated activities (by plugging and abandonment) rather than continue to operate and meet permit requirements as follows:

(1) If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:

(i) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or

(ii) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

(2) If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements.

(3) If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two schedules as follows:

(i) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date

(cont.)

⁶⁰ 20 NMAC 6.2 covers the same requires as 40 CFR parts 144 (Underground Injection Control Program), 145 (State UIC Program Requirements), 146 (Underground Injection Control Program: Criteria and Standards), and 124 (Procedures for Decisionmaking).

which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;

(ii) One schedule shall lead to timely compliance with applicable requirements;

(iii) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements;

(iv) Each permit containing two schedules shall include a requirement that after the permittee has made a final decision under ~~Subsection paragraph (Bb)~~(3)(i) of this section it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities.

(4) The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Director, such as a resolution of the board of directors of a corporation.

§ 20.6.2.5344144.54

REQUIERMENTS FOR RECORDING AND REPORTING OF MONITORING RESULTS:

All permits shall specify:

(a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);

(b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring;

(c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in Section 20.6.2.5359 NMAC ~~part 146~~.⁶¹ Reporting shall be no less frequent than specified in the above regulations.

20.6.2.5345 – 20.6.2.5350: [RESERVED]

§ 144.55⁶²

~~Corrective action.~~

~~(a) Coverage. Applicants for Class I, II, (other than existing), or III injection well permits shall identify the location of all known wells within the injection well's area of review which penetrate~~

⁶¹ Internal cross reference to reporting provisions for Class I hazardous wells.

⁶² Pursuant to 40 CFR § 146.64 (Section 20.6.2.5354 NMAC), Section 144.55 is not applicable to Class I hazardous wells.

the injection zone, or in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review penetrating formations affected by the increase in pressure. For such wells which are improperly sealed, completed, or abandoned, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into underground sources of drinking water ("corrective action"). Where the plan is adequate, the Director shall incorporate it into the permit as a condition. Where the Director's review of an application indicates that the permittee's plan is inadequate (based on the factors in § 146.07), the Director shall require the applicant to revise the plan, prescribe a plan for corrective action as a condition of the permit under paragraph (b) of this section, or deny the application. The Director may disregard the provisions of § 146.06 (Area of Review) and § 146.07 (Corrective Action) when reviewing an application to permit an existing Class II well.

~~(b) Requirements—~~

~~(1) Existing injection wells.~~ Any permit issued for an existing injection well (other than Class II) requiring corrective action shall include a compliance schedule requiring any corrective action accepted or prescribed under paragraph (a) of this section to be completed as soon as possible.

~~(2) New injection wells.~~ No owner or operator of a new injection well may begin injection until all required corrective action has been taken.

~~(3) Injection pressure limitation.~~ The Director may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not exceed hydrostatic pressure at the site of any improperly completed or abandoned well within the area of review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other required corrective action has been taken.

~~(4) Class III wells only.~~ When setting corrective action requirements the Director shall consider the overall effect of the project on the hydraulic gradient in potentially affected USDWs, and the corresponding changes in potentiometric surface(s) and flow direction(s) rather than the discrete effect of each well. If a decision is made that corrective action is not necessary based on the determinations above, the monitoring program required in § 146.33(b) shall be designed to verify the validity of such determinations.

~~§ 20.6.2.5351~~ 146.61

APPLICABILITY:⁶³

~~(a) A.~~ Sections 20.6.2.5351 through 20.6.2.5363 NMAC This subpart⁶⁴ establishes criteria and standards for underground injection control programs to regulate Class I hazardous

⁶³ Adjusted formatting because definitions were moved to 20.6.2.5301.

⁶⁴ Internal cross reference (see cross reference table for details).

waste injection wells. Unless otherwise noted ~~in this these Sections subpart~~ supplements the requirements of ~~Sections 20.6.2.5000 through 20.6.2.5299 NMAC subpart A~~ and applies instead of ~~any inconsistent requirements for Class I non-hazardous waste injection wells subpart B to Class I hazardous waste injection wells.~~⁶⁵

~~(b) B. Definitions.~~

~~*Cone of influence* means that area around the well within which increased injection zone pressures caused by injection into the hazardous waste injection well would be sufficient to drive fluids into an underground source of drinking water (USDW).~~

~~*Existing well* means a Class I well which was authorized prior to August 25, 1988, by an approved State program, or an EPA administered program or a well which has become a Class I well as a result of a change in the definition of the injected waste which would render the waste hazardous under § 261.3) of this part.~~

~~*Injection interval* means that part of the injection zone in which the well is screened, or in which the waste is otherwise directly emplaced.~~

~~*New well* means any Class I hazardous waste injection well which is not an existing well.~~

~~*Transmissive fault or fracture* is a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.~~

~~§ 20.6.2.5352146.62~~

MINIMUM CRITERIA FOR SITING:

~~(a) A. All Class I hazardous waste injection wells shall be sited such that they inject into a formation that is beneath the lowermost formation containing within one quarter mile of the well bore groundwater of the State of New Mexico~~an underground source of drinking water.~~~~

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

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

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

⁶⁵ Subpart A of Section 146 is entitled "General Provisions;" Subpart B of Section 146 is entitled "Criteria and Standards Applicable to Class I Wells." The NMAC does not contain the same divisions. This rephrasing has the same effect of supplementing generally applicable UIC provisions while replacing provisions specific to Class I non-hazardous wells.

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

~~(e)~~ C. Class I hazardous waste injection wells shall be sited such that:

(1) The injection zone has sufficient permeability, porosity, thickness and areal extent to prevent migration of fluids into groundwater of the State of New Mexico~~USDWs~~.

(2) The confining zone:

(i) Is laterally continuous and free of transecting, transmissive faults or fractures over an area sufficient to ~~prevent~~prevent the movement of fluids into groundwater of the State of New Mexico~~a-USDW~~; and

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

~~(d)~~ D. The owner or operator shall demonstrate to the satisfaction of the Director that:

(1) The confining zone is separated from the base of the lowermost groundwater of the State of New Mexico~~USDW~~ by at least one sequence of permeable and less permeable strata that will provide an added layer of protection for groundwater of the State of New Mexico~~the USDW~~ in the event of fluid movement in an unlocated borehole or transmissive fault; or

(2) Within the area of review, the piezometric surface of the fluid in the injection zone is less than the piezometric surface of the lowermost groundwater of the State of New Mexico~~USDW~~, considering density effects, injection pressures and any significant pumping in the overlying groundwater of the State of New Mexico~~USDW~~; or

(3) There is no groundwater of the State of New Mexico~~USDW~~ present.

(4) The Director may approve a site which does not meet the requirements in Subsections~~paragraphs~~ ~~(d)~~D (1), (2), or (3) of this section if the owner or operator can demonstrate to the Director that because of the geology, nature of the waste, or other considerations, abandoned boreholes or other conduits would not cause endangerment of groundwater of the State of New Mexico~~USDWs~~.

~~§ 20.6.2.5353146.63~~

AREA OF REVIEW:

For the purposes of Class I hazardous waste wells, this section shall apply to the exclusion of Section 20.6.2.5202 NMAC~~§ 146.6~~.⁶⁶ The area of review for Class I hazardous waste injection

⁶⁶ Section 146.6 is entitled "area of review." Section 20.6.2.5202 NMAC defines area of review in the NMAC.

wells shall be a 2-mile radius around the well bore. The Director may specify a larger area of review based on the calculated cone of influence of the well.

~~§ 20.6.2.5354~~146.64

CORRECTIVE ACTION FOR WELLS IN THE AREA OF REVIEW:

For the purposes of Class I hazardous waste wells, this section shall apply to the exclusion of Section 20.6.2.5203 NMAC §§ ~~144.55 and 146.07~~.⁶⁷

~~(a)~~ A. The owner or operator of a Class I hazardous waste well shall as part of the permit application submit a plan to the Director outlining the protocol used to:

- (1) Identify all wells penetrating the confining zone or injection zone within the area of review; and
- (2) Determine whether wells are adequately completed or plugged.

~~(b)~~ B. The owner or operator of a Class I hazardous waste well shall identify the location of all wells within the area of review that penetrate the injection zone or the confining zone and shall submit as required in Subsection A of Section 20.6.2.5360 NMAC § 146.70(a).⁶⁸

- (1) A tabulation of all wells within the area of review that penetrate the injection zone or the confining zone; and
- (2) A description of each well or type of well and any records of its plugging or completion.

~~(c)~~ C. For wells that the Director determines are improperly plugged, completed, or abandoned, or for which plugging or completion information is unavailable, the applicant shall also submit a plan consisting of such steps or modification as are necessary to prevent movement of fluids into or between groundwater of the State of New Mexico USDWs. Where the plan is adequate, the Director shall incorporate it into the permit as a condition. Where the Director's review of an application indicates that the permittee's plan is inadequate (based at a minimum on the factors in Subsection paragraph (E) of this section), the Director shall:

- (1) Require the applicant to revise the plan;
- (2) Prescribe a plan for corrective action as a condition of the permit; or
- (3) Deny the application.

⁶⁷ Section 144.55 (Corrective Action) and 146.07 (Corrective Action) are generally applicable corrective action provisions for all UIC wells. Section 20.6.2.5203 NMAC includes the generally applicable corrective action requirements for Class I non-hazardous and Class III wells in the NMAC.

⁶⁸ Internal cross reference (see cross reference table for details).

~~(d)~~ D. Requirements:

(1) Existing injection wells. Any permit issued for an existing Class I hazardous waste injection well requiring corrective action other than pressure limitations shall include a compliance schedule requiring any corrective action accepted or prescribed under Subsection paragraph (cC) of this section. Any such compliance schedule shall provide for compliance no later than 2 years following issuance of the permit and shall require observance of appropriate pressure limitations under Subsection paragraph (dD)(3) until all other corrective action measures have been implemented.

(2) New injection wells. No owner or operator of a new Class I hazardous waste injection well may begin injection until all corrective actions required under this section have been taken.

(3) The Director may require pressure limitations in lieu of plugging. If pressure limitations are used in lieu of plugging, the Director shall require as a permit condition that injection pressure be so limited that pressure in the injection zone at the site of any improperly completed or abandoned well within the area of review would not be sufficient to drive fluids into or between groundwater of the State of New Mexico USDWs. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation may be made part of a compliance schedule and may be required to be maintained until all other required corrective actions have been implemented.

~~(e)~~ E. In determining the adequacy of corrective action proposed by the applicant under Subsection paragraph (cC) of this section and in determining the additional steps needed to prevent fluid movement into and between groundwater of the State of New Mexico USDWs, the following criteria and factors shall be considered by the Director:

- (1) Nature and volume of injected fluid;
- (2) Nature of native fluids or byproducts of injection;
- (3) Geology;
- (4) Hydrology;
- (5) History of the injection operation;
- (6) Completion and plugging records;
- (7) Closure procedures in effect at the time the well was closed;
- (8) Hydraulic connections with groundwater of the State of New Mexico USDWs;
- (9) Reliability of the procedures used to identify abandoned wells; and

(10) Any other factors which might affect the movement of fluids into or between groundwater of the State of New Mexico USDWs.

§ 20.6.2.5355-146.65

CONSTRUCTION REQUIREMENTS:

(a) A. *General.* All existing and new Class I hazardous waste injection wells shall be constructed and completed to:

(1) Prevent the movement of fluids into or between groundwater of the State of New Mexico USDWs or into any unauthorized zones;

(2) Permit the use of appropriate testing devices and workover tools; and

(3) Permit continuous monitoring of injection tubing and long string casing as required pursuant to Subsection F of Section 20.6.2.5357 NMAC § 146.67(f).⁶⁹

(b) B. *Compatibility.* All well materials must be compatible with fluids with which the materials may be expected to come into contact. A well shall be deemed to have compatibility as long as the materials used in the construction of the well meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM ~~The American Society for Testing Materials~~, or comparable standards acceptable to the Director.

(c) C. *Casing and Cementing of New Wells.*

(1) Casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well, including the post-closure care period. The casing and cementing program shall be designed to prevent the movement of fluids into or between groundwater of the State of New Mexico USDWs, and to prevent potential leaks of fluids from the well. In determining and specifying casing and cementing requirements, the Director shall consider the following information as required by Section 20.6.2.5360 NMAC § 146.70:⁷⁰

(i) Depth to the injection zone;

(ii) Injection pressure, external pressure, internal pressure and axial loading;

(iii) Hole size;

(iv) Size and grade of all casing strings (well ~~well~~ thickness, diameter, nominal weight, length, joint specification and construction material);

(v) Corrosiveness of injected fluid, formation fluids and temperature;

⁶⁹ Internal cross reference (see cross reference table for details).

⁷⁰ Internal cross reference (see cross reference table for details).

(vi) Lithology of injection and confining zones;

(vii) Type or grade of cement; and

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

(2) One surface casing string shall, at a minimum, extend into the confining bed below the lowest formation that contains ~~a groundwater of the State of New Mexico~~ USDW and be cemented by circulating cement from the base of the casing to the surface, using a minimum of 120% of the calculated annual volume. The Director may require more than 120% when the geology or other circumstances warrant it.

(3) At least one long string casing, using a sufficient number of centralizers, shall extend to the injection zone and shall be cemented by circulating cement to the surface in one or more stages:

(i) Of sufficient quantity and quality to withstand the maximum operating pressure; and

(ii) In a quantity no less than 120% of the calculated volume necessary to fill the annular space. The Director may require more than 120% when the geology or other circumstances warrant it.

(4) Circulation of cement may be accomplished by staging. The Director may approve an alternative method of cementing in cases where the cement cannot be recirculated to the surface, provided the owner or operator can demonstrate by using logs that the cement is continuous and does not allow fluid movement behind the well bore.

(5) Casings, including any casing connections, must be rated to have sufficient structural strength to withstand, for the design life of the well:

(i) The maximum burst and collapse pressures which may be experienced during the construction, operation and closure of the well; and

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

(6) At a minimum, cement and cement ~~additives~~ additives must be of sufficient quality and quantity to maintain integrity over the design life of the well.

~~(d)~~ D. *Tubing and packer.*

(1) All Class I hazardous waste injection wells shall inject fluids through tubing with a packer set at a point specified by the Director.

(2) In determining and specifying requirements for tubing and packer, the following factors shall be considered:

- (i) Depth of setting;
- (ii) Characteristics of injection fluid (chemical content, corrosiveness, temperature and density);
- (iii) Injection pressure;
- (iv) Annular pressure;
- (v) Rate (intermittent or continuous), temperature and volume of injected fluid;
- (vi) Size of casing; and
- (vii) Tubing tensile, burst, and collapse strengths.

(3) The Director may approve the use of a fluid seal if he determines that the following conditions are met:

- (i) The operator demonstrates that the seal will provide a level of protection comparable to a packer;
- (ii) The operator demonstrates that the staff is, and will remain, adequately trained to operate and maintain the well and to identify and interpret variations in parameters of concern;
- (iii) The permit contains specific limitations on variations in annular pressure and loss of annular fluid;
- (iv) The design and construction of the well allows continuous monitoring of the annular pressure and mass balance of annular fluid; and
- (v) A secondary system is used to monitor the interface between the annulus fluid and the injection fluid and the permit contains requirements for testing the system every three months and recording the results.

§-20.6.2.5356146.66

LOGGING, SAMPLING, AND TESTING PRIOR TO NEW WELL OPERATION:

(a) A. During the drilling and construction of a new Class I hazardous waste injection well, appropriate logs and tests shall be run to determine or verify the depth, thickness, porosity, permeability, and rock type of, and the salinity of any entrained fluids in, all relevant geologic units to assure conformance with performance standards in Section 20.6.2.5355 NMAC§ 146.65,⁷¹ and to establish accurate baseline data against which future measurements may be compared. A descriptive report interpreting results of such logs and tests shall be prepared by a

⁷¹ Internal cross reference (see cross reference table for details).

knowledgeable log analyst and submitted to the Director. At a minimum, such logs and tests shall include:

(1) Deviation checks during drilling on all holes constructed by drilling ~~a~~ pilot holes which are enlarged by reaming or another method. Such checks shall be at sufficiently frequent intervals to determine the location of the borehole and to assure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling; and

(2) Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan, and the need for additional information that may arise from time to time as the construction of the well progresses. At a minimum, the following logs shall be required in the following situations:

(i) Upon installation of the surface casing:

(A) Resistivity, spontaneous potential, and caliper logs before the casing is installed; and

(B) A cement bond and variable density log, and a temperature log after the casing is set and cemented.

(ii) Upon installation of the long string casing:

(A) Resistivity, spontaneous potential, porosity, caliper, gamma ray, and fracture finder logs before the casing is installed; and

(B) A cement bond and variable density log, and a temperature log after the casing is set and cemented.

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

(3) A mechanical integrity test consisting of:

(i) A pressure test with liquid or gas;

(ii) A radioactive tracer survey;

(iii) A temperature or noise log;

(iv) A casing inspection log, if required by the Director; and

(v) Any other test required by the Director.

~~(b)~~ B. Whole cores or sidewall cores of the confining and injection zones and formation fluid samples from the injection zone shall be taken. The Director may accept cores from nearby wells if the owner or operator can demonstrate that core retrieval is not possible and that such

cores are representative of conditions at the well. The Director may require the owner or operator to core other formations in the borehole.

~~(c)~~ C. The fluid temperature, pH, conductivity, pressure and the static fluid level of the injection zone must be recorded.

~~(d)~~ D. At a minimum, the following information concerning the injection and confining zones shall be determined or calculated for Class I hazardous waste injection wells:

- (1) Fracture pressure;
- (2) Other physical and chemical characteristics of the injection and confining zones; and
- (3) Physical and chemical characteristics of the formation fluids in the injection zone.

~~(e)~~ E. Upon completion, but prior to operation, the owner or operator shall conduct the following tests to verify hydrogeologic characteristics of the injection zone:

- (1) A pump test; or
- (2) Injectivity tests.

~~(f)~~ F. The Director shall have the opportunity to witness all logging and testing required by Sections 20.6.2.5351 through 5363 NMAC~~this subpart.~~⁷² The owner or operator shall submit a schedule of such activities to the Director 30 days prior to conducting the first test.

~~§ 20.6.2.5357~~446.67

OPERATING REQUIREMENTS:

~~(a)~~ A. Except during stimulation, the owner or operator shall assure that injection pressure at the wellhead does not exceed a maximum which shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone. The owner or operator shall assure that the injection pressure does not initiate fractures or propagate existing fractures in the confining zone, nor cause the movement of injection or formation fluids into groundwater of the State of New Mexico~~USDW~~.

~~(b)~~ B. Injection between the outermost casing protecting groundwater of the State of New Mexico~~USDWs~~ and the well bore is prohibited.

~~(c)~~ C. The owner or operator shall maintain an annulus pressure that exceeds the operating injection pressure, unless the Director determines that such a requirement might harm the integrity of the well. The fluid in the annulus shall be noncorrosive, or shall contain a corrosion inhibitor.

⁷² Internal cross reference (see cross reference table for details).

~~(d)~~ **D.** The owner or operator shall maintain mechanical integrity of the injection well at all times.

~~(e)~~ **E.** Permit requirements for owners or operators of hazardous waste wells which inject wastes which have the potential to react with the injection formation to generate gases shall include:

- (1) Conditions limiting the temperature, pH or acidity of the injected waste; and
- (2) Procedures necessary to assure that pressure imbalances which might cause a backflow or blowout do not occur.

~~(f)~~ **F.** The owner or operator shall install and use continuous recording devices to monitor: the injection pressure; the flow rate, volume, and temperature of injected fluids; and the pressure on the annulus between the tubing and the long string casing, and shall install and use:

- (1) Automatic alarm and automatic shut-off systems, designed to sound and shut-in the well when pressures and flow rates or other parameters approved by the Director exceed a range and/or gradient specified in the permit; or
- (2) Automatic alarms, designed to sound when the pressures and flow rates or other parameters approved by the Director exceed a rate and/or gradient specified in the permit, in cases where the owner or operator certifies that a trained operator will be on-site at all times when the well is operating.

~~(g)~~ **G.** If an automatic alarm or shutdown is triggered, the owner or operator shall immediately investigate and identify as expeditiously as possible the cause of the alarm or shutoff. If, upon such investigation, the well appears to be lacking mechanical integrity, or if monitoring required under Subsection paragraph (fF) of this section otherwise indicates that the well may be lacking mechanical integrity, the owner or operator shall:

- (1) Cease injection of waste fluids unless authorized by the Director to continue or resume injection.
- (2) Take all necessary steps to determine the presence or absence of a leak; and
- (3) Notify the Director within 24 hours after the alarm or shutdown.

~~(h)~~ **H.** If a loss of mechanical integrity is discovered pursuant to Subsection paragraph (gG) of this section or during periodic mechanical integrity testing, the owner or operator shall:

- (1) Immediately cease injection of waste fluids;
- (2) Take all steps reasonably necessary to determine whether there may have been a release of hazardous wastes or hazardous waste constituents into any unauthorized zone;
- (3) Notify the Director within 24 hours after loss of mechanical integrity is discovered;

(4) Notify the Director when injection can be expected to resume; and

(5) Restore and demonstrate mechanical integrity to the satisfaction of the Director prior to resuming injection of waste fluids.

(i) I. Whenever the owner or operator obtains evidence that there may have been a release of injected wastes into an unauthorized zone:

(1) The owner or operator shall immediately cease injection of waste fluids, and:

(i) Notify the Director within 24 hours of obtaining such evidence;

(ii) Take all necessary steps to identify and characterize the extent of any release;

(iii) Comply with any remediation plan specified by the Director;

(iv) Implement any remediation plan approved by the Director; and

(v) Where such release is into groundwater of the State of New Mexico ~~USDW~~ currently serving as a water supply, place a notice in a newspaper of general circulation.

(2) The Director may allow the operator to resume injection prior to completing cleanup action if the owner or operator demonstrates that the injection operation will not endanger groundwater of the State of New Mexico ~~USDWs~~.

(j) J. The owner or operator shall notify the Director and obtain his approval prior to conducting any well workover.

~~§ 20.6.2.5358146.68~~

TESTING AND MONITORING REQUIREMENTS:

Testing and monitoring requirements shall at a minimum include:

(a) A. Monitoring of the injected wastes.

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

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

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

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

(2) The owner or operator shall repeat the analysis of the injected wastes as described in the waste analysis plan at frequencies specified in the waste analysis plan and when process or operating changes occur that may significantly alter the characteristics of the waste stream.

(3) The owner or operator shall conduct continuous or periodic monitoring of selected parameters as required by the Director.

(4) The owner or operator shall assure that the plan remains accurate and the analyses remain representative.

~~(b)~~ B. Hydrogeologic compatibility determination. The owner or operator shall submit information demonstrating to the satisfaction of the Director that the waste stream and its anticipated reaction products will not alter the permeability, thickness or other relevant characteristics of the confining or injection zones such that they would no longer meet the requirements specified in Section 20.6.2.5352 NMAC§ 146.62.⁷³

~~(e)~~ C. Compatibility of well materials.

(1) The owner or operator shall demonstrate that the waste stream will be compatible with the well materials with which the waste is expected to come into contact, and submit to the Director a description of the methodology used to make that determination. Compatibility for purposes of this requirement is established if contact with injected fluids will not cause the well materials to fail to satisfy any design requirement imposed under Subsection B of Section 20.6.2.5355 NMAC§ 146.65(b).⁷⁴

(2) The Director shall require continuous corrosion monitoring of the construction materials used in the well for wells injecting corrosive waste, and may require such monitoring for other waste, by:

(i) Placing coupons of the well construction materials in contact with the waste stream; or

(ii) Routing the waste stream through a loop constructed with the material used in the well; or

(iii) Using an alternative method approved by the Director.

(3) If a corrosion monitoring program is required:

(i) The test shall use materials identical to those used in the construction of the well, and such materials must be continuously exposed to the operating pressures and temperatures (measured at the well head) and flow rates of the injection operation; and

⁷³ Internal cross reference (see cross reference table for details).

⁷⁴ Internal cross reference (see cross reference table for details).

(ii) The owner or operator shall monitor the materials for loss of mass, thickness, cracking, pitting and other signs of corrosion on a quarterly basis to ensure that the well components meet the minimum standards for material strength and performance set forth in Subsection B of Section 20.6.2.5355 NMAC § 146.65(b).⁷⁵

~~(d)~~ D. *Periodic mechanical integrity testing.* In fulfilling the requirements of Section 20.6.2.5204 NMAC § 146.8,⁷⁶ the owner or operator of a Class I hazardous waste injection well shall conduct the mechanical integrity testing as follows:

(1) The long string casing, injection tube, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover;

(2) The bottom-hole cement shall be tested by means of an approved radioactive tracer survey annually;

(3) An approved temperature, noise, or other approved log shall be run at least once every five years to test for movement of fluid along the borehole. The Director may require such tests whenever the well is worked over;

(4) Casing inspection logs shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Director may require that a casing inspection log be run every five years, if he has reason to believe that the integrity of the long string casing of the well may be adversely affected by naturally-occurring or man-made events;

(5) Any other test approved by the Director in accordance with the procedures in 40 CFR § Section 146.8(d)⁷⁷ may also be used.

~~(e)~~ E. *Ambient monitoring.*

(1) Based on a site-specific assessment of the potential for fluid movement from the well or injection zone, and on the potential value of monitoring wells to detect such movement, the Director shall require the owner or operator to develop a monitoring program. At a minimum, the Director shall require monitoring of the pressure buildup in

⁷⁵ Internal cross reference (see cross reference table for details).

⁷⁶ Section 146.8 is entitled "Mechanical Integrity." Section 20.6.2.5204 NMAC includes mechanical integrity requirements for Class I non-hazardous and Class III wells.

⁷⁷ 40 C.F.R. § 146.8(d) requires the Director to obtain approval from the EPA administrator after notice in the Federal Register. There is no exact corollary provision in the NMAC. Subsection B(d) of Section 20.6.2.5204 NMAC, however, allows use of "other appropriate tests as the Secretary may require" but does not include any reference to approval from the EPA administrator.

the injection zone annually, including at a minimum, a shut down of the well for a time sufficient to conduct a valid observation of the pressure fall-off curve.

(2) When prescribing a monitoring system the Director may also require:

(i) Continuous monitoring for pressure changes in the first aquifer overlying the confining zone. When such a well is installed, the owner or operator shall, on a quarterly basis, sample the aquifer and analyze for constituents specified by the Director;

(ii) The use of indirect, geophysical techniques to determine the position of the waste front, the water quality in a formation designated by the Director, or to provide other site specific data;

(iii) Periodic monitoring of the ground water quality in the first aquifer overlying the injection zone;

(iv) Periodic monitoring of the ground water quality in the lowermost groundwater of the State of New MexicoUSDW; and

(v) Any additional monitoring necessary to determine whether fluids are moving into or between groundwater of the State of New MexicoUSDWs.

(f) F. The Director may require seismicity monitoring when he has reason to believe that the injection activity may have the capacity to cause seismic disturbances.

~~§ 20.6.2.5359146.69~~

REPORTING REQUIREMENTS:

Reporting requirements shall, at a minimum, include:

(a) A. Quarterly reports to the Director containing:

(1) The maximum injection pressure;

(2) A description of any event that exceeds operating parameters for annulus pressure or injection pressure as specified in the permit;

(3) A description of any event which triggers an alarm or shutdown device required pursuant to Subsection F of Section 20.6.2.5357 NMAC§ 146.67(f)⁷⁸ and the response taken;

(4) The total volume of fluid injected;

⁷⁸ Internal cross reference (see cross reference table for details).

- (5) Any change in the annular fluid volume;
- (6) The physical, chemical and other relevant characteristics of injected fluids; and
- (7) The results of monitoring prescribed under Section 20.6.2.5358 NMAC~~§ 146.68.~~⁷⁹

(b) B. Reporting, within 30 days or with the next quarterly report whichever comes later, the results of:

- (1) Periodic tests of mechanical integrity;
- (2) Any other test of the injection well conducted by the permittee if required by the Director; and
- (3) Any well workover.

§ 20.6.2.5360146.70

INFORMATION TO BE EVALUATED BY THE DIRECTOR:

This section sets forth the information which must be evaluated by the Director in authorizing Class I hazardous waste injection wells. For a new Class I hazardous waste injection well, the owner or operator shall submit all the information listed below as part of the permit application. For an existing or converted Class I hazardous waste injection well, the owner or operator shall submit all information listed below as part of the permit application except for those items of information which are current, accurate, and available in the existing permit file. For both existing and new Class I hazardous waste injection wells, certain maps, cross-sections, tabulations of wells within the area of review and other data may be included in the application by reference provided they are current and readily available to the Director (for example, in the permitting agency's files) and sufficiently identifiable to be retrieved. ~~In cases where EPA issues the permit, all the information in this section must be submitted to the Administrator or his designee.~~⁸⁰

(a) A. Prior to the issuance of a permit for an existing Class I hazardous waste injection well to operate or the construction or conversion of a new Class I hazardous waste injection well, the Director shall review the following to assure that the requirements of Sections 20.6.2.5000 through 20.6.2.5399 NMAC~~this part and part 144~~ are met:⁸¹

⁷⁹ Internal cross reference (see cross reference table for details).

⁸⁰ Inapplicable to New Mexico-administered program.

⁸¹ 20 NMAC 6.2 covers the same requirements as 40 CFR parts 144 (Underground Injection Control Program) and 146 (Underground Injection Control Program: Criteria and Standards).

- (1) Information required in Section 20.6.2.5102 NMAC⁸²§ 144.31;
- (2) A map showing the injection well for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or 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. The map should also show faults, if known or suspected;
- (3) A tabulation of all wells within the area of review which penetrate the proposed injection zone or confining zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion and any additional information the Director may require;
- (4) The protocol followed to identify, locate and ascertain the condition of abandoned wells within the area of review which penetrate the injection or the confining zones;
- (5) Maps and cross-sections indicating the general vertical and lateral limits of all groundwater of the State of New Mexico~~underground sources of drinking water~~ within the area of review, their position relative to the injection formation and the direction of water movement, where known, in each groundwater of the State of New Mexico~~underground source of drinking water~~ which may be affected by the proposed injection;
- (6) Maps and cross-sections detailing the geologic structure of the local area;
- (7) Maps and cross-sections illustrating the regional geologic setting;
- (8) Proposed operating data;
 - (i) Average and maximum daily rate and volume of the fluid to be injected; and
 - (ii) Average and maximum injection pressure;
- (9) Proposed formation testing program to obtain an analysis of the chemical, physical and radiological characteristics of and other information on the injection formation and the confining zone;
- (10) Proposed stimulation program;
- (11) Proposed injection procedure;

⁸² § 144.31 is entitled "Application for a permit; authorization for a permit." There is no complete state corollary because 20.6.2.5102 NMAC, which covers the same topic, does not cover Class I hazardous waste wells. In order to allow this cross reference to work, 20.6.2.5102 NMAC has been amended to include hazardous waste wells.

(12) Schematic or other appropriate drawings of the surface and subsurface construction details of the well;

(13) Contingency plans to cope with all shut-ins or well failures so as to prevent migration of fluids into any groundwater of the State of New MexicoUSDW;

(14) Plans (including maps) for meeting monitoring requirements of Section 20.6.2.5358 NMAC§ 146.68,⁸³

(15) For wells within the area of review which penetrate the injection zone or the confining zone but are not properly completed or plugged, the corrective action to be taken under Section 20.6.2.5354 NMAC§ 146.64;⁸⁴

(16) Construction procedures including a cementing and casing program, well materials specifications and their life expectancy, logging procedures, deviation checks, and a drilling, testing and coring program; and

(17) A demonstration pursuant to Section 20.6.2.5320 NMACpart 144, subpart F,⁸⁵ that the applicant has the resources necessary to close, plug or abandon the well and for post-closure care.

(b) B. Prior to the Director's granting approval for the operation of a Class I hazardous waste injection well, the owner or operator shall submit and the Director shall review the following information, which shall be included in the completion report:

(1) All available logging and testing program data on the well;

(2) A demonstration of mechanical integrity pursuant to Section 20.6.2.5358 NMAC§ 146.68;⁸⁶

(3) The anticipated maximum pressure and flow rate at which the permittee will operate;

(4) The results of the injection zone and confining zone testing program as required in Subsection A(9) of Section 20.6.2.5360 NMAC§ 146.70(a)(9);⁸⁷

(5) The actual injection procedure;

(6) The compatibility of injected waste with fluids in the injection zone and minerals in both the injection zone and the confining zone and with the materials used to construct the well;

⁸³ Internal cross reference (see cross reference table for details).

⁸⁴ Internal cross reference (see cross reference table for details).

⁸⁵ Internal cross reference (see cross reference table for details). Part 144, subpart F refers to 40 CFR §§ 144.60-70.

⁸⁶ Internal cross reference (see cross reference table for details).

⁸⁷ Internal cross reference (see cross reference table for details).

(7) The calculated area of review based on data obtained during logging and testing of the well and the formation, and where necessary revisions to the information submitted under Subsections A(2) and (3) of Section 20.6.2.5360 NMAC~~§ 146.70(a)(2) and (3)~~.⁸⁸

(8) The status of corrective action on wells identified in Subsection A(15) of Section 20.6.2.5360 NMAC~~§ 146.70(a)(15)~~; and⁸⁹

(9) Evidence that the permittee has obtained an exemption under 40 C.F.R. Part 148, Subpart C for the hazardous wastes permitted for disposal through underground injection.

~~(c)~~ C. Prior to granting approval for the plugging and abandonment (*i.e.*, closure) of a Class I hazardous waste injection well, the Director shall review the information required in Subsection A(4) of Section 20.6.2.5361 NMAC and Subsection A of Section 20.6.2.5362 NMAC~~§§ 146.71(a)(4) and 146.72(a)~~.⁹⁰

~~(d)~~ D. Any permit issued for a Class I hazardous waste injection well for disposal on the premises where the waste is generated shall contain a certification by the owner or operator that:

(1) The generator of the hazardous waste has a program to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable; and

(2) Injection of the waste is that practicable method of disposal currently available to the generator which minimizes the present and future threat to human health and the environment.

§ 20.6.2.5361~~146.71~~

CLOSURE:

~~(a)~~ A. *Closure Plan.* The owner or operator of a Class I hazardous waste injection well shall prepare, maintain, and comply with a plan for closure of the well that meets the requirements of Subsection D~~paragraph (d)~~ of this section and is acceptable to the Director. The obligation to implement the closure plan survives the termination of a permit or the cessation of injection activities. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.

(1) The owner or operator shall submit the plan as a part of the permit application and, upon approval by the Director, such plan shall be a condition of any permit issued.

(2) The owner or operator shall submit any proposed significant revision to the method of closure reflected in the plan for approval by the Director no later than the date on which

⁸⁸ Internal cross reference (see cross reference table for details).

⁸⁹ Internal cross reference (see cross reference table for details).

⁹⁰ Internal cross reference (see cross reference table for details).

notice of closure is required to be submitted to the Director under Subsection B ~~paragraph (b)~~ of this section.

(3) The plan shall assure financial responsibility as required in Subsection A(7) of Section 20.6.2.5342 NMAC ~~§ 144.52(a)(7)~~.⁹¹

(4) The plan shall include the following information:

- (i) The type and number of plugs to be used;
- (ii) The placement of each plug including the elevation of the top and bottom of each plug;
- (iii) The type and grade and quantity of material to be used in plugging;
- (iv) The method of placement of the plugs;
- (v) Any proposed test or measure to be made;
- (vi) The amount, size, and location (by depth) of casing and any other materials to be left in the well;
- (vii) The method and location where casing is to be parted, if applicable;
- (viii) The procedure to be used to meet the requirements of Subsection D(5) ~~paragraph (d)(5)~~ of this section;
- (ix) The estimated cost of closure; and
- (x) Any proposed test or measure to be made.

(5) The Director may modify a closure plan following the procedures of Section 20.6.2.3109 NMAC ~~§ 124.5~~.⁹²

(6) An owner or operator of a Class I hazardous waste injection well who ceases injection temporarily, may keep the well open provided he:

- (i) Has received authorization from the Director; and
- (ii) Has described actions or procedures, satisfactory to the Director, that the owner or operator will take to ensure that the well will not endanger groundwater of the State of New Mexico ~~USDWs~~ during the period of temporary disuse. These

⁹¹ Internal cross reference (see cross reference table for details).

⁹² Section 124.5 is entitled "Modification, revocation, and reissuance, or termination of permits; subsection (c) applies to NPDES and UIC permits. Section 20.6.2.3109 NMAC provides corollary requirements.

actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Director.

(7) The owner or operator of a well that has ceased operations for more than two years shall notify the Director 30 days prior to resuming operation of the well.

~~(b)~~ B. *Notice of intent to close.* The owner or operator shall notify the Director at least 60 days before closure of a well. At the discretion of the Director, a shorter notice period may be allowed.

~~(c)~~ C. *Closure report.* Within 60 days after closure or at the time of the next quarterly report (whichever is less) the owner or operator shall submit a closure report to the Director. If the quarterly report is due less than 15 days after completion of closure, then the report shall be submitted within 60 days after closure. The report shall be certified as accurate by the owner or operator and by the person who performed the closure operation (if other than the owner or operator). Such report shall consist of either:

(1) A statement that the well was closed in accordance with the closure plan previously submitted and approved by the Director; or

(2) Where actual closure differed from the plan previously submitted, a written statement specifying the differences between the previous plan and the actual closure.

~~(d)~~ D. *Standards for well closure.*

(1) Prior to closing the well, the owner or operator shall observe and record the pressure decay for a time specified by the Director. The Director shall analyze the pressure decay and the transient pressure observations conducted pursuant to Subsection E(1)(i) of Section 20.6.2.5358 NMAC § 146.68(e)(1)(i)⁹³ and determine whether the injection activity has conformed with predicted values.

(2) Prior to well closure, appropriate mechanical integrity testing shall be conducted to ensure the integrity of that portion of the long string casing and cement that will be left in the ground after closure. Testing methods may include:

(i) Pressure tests with liquid or gas;

(ii) Radioactive tracer surveys;

(iii) Noise, temperature, pipe evaluation, or cement bond logs; and

(iv) Any other test required by the Director.

(3) Prior to well closure, the well shall be flushed with a buffer fluid.

⁹³ Internal cross reference (see cross reference table for details).

(4) Upon closure, a Class I hazardous waste well shall be plugged with cement in a manner that will not allow the movement of fluids into or between groundwater of the State of New Mexico ~~USDWs~~.

(5) Placement of the cement plugs shall be accomplished by one of the following:

(i) The Balance Method;

(ii) The Dump Bailer Method;

(iii) The Two-Plug Method; or

(iv) An alternate method, approved by the Director, that will reliably provide a comparable level of protection.

(6) Each plug used shall be appropriately tagged and tested for seal and stability before closure is completed.

(7) The well to be closed 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 prescribed by the Director, prior to the placement of the cement plug(s).

§ 20.6.2.5362146.72

POST-CLOSURE CARE:

~~(a)~~ A. The owner or operator of a Class I hazardous waste well shall prepare, maintain, and comply with a plan for post-closure care that meets the requirements of Subsection B paragraph (b) of this section and is acceptable to the Director. The obligation to implement the post-closure plan survives the termination of a permit or the cessation of injection activities. The requirement to maintain an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.

(1) The owner or operator shall submit the plan as a part of the permit application and, upon approval by the Director, such plan shall be a condition of any permit issued.

(2) The owner or operator shall submit any proposed significant revision to the plan as appropriate over the life of the well, but no later than the date of the closure report required under Subsection C of Section 20.6.2.5361 NMAC § 146.71(e).⁹⁴

(3) The plan shall assure financial responsibility as required in Section 20.6.2.5363 NMAC § 146.73.⁹⁵

⁹⁴ Internal cross reference (see cross reference table for details).

⁹⁵ Internal cross reference (see cross reference table for details).

(4) The plan shall include the following information:

- (i) The pressure in the injection zone before injection began;
- (ii) The anticipated pressure in the injection zone at the time of closure;
- (iii) The predicted time until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost groundwater of the State of New Mexico ~~USDW~~;
- (iv) Predicted position of the waste front at closure;
- (v) The status of any cleanups required under Section 20.6.2.5354 NMAC ~~§ 146.64~~; ⁹⁶ and
- (vi) The estimated cost of proposed post-closure care.

(5) At the request of the owner or operator, or on his own initiative, the Director may modify the post-closure plan after submission of the closure report following the procedures in Section 20.6.2.3109 NMAC, ~~§ 124.5~~. ⁹⁷

~~(b)~~ B. The owner or operator shall:

- (1) Continue and complete any cleanup action required under Section 20.6.2.5354 NMAC ~~§ 146.64~~, ⁹⁸ if applicable;
- (2) Continue to conduct any groundwater monitoring required under the permit until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost groundwater of the State of New Mexico ~~USDW~~. The Director may extend the period of post-closure monitoring if he determines that the well may endanger ~~groundwater of the State of New Mexico~~ ~~USDW~~.
- (3) Submit a survey plat to the local zoning authority designated by the Director. The plat shall indicate the location of the well relative to permanently surveyed benchmarks. A copy of the plat shall be submitted to the ~~Regional Administrator~~ Director of the appropriate ~~EPA Regional Office~~.
- (4) Provide appropriate notification and information to such State and local authorities as have cognizance over drilling activities to enable such State and local authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the well's confining or injection zone.

⁹⁶ Internal cross reference (see cross reference table for details).

⁹⁷ Section 124.5 is entitled "Modification, revocation, and reissuance, or termination of permits; subsection (c) applies to NPDES and UIC permits. Section 20.6.2.3109 NMAC provides corollary requirements.

⁹⁸ Internal cross reference (see cross reference table for details).

(5) Retain, for a period of three years following well closure, records reflecting the nature, composition and volume of all injected fluids. The Director shall require the owner or operator to deliver the records to the Director at the conclusion of the retention period, and the records shall thereafter be retained at a location designated by the Director for that purpose.

(e) C. Each owner of a Class I hazardous waste injection well, and the owner of the surface or subsurface property on or in which a Class I hazardous waste injection well is located, must record a notation on the deed to the facility property or on some other instrument which is normally examined during title search that will in perpetuity provide any potential purchaser of the property the following information:

(1) The fact that land has been used to manage hazardous waste;

(2) The name of the State agency or local authority with which the plat was filed, as well as the address of the ~~Director Regional Environmental Protection Agency Office to which it was submitted;~~

(3) The type and volume of waste injected, the injection interval or intervals into which it was injected, and the period over which injection occurred.

§ 20.6.2.5363146.73

FINANCIAL RESPONSIBILITY FOR POST-CLOSURE CARE:

The owner or operator shall demonstrate and maintain financial responsibility for post-closure by using a trust fund, surety bond, letter of credit, financial test, insurance or corporate guarantee that meets the specifications for the mechanisms and instruments revised as appropriate to cover closure and post-closure care in Section 20.6.2.5320 NMAC,⁹⁹~~40 CFR part 144, subpart F.~~ The amount of the funds available shall be no less than the amount identified in Subsection A(4)(vi) of Section 20.6.2.5362 NMAC~~§ 146.72(a)(4)(vi).~~¹⁰⁰ The obligation to maintain financial responsibility for post-closure care survives the termination of a permit or the cessation of injection. The requirement to maintain financial responsibility is enforceable regardless of whether the requirement is a condition of the permit.

20.6.2.5364 – 20.6.2.5399: [RESERVED]

⁹⁹ Internal cross reference (see cross reference table for details). Part 144, subpart F refers to 40 CFR §§ 144.60-70.

¹⁰⁰ Internal cross reference (see cross reference table for details).