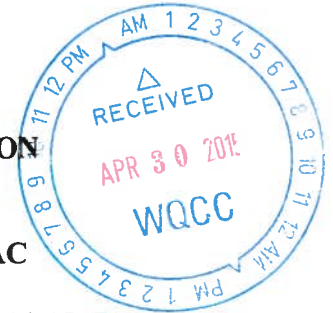


STATE OF NEW MEXICO
BEFORE THE WATER QUALITY CONTROL COMMISSION

IN THE MATTER TO AMEND 20.6.2.3000 NMAC AND 20.6.2.5000 NMAC

No. WQCC 14-15 (R)



SECOND AMENDED PETITION TO AMEND 20.6.2.3000 NMAC
AND 20.6.2.5000 NMAC

Pursuant to the New Mexico Water Quality Act (“WQA”), NMSA 1978, §§74-6-1 to 74-6-17 (2009) and Section 301 of the *Guidelines for Water Quality Control Commission Hearings*, Navajo Refining Company, L.L.C. (“Navajo”) petitions the Water Quality Control Commission (the “Commission”) to adopt new rules authorizing Class I underground injection control (“UIC”) wells for hazardous waste (“Class I hazardous waste injection wells”) generated by oil refineries hereinafter referred to as the Water Conservation Rule (“WCR”). The WCR is based on and incorporates by reference portions of existing federal regulations, promulgated under the authority of the federal Safe Drinking Water Act (“SWDA”) for Class I hazardous waste injection wells. Specifically, the proposed WCR, attached to this Second Amended Petition as Attachment 1, would amend Sections 20.6.2.3106-07, 20.6.2.3109, 20.6.2.5002-04, 20.6.2.5101-04, 20.6.2.5200-01, 20.6.2.5204, and 20.6.2.5209-10 NMAC and add new text as 20.6.2.5300 through 20.6.2.5399 NMAC. As described below, the proposed WCR ensures that New Mexico’s SWDA regulations for Class I hazardous waste injection wells would, if adopted, be, at a minimum, as stringent as federal regulations.

This Second Amended Petition hereby amends the Petition to Amend 20.6.2.5000 NMAC that Navajo filed with the Commission on November 12, 2014 (“First Amended Petition”). The Second Amended Petition proposes to adopt substantial portions of the United

States Environmental Protection Agency's ("EPA's") regulations for Class I hazardous waste injection wells directly in the New Mexico Administrative Code rather than incorporating them by reference, as was proposed in the First Amended Petition. As noted above, some portions would still be incorporated by reference. The substantive requirements of the Second Amended Petition are generally similar to those in the First Amended Petition, and the proposed Second Amended Petition would result in regulations no less stringent than EPA regulations.

I. Statement of Reasons for the Rule Change

Navajo operates an oil refinery in Artesia, New Mexico and generates a wastewater stream that, on a constituent basis, is very similar to produced water routinely disposed of in connection with the production of oil and gas. For the reasons stated in this Second Amended Petition, Navajo desires to use an injection well to dispose of process wastewaters that may be classified as hazardous due to the concentration of chemical constituents caused by water conservation and reuse. To do so, Navajo requests the Commission to adopt a Class I hazardous waste injection well permitting program under the WQA and New Mexico's delegated authority to administer the federal Safe Drinking Water Act's UIC program.

Authorizing Class I hazardous waste injection wells and adopting a permitting program for those wells used by oil refineries will provide a number of benefits to the State, to refineries, and to others in the oil and natural gas industry. These benefits include the following:

1. Water conservation: Authorizing the State to issue Class I hazardous waste injection well permits will promote water reuse and conservation by allowing refineries to reuse water by extracting and disposing of any hazardous constituents in the waste streams generated by oil refineries.

2. Waste minimization: The WCR would promote waste minimization. Through water reuse, the final effluent stream that would be sent to a Class I hazardous waste injection well could be materially smaller than a full effluent stream that is typically disposed of in Class I nonhazardous waste injection wells. Volumes of waste generated by oil refineries would therefore be minimized.
3. Economic benefits: The WCR would provide a number of economic benefits to communities supporting refineries. Through reuse of water and reduction of fresh water usage by oil refineries, more fresh water would be available for use by the surrounding communities and businesses, including agriculture.
4. Preservation of disposal capacity: Because disposal capacity at existing Class I nonhazardous waste injection wells is finite, reducing effluent discharges to those wells preserves capacity. Preserving capacity will foster continued oil and gas production by ensuring that there will be sufficient resources available to process additional crude oil and recovered oil in the future.
5. Improved oil and gas industry reliability: The WCR will also allow those in the oil and gas industry to improve reliability in their systems and production by allowing the refineries they depend upon to manage any unexpected increases in concentrations of chemical constituents in the wastewater stream that may exceed hazardous waste thresholds. Currently, refineries must treat wastewater streams before disposal so that the wastewater streams do not exceed hazardous waste thresholds. This treatment process can curtail crude oil throughput. Creating disposal capacity for hazardous wastewater streams will allow refineries to maintain greater crude oil throughput, avoiding adverse financial consequences to their suppliers and the State.

II. Waste Management Practices of Oil Refineries in New Mexico

Oil refining companies must complete a number of processes in order to transform crude oil and recovered oil (i.e., oil recovered from oil-bearing residuals generated in the refining industry) into refined products. During these processes refineries use significant quantities of water and generate wastewater streams that can be recycled, especially if certain chemical constituents can be removed from these wastewater streams before reuse. Some of these chemical constituents could be considered hazardous waste if present in sufficient concentrations. Class I hazardous waste injection wells provide a demonstrated means for safely disposing of such wastes in deep geologic formations that are isolated from aquifers that are suitable for use as water supplies. The deep formations used for injection would be substantially below aquifers used for fresh drinking and agricultural/industrial water supplies and are separated from those supplies by numerous layers of impermeable rock formations. The WCR requires that any injection of fluids through a Class I hazardous waste injection well must occur beneath the lowermost formation that contains 10,000 milligrams per liter or less of total dissolved solids (“TDS”).

The federal Class I hazardous waste injection well regulations were promulgated in 1980 and have a demonstrated history of protecting human health and the environment. In 1983 New Mexico was granted primacy over the UIC program for all Class I wells.¹ After New Mexico assumed primacy, EPA amended its regulations applicable to Class I hazardous waste injection wells.² New Mexico at the time did not amend its regulations to incorporate the changes made in the federal regulations. Instead, in 2001, New Mexico eliminated the regulations authorizing

¹ See 40 CFR § 147.1601.

² 53 Fed. Reg. 28,118 (July 28, 1988).

Class I hazardous waste injection well permits because they had not been used and no such wells had been permitted or constructed under the regulations.

The WCR does not alter the responsibilities of the NMED or OCD with respect to administering the UIC program currently delegated to the State by the EPA under the SDWA. Since the WCR applies to oil refineries only, the requirements of the WCR would be administered by OCD. OCD currently administers the UIC program for oil and gas related industries, including refineries, pursuant to the EPA's delegation to New Mexico under the SDWA, the 1982 Joint Powers Agreement Between the Environmental Improvement Division, the Oil Conservation Division, and the Mining and Minerals Division, and NMSA 1978, § 70-2-12.

As described below, Class I wells are a safe and economical way to dispose of hazardous wastewater. The federal regulations on which the proposed WCR is based are comprehensive, imposing exacting requirements for the selection of the site, well construction standards, and the day-to-day operations to ensure that underground sources of drinking water ("USDWs) are safe and secure.

III. Background of Class I Injection Wells

Wastewater is an unavoidable byproduct of the manufacturing processes that create thousands of products we use every day. While industries continue to research and implement ways to reduce waste by recycling and improving manufacturing processes, wastewater is still generated and requires disposal. Class I underground injection wells represent a technically sound and safe disposal option for such wastewater, as demonstrated by stringent design and operating requirements and a history of safe disposal that spans many decades.

(a) Regulatory Framework for UIC Wells

“Underground injection” refers to the placement of fluids, often wastewater, underground through a well bore. As the EPA Regional Office for Region 6 found, “some waste fluids are generated in such volumes as to make treatment economically impractical. If properly constructed, and operated, injection wells are by far the best way to dispose of these waste fluids.”³ In contrast, the lack of this option “removes a safe, economically proven technology by which wastes can be effectively addressed.”⁴

As part of the SDWA, the federal UIC program was established.⁵ Since ground water is a major source of drinking water in the United States, the UIC program requirements were designed to prevent ground water contamination. Most ground water used as drinking water today contains less than 3,000 milligrams per liter TDS. The UIC program adds a significant margin of safety and protects waters with significantly higher concentrations of TDS of up to 10,000 milligrams per liter to ensure that all water with the potential to be treated and used as drinking water in the future is protected.

New Mexico, like other states and the federal government, has a reasonable objective to protect any USDW. A USDW is defined by EPA as an “aquifer or its portion which supplies any public water system or contains a sufficient quantity of ground water to supply a public water system, and either currently supplies a public water system, or contains less than 10,000 milligrams per liter of [TDS] and is not an exempted aquifer.”⁶ In essence, a USDW is a collection of clean water large enough that it could potentially serve the public. New Mexico’s

³ ENVIRONMENTAL PROTECTION AGENCY, *Frequently Asked Questions About the Underground Injection Control Program*, <http://www.epa.gov/Region6/water/swp/uic/faq3.htm#banned>.

⁴ *Id.*

⁵ 42 U.S.C. §300h.

⁶ 40 CFR § 144.3

existing UIC regulations go further and “protect all ground water of the State of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow for uses designated in the New Mexico Water Quality Standards.”⁷ The existing standard would also apply to the proposed WCR.

(b) Class I Wells

There are six classes of underground injection wells. These classes are based on the types of fluids injected and, in some cases, the industries that they support. Each well classification has technical standards for well design and construction, injection depth, and operating and monitoring techniques in order to ensure that all wells are designed and operated in a way that protects USDWs.

Class I wells, which are further classified as hazardous and nonhazardous wells, inject industrial or municipal wastewater far beneath the lowermost source of drinking water. Class I wells are used mainly by the following industries: petroleum refining, metal production, chemical production, pharmaceutical production, commercial waste disposal, food production, and municipal wastewater treatment.⁸

Class I wells inject wastewater into geologic formations that lack suitable water quality to qualify as a USDW (or groundwater of the State of New Mexico) and are typically located thousands of feet below the land surface. The geological formation into which the wastewater is injected, known as the injection zone, must be demonstrated to be sufficiently porous and permeable so that the wastewater can enter the rock formation without an excessive buildup of

⁷ Section 20.6.2.5001 NMAC.

⁸ ENVIRONMENTAL PROTECTION AGENCY, *Industrial & Municipal Waste Disposal Wells (Class I)*, http://water.epa.gov/type/groundwater/uic/wells_class1.cfm.

pressure. The injection zone is typically beneath a large, relatively impermeable layer of rock, known as the confining zone, which along with the natural force of gravity, will hold injected fluids in place and restrict them from moving upward toward a USDW (or groundwater of the State of New Mexico). A diagram depicting the general schematic of a Class I well is attached to this Second Amended Petition as Attachment 2.

According to EPA's most recent data, there are currently 678 Class I injection wells in the United States.⁹ 117 of these wells (17%) are Class I hazardous waste injection wells.¹⁰ A significant number of Class I hazardous waste injection wells are located in EPA Region 6 (comprised of Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Native American Tribes).¹¹ 21 states currently have Class I hazardous waste injection wells.¹² Texas has the greatest number of Class I hazardous waste injection wells followed by Louisiana.¹³

(c) Federal Regulations For Class I Wells

Federal regulations strictly control the construction and operation of Class I wells. Class I wells must be located in geologically stable areas that are free of fractures or faults through which injected fluids could travel to drinking water sources.¹⁴ Well operators must also show that there are no wells or other artificial pathways between the injection zone and USDWs through which fluids can travel. Further, limitations on the locations where Class I wells can be

⁹ ENVIRONMENTAL PROTECTION AGENCY, *UIC Inventory by State – 2011*, <http://water.epa.gov/type/groundwater/uic/upload/uicinventorystate2011.pdf>.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ 40 CFR §146.62.

sited ensures that the site-specific geologic properties of the subsurface around the well provide additional safeguards against the movement of injected wastewaters to a USDW.

All Class I wells are designed and constructed to prevent the movement of injected wastewaters into USDWs. Their stringent, multi-layer construction¹⁵ has many redundant safety features. One of these features is the well's casing, which prevents the borehole from caving in. The casing is made out of a corrosion-resistant material such as steel or fiberglass-reinforced plastic. It consists of an outer surface casing, that extends the entire depth of the well, and an inner "long string" casing that extends from the surface to or through the injection zone. The innermost layer of the well, the injection tubing, brings injected wastewater from the surface to the injection zone.

All of the materials used in Class I injection wells must be corrosion-resistant and compatible with the wastewater, geologic formations, and fluids into which they will come in contact. A constant pressure is maintained at the well head and that pressure is continuously monitored to verify the well's mechanical integrity and proper operational conditions.¹⁶ Trained operators are responsible for day-to-day injection well operation, maintenance, monitoring, and testing.¹⁷ In addition to monitoring the well operation, operators of hazardous waste wells are required to develop and follow a waste analysis plan for monitoring the physical and chemical properties of the injected wastewater.¹⁸

Finally, Class I injection wells are continuously monitored and controlled, usually with sophisticated computers and digital equipment, which provide real-time data and information to

¹⁵ Wells typically consist of three or more concentric layers of pipe: surface casing, long string casing, and injection tubing. Class I hazardous wells must have 3 layers of casing. 40 CFR § 146.65(c).

¹⁶ 40 CFR §146.67.

¹⁷ 40 CFR § 146.13(b).

¹⁸ 40 CFR §146.68 (a).

the well operator. Thousands of data points about the pumping pressure for fluid disposal, the pressure in the space between the injection tubing and the well casing (that shows there are no leaks in the well), and data on the fluid being disposed of, such as its temperature and flow rate, are monitored and recorded each day.¹⁹

Alarms are connected to sound if anything out of the ordinary happens, and if unusual pressures are sensed by the monitoring equipment, the well pump automatically shuts off.²⁰ Disposal in the well does not resume until the cause of the unusual event is investigated, and the parties responsible for operating the well and the regulatory agencies both are sure that no environmental harm has been or will be done by well operations.²¹

The wells are also tested regularly, using special tools that are inserted into the well to record data about the well and surrounding rock formations. Regulators review all the data about the well operations, monitoring and testing frequently, and inspecting the well site to make sure everything is operating according to the requirements put in place to protect drinking water sources.

(d) Safety Factors and Safety Record

Because these Class I wells inject waste far below the deepest USDW, there is very little chance of any adverse effect on ground water that could be used for domestic or agricultural water supply. In fact, in its March 2001 Study of Class I wells, EPA said that “the probability of loss of waste confinement due to Class I injection has been demonstrated to be low” and “existing Class I regulatory controls are strong, adequately protective, and provide an extremely

¹⁹ 40 CFR §146.67(a).

²⁰ 40 CFR §146.67(f).

²¹ 40 CFR 146.67(h).

low-risk option in managing the wastewaters of concern.”²² In other words, the injection zone, the related impermeable confining layers above the injection zone, and the many layers of protection required in the construction, operation, and monitoring of wells, provide many safeguards against upward fluid movement, effectively protect USDWs.

Class I injection wells that meet EPA’s design and operating requirements are well studied and pose minimal risks. In 1998, scientists quantitatively estimated the risk of waste containment loss as a result of various sets of events associated with Class I hazardous waste wells.²³ According to the study, because of the redundant safety systems in a typical Class I well, loss of containment would require a series of improbable events to occur in sequence. As a result, the calculated probability of containment loss resulting from each of the scenarios examined ranges from one-in-one-million to one-in-ten-quadrillion.²⁴

In the field, the probability of Class I well failures, both nonhazardous and hazardous, has also been demonstrated to be very low. Some early Class I failures were a result of historic practices that are no longer permissible under current federal UIC regulations, such as improper well construction or improper well closure upon cessation of operations. As discussed above, Class I wells now have redundant safety systems and several protective layers; an injection well would fail only when multiple systems fail in sequence without detection. In the unlikely event that a well would fail, the geology of the injection and confining zones serves as a final safety mechanism to prevent movement of wastewater to USDWs. Injection well operators invest millions of dollars in the permitting, construction, and operation of wells and even in the absence

²² EPA, CLASS I UNDERGROUND INJECTION CONTROL PROGRAM: STUDY OF THE RISKS ASSOCIATED WITH CLASS I UNDERGROUND INJECTION WELLS xiii, 42 (March 2001) (emphasis supplied).

²³ Rish, W.A., T. Ijaz, and T.F. Long, *A Probabilistic Risk Assessment of Class I Hazardous Waste Injection Wells*, 1998.

²⁴ *Id.*

of UIC regulations would carefully monitor the integrity of the injection operation to safeguard their investments.

Failures of Class I wells are exceedingly rare and have generally not resulted in significant harm to the environment or fresh water supplies. Typically, any failures of mechanical integrity that have occurred are internal failures, detected by continuous pressure monitoring systems or integrity tests. Any wells that fail are shut down until they are repaired to the satisfaction of the regulatory agency. EPA's study of more than 500 Class I nonhazardous and hazardous wells showed that loss of mechanical integrity contributed to only 4 cases of significant wastewater migration (none of which affected a drinking water source) over several decades of operation.²⁵ This safety record can be attributed to the rigorous requirements for monitoring and ensuring that the well materials are compatible with the wastewater injected.

IV. Summary of Proposed WCR

The proposed WCR is based on federal regulations for Class I hazardous waste injection wells found in 40 CFR Parts 144, 146, and 148. The proposed WCR draws from these federal provisions in two ways. First, in many cases, entire CFR provisions have been incorporated verbatim from the federal regulations (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 WCR incorporates relevant subparts CFR by reference.

²⁵ EPA, CLASS I UNDERGROUND INJECTION CONTROL PROGRAM: STUDY OF THE RISKS ASSOCIATED WITH CLASS I UNDERGROUND INJECTION WELLS 41 (March 2001).

In most cases, New Mexico's existing UIC requirements are functionally equivalent to EPA's regulations. In turn, the proposed WCR is at a minimum as stringent as EPA's regulations. In a few cases, however, New Mexico's existing UIC program is more stringent than EPA's regulations and, as a result, certain provisions of the proposed WCR provisions are more stringent than their counterparts in the CFR. Finally, the proposed WCR 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 following paragraphs summarize the proposed regulations, which are included in full as Attachment A to this Second Amended Petition and incorporated by reference into this Second Amended Petition. In addition, Table 1 below provides a cross reference between each applicable federal regulation for Class I hazardous waste injection wells and the corresponding NMAC provision.

A. Existing regulations.

The WCR proposes amendments to Sections 20.6.2.3106-07, 20.6.2.3109, 20.6.2.5002-04, 20.6.2.5101-04, 20.6.2.5200-01, 20.6.2.5204, and 20.6.2.5209-10 NMAC. These amendments primarily involve administrative updates to reflect the fact that Class I hazardous waste injection wells would no longer be prohibited and that the State's UIC regulations would be expanded to include 20.6.2.5300 through 20.6.2.5399 NMAC. The only substantive change to existing regulations is an expansion of the reporting requirements for Class I hazardous waste injection wells in 20.6.2.5101(G)(2) NMAC.

B. New regulations.

Sections 20.6.2.5300 through 5309 NMAC. The proposed WCR starts with several new provisions that provide necessary context and state-specific structure that are not based on the federal UIC provisions. Section 20.6.2.5300 NMAC provides the requirements for Class I

hazardous waste injection wells and expressly limits the scope of the Class I hazardous waste injection well program to petroleum refineries. Section 20.6.2.5301 NMAC includes all of the definitions applicable to Class I hazardous waste injection wells (beyond those generally applicable to 20.6.2 NMAC). Section 20.6.2.5302 NMAC provides the fee provisions for Class I hazardous waste injection wells, including a filing fee, permit fee, annual administrative fee, renewal fee, modification fee, and financial assurance fee. Section 20.6.2.5303 authorizes the conversion of existing Class I nonhazardous wells to Class I hazardous wells provided the permit applicant complies with all requirements for Class I hazardous wells and obtains the a Class I hazardous waste permit. Sections 20.6.2.5304 through 20.6.2.5309 NMAC are reserved.

Sections 20.6.2.5310 through 5319 NMAC. Section 20.6.2.3110 NMAC provides the requirements for wells injecting hazardous waste required to be accompanied by a manifest. This provision is substantially similar to the corresponding EPA regulation with updated cross references to the NMAC. Sections 20.6.2.5311 through 5319 NMAC are reserved.

Sections 20.6.2.5320 through 5329 NMAC. These provisions incorporate by reference EPA's financial assurance requirements for Class I hazardous waste injection wells found in 40 CFR Part 144, subpart F. The provisions authorize financial assurance using trust funds, surety bonds, letters of credit, insurance, and corporate guarantees by a permit applicant's corporate parents. To be consistent with OCD's existing UIC regulations, the proposed WCR does not incorporate by reference federal regulations that permit a financial test by a permit applicant. The WCR also does not incorporate by reference federal provisions that address EPA-administered programs or state assumption of responsibility for plugging and abandonment of Class I hazardous waste injection wells.

Sections 20.6.2.5330 through 5339 NMAC. These provisions are based on EPA's conditions applicable to all UIC permits found in 40 CFR Part 144, subpart E, although the WCR limits their applicability to Class I hazardous waste injection wells and does not include EPA regulations applicable to other classes of wells. These provisions include many of the procedural and administrative aspects of the Class I hazardous waste injection well program including, for example, the duty to reapply at the end of the permit term as well as schedules of compliance and monitoring, recordkeeping, and reporting obligations. The requirements are substantially similar to the corresponding EPA regulations applicable to Class I hazardous waste injection wells. One area where WCR is more stringent than EPA is the requirement that the director of OCD provide written approval for the transfer of a Class I hazardous waste injection well permit.

Sections 20.6.2.5351 through 5369 NMAC. These provisions are based on EPA's substantive criteria and standards for Class I hazardous waste injection wells found in 40 CFR Part 146, subpart G. These provisions provide applicability criteria; minimum siting requirements; corrective action provisions; construction and operating requirements; testing, monitoring, and reporting requirements, and closure and post-closure requirements. These provisions also provide the technical requirements that will be applicable to Class I hazardous waste injection wells. The proposed provisions in the WCR are substantially similar to EPA regulations, with appropriate updates to cross references to address New Mexico's existing UIC regulations. There are no substantive additions or deletions to these sections.

Sections 20.6.2.5370 through 5371 NMAC. These provisions incorporate by reference EPA's hazardous waste injection restrictions found in 40 CFR Part 148. The EPA provisions identify wastes that are restricted from disposal in Class I hazardous waste injection wells and define the circumstances under which such restricted wastes may be disposed of in Class I

hazardous waste injection wells. The WCR does not incorporate by reference provisions which have been deleted from the Code of Federal Regulations and are now reserved and those provisions which were applicable only for a fixed period of time which has since lapsed.

Sections 20.6.2.5372 through 5399 are reserved.

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
40 CFR Part 148 Subpart A - General (all sections)		
§ 148.1 Purpose, scope and applicability.	20.6.2.5371	Incorporated By Reference
§ 148.2 Definitions.	20.6.2.5371	Incorporated By Reference
§ 148.3 Dilution prohibited as a substitute for treatment.	20.6.2.5371	Incorporated By Reference
§ 148.4 Procedures for case-by-case extensions to an effective date.	20.6.2.5371	Incorporated By Reference
§ 148.5 Waste analysis.	20.6.2.5371	Incorporated By Reference
40 CFR Part 148 Subpart B - Prohibitions on Injection (all sections)		
§ 148.10 Waste specific prohibitions—solvent wastes	20.6.2.5371	Incorporated By Reference
§ 148.11 Waste specific prohibitions—dioxin-containing wastes.	20.6.2.5371	Incorporated By Reference
§ 148.12 Waste specific prohibitions—California list wastes.	20.6.2.5371	Incorporated By Reference
§ 148.14 Waste specific prohibitions—first third wastes.	20.6.2.5371	Incorporated By Reference
§ 148.15 Waste specific prohibitions—second third wastes.	20.6.2.5371	Incorporated By Reference
§ 148.16 Waste specific prohibitions—third third wastes.	20.6.2.5371	Incorporated By Reference
§ 148.17 Waste specific prohibitions; newly listed wastes.	20.6.2.5371	Incorporated By Reference
§ 148.18 Waste specific prohibitions—newly listed and identified wastes.	20.6.2.5371	Incorporated By Reference
40 CFR Part 148 Subpart C - Petition Standards and Procedures (all sections)		

CFR Cite/Title	NMAC Cite	Notes
§ 148.20 Petitions to allow injection of a waste prohibited under subpart B.	20.6.2.5371	Incorporated By Reference
§ 148.21 Information to be submitted in support of petitions.	20.6.2.5371	Incorporated By Reference
§ 148.22 Requirements for petition submission, review and approval or denial.	20.6.2.5371	Incorporated By Reference
§ 148.23 Review of exemptions granted pursuant to a petition.	20.6.2.5371	Incorporated By Reference
§ 148.24 Termination of approved petition.	20.6.2.5371	Incorporated By Reference

V. Request for Hearing

Navajo's First Amended Petition requested that the Commission schedule a rulemaking hearing to consider the proposed Water Conservation Act. Petitioners reiterate that request here. Pursuant to the request in the First Amended Petition the Commission has scheduled a hearing to begin on July 14, 2015. This hearing date will allow the Commission to conduct the hearing in conjunction with the Commission's July 2015 meeting. Official notice of the hearing will be filed separately and will be published in the New Mexico Register and in newspapers of general circulation in the state of New Mexico in accordance with New Mexico law.

It is anticipated that the rulemaking hearing will take approximately one day or less.

Respectfully Submitted,



Robert K. O'Brien
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CERTIFICATE OF SERVICE

I hereby certify that a copy of the Second Amended Petition to Amend 20.6.2.3000 NMAC and 20.6.2.5000 NMAC has been hand delivered to the following party on April 30, 2015.

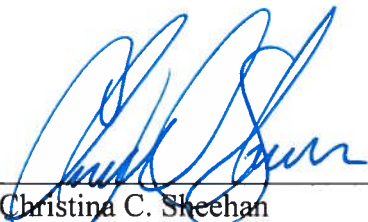
Pam Castañeda
Administrator
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1190 South Saint Francis Drive, S-2102
Santa Fe, New Mexico 87502

I hereby certify that a copy of the Second Amended Petition to Amend 20.6.2.3000 NMAC and 20.6.2.5000 NMAC has been served via e-mail and regular U.S Mail to the following parties on April 30, 2015.

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WATER QUALITY CONTROL COMMISSION SECOND AMENDED PETITION
ATTACHMENT 1

PROPOSED WCR

I. Proposed Amendments to Existing Provisions.

Section 20.6.2.3106 NMAC is amended to read:

20.6.2.3106 APPLICATION FOR DISCHARGE PERMITS AND RENEWALS:

A. Any person who, before or on June 18, 1977, is discharging any of the water contaminants listed in Section 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall, within 120 days of receipt of written notice from the secretary that a discharge permit is required, or such longer time as the secretary shall for good cause allow, submit a discharge plan to the secretary for approval; such person may discharge without a discharge permit until 240 days after written notification by the secretary that a discharge permit is required or such longer time as the secretary shall for good cause allow.

B. Any person who intends to begin, after June 18, 1977, discharging any of the water contaminants listed in Section 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall notify the secretary giving the information enumerated in Subsection B of Section 20.6.2.1201 NMAC; the secretary shall, within 60 days, notify such person if a discharge permit is required; upon submission, the secretary shall review the discharge plan pursuant to Sections 20.6.2.3108 and 20.6.2.3109 NMAC. For good cause shown the secretary may allow such person to discharge without a discharge permit for a period not to exceed 120 days.

C. A proposed discharge plan shall set forth in detail the methods or techniques the discharger proposes to use or processes expected to naturally occur which will ensure compliance with this Part. At least the following information shall be included in the plan:

- (1) Quantity, quality and flow characteristics of the discharge;
- (2) Location of the discharge and of any bodies of water, watercourses and ground water discharge sites within one mile of the outside perimeter of the discharge site, and existing or proposed wells to be used for monitoring;
- (3) Depth to and TDS concentration of the ground water most likely to be affected by the discharge;
- (4) Flooding potential of the site;
- (5) Location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow;

(6) Depth to and lithological description of rock at base of alluvium below the discharge site if such information is available;

(7) Any additional information that may be necessary to demonstrate that the discharge permit will not result in concentrations in excess of the standards of Section 20.6.2.3103 NMAC or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use. Detailed information on site geologic and hydrologic conditions may be required for a technical evaluation of the applicant's proposed discharge plan; and

(8) Additional detailed information required for a technical evaluation of underground injection control wells as provided in Sections 20.6.2.5000 through ~~[20.6.2. 5299]~~ 20.6.2.5399 NMAC,

D. An applicant for a discharge permit shall pay fees as specified in ~~[Section]~~ Sections 20.6.2.3114 and 20.6.2.5302 NMAC.

E. An applicant for a permit to dispose of or use septage or sludge, or within a source category designated by the commission, may be required by the secretary to file a disclosure statement as specified in 74-6-5.1 of the Water Quality Act.

F. If the holder of a discharge permit submits an application for discharge permit renewal at least 120 days before the discharge permit expires, and the discharger is not in violation of the discharge permit on the date of its expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved. A discharge permit continued under this provision remains fully effective and enforceable. An application for discharge permit renewal must include and adequately address all of the information necessary for evaluation of a new discharge permit. Previously submitted materials may be included by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

Section 20.6.2.3107 NMAC is amended to read:

20.6.2.3107 MONITORING, REPORTING, AND OTHER REQUIREMENTS:

- A.** Each discharge plan shall provide for the following as the secretary may require:
- (1) The installation, use, and maintenance of effluent monitoring devices;
 - (2) The installation, use, and maintenance of monitoring devices for the ground water most likely to be affected by the discharge;
 - (3) Monitoring in the vadose zone;
 - (4) Continuation of monitoring after cessation of operations;
 - (5) Periodic submission to the secretary of results obtained pursuant to any monitoring requirements in the discharge permit and the methods used to obtain these results;

- (6) Periodic reporting to the secretary of any other information that may be required as set forth in the discharge permit;
- (7) The discharger to retain for a period of at least five years any monitoring data required in the discharge permit;
- (8) A system of monitoring and reporting to verify that the permit is achieving the expected results;
- (9) Procedures for detecting failure of the discharge system;
- (10) Contingency plans to cope with failure of the discharge permit or system;
- (11) A closure plan to prevent the exceedance of standards of Section 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation which includes: a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, financial assurance, and other measures necessary to prevent and/or abate such contamination. The obligation to implement the closure plan as well as the requirements of the closure plan, if any is required, survives the termination or expiration of the permit. A closure plan for any underground injection control well must also incorporate the applicable requirements of Sections 20.6.2.5005, ~~and~~ 20.6.2.5209, and 20.6.2.5361 NMAC.

B. Sampling and analytical techniques shall conform with the following references unless otherwise specified by the secretary:

- (1) Standard Methods for the Examination of Water and Wastewater, latest edition, American Public Health Association; or
- (2) Methods for Chemical Analysis of Water and Waste, and other publications of the Analytical Quality Laboratory, EPA; or
- (3) Techniques of Water Resource Investigations of the U.S. Geological Survey; or
- (4) Annual Book of ASTM Standards. Part 31. Water, latest edition, American Society For Testing and Materials; or
- (5) Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations; or
- (6) National Handbook of Recommended Methods for Water-Data Acquisition, latest edition, prepared cooperatively by agencies of the United States Government under the sponsorship of the U.S. Geological Survey.

C. The discharger shall notify the secretary of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants.

D. Any discharger of effluent or leachate shall allow any authorized representative of the secretary to:

- (1) inspect and copy records required by a discharge permit;
- (2) inspect any treatment works, monitoring and analytical equipment;
- (3) sample any effluent before or after discharge;
- (4) use monitoring systems and wells installed pursuant to a discharge permit requirement in order to collect samples from ground water or the vadose zone.

E. Each discharge permit for an underground injection control well shall incorporate the applicable requirements of Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC.

Section 20.6.2.3109 NMAC is amended to read:

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

A. The department shall evaluate the application for a discharge permit, modification or renewal based on information contained in the department's administrative record. The department may request from the discharger, either before or after the issuance of any public notice, additional information necessary for the evaluation of the application. The administrative record shall consist of the application, any additional information required by the department, any information submitted by the discharger or the general public, other information considered by the department, the proposed approval or disapproval of an application for a discharge permit, modification or renewal prepared pursuant to Subsection G of 20.6.2.3108 NMAC, and, if a public hearing is held, all of the documents filed with the hearing clerk, all exhibits offered into evidence at the hearing, the written transcript or tape recording of the hearing, any hearing officer report, and any post hearing submissions.

B. The secretary shall, within 30 days after the administrative record is complete and all required information is available, approve, approve with conditions or disapprove the proposed discharge permit, modification or renewal based on the administrative record. The secretary shall give written notice of the action taken to the applicant or permittee and any other person who participated in the permitting action who requests a copy in writing.

C. Provided that the other requirements of this part are met and the proposed discharge plan, modification or renewal demonstrates that neither a hazard to public health nor undue risk to property will result, the secretary shall approve the proposed discharge plan, modification or renewal if the following requirements are met:

- (1) ground water that has a TDS concentration of 10,000 mg/l or less will not be affected by the discharge; or

(2) the person proposing to discharge demonstrates that approval of the proposed discharge plan, modification or renewal will not result in either concentrations in excess of the standards of 20.6.2.3103 NMAC or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use, except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(3) the proposed discharge plan conforms to either Subparagraph (a) or (b) below and Subparagraph (c) below:

(a) municipal, other domestic discharges, and discharges from sewerage systems handling only animal wastes: the effluent is entirely domestic, is entirely from a sewerage system handling only animal wastes or is from a municipality and conforms to the following:

(i) the discharge is from an impoundment or a leach field existing on February 18, 1977 which receives less than 10,000 gallons per day and the secretary has not found that the discharge may cause a hazard to public health; or

(ii) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment will not exceed 200 pounds per acre per year and that the effluent will meet the standards of 20.6.2.3103 NMAC except for nitrates and except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(iii) the total nitrogen in effluent that is applied to a crop which is harvested shall not exceed by more than 25 percent the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrates and except for contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC;

(b) discharges from industrial, mining or manufacturing operations:

(i) the discharger has demonstrated that the amount of effluent that enters the subsurface from a surface impoundment will not exceed 0.5 acre-feet per acre per year; or

(ii) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment shall not exceed 200 pounds per acre per year and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrate and contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC; or

(iii) the total nitrogen in effluent that is applied to a crop that is harvested shall not exceed by more than 25 percent the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of 20.6.2.3103 NMAC except for nitrate and contaminants in the water diverted as provided in Subsection D of 20.6.2.3109 NMAC;

(c) all discharges:

(i) the monitoring system proposed in the discharge plan includes adequate provision for sampling of effluent and adequate flow monitoring so that the amount being discharged onto or below the surface of the ground can be determined;

(ii) the monitoring data is reported to the secretary at a frequency determined by the secretary.

D. The secretary shall allow the following unless he determines that a hazard to public health may result:

(1) the weight of water contaminants in water diverted from any source may be discharged provided that the discharge is to the aquifer from which the water was diverted or to an aquifer containing a greater concentration of the contaminants than contained in the water diverted; and provided further that contaminants added as a result of the means of diversion shall not be considered to be part of the weight of water contaminants in the water diverted;

(2) the water contaminants leached from undisturbed natural materials may be discharged provided that:

(a) the contaminants were not leached as a product or incidentally pursuant to a solution mining operation; and

(b) the contaminants were not leached as a result of direct discharge into the vadose zone from municipal or industrial facilities used for the storage, disposal, or treatment of effluent;

(3) the water contaminants leached from undisturbed natural materials as a result of discharge into ground water from lakes used as a source of cooling water.

E. If data submitted pursuant to any monitoring requirements specified in the discharge permit or other information available to the secretary indicates that this part is being or may be violated or that the standards of 20.6.2.3103 NMAC are being or will be exceeded, or a toxic pollutant as defined in 20.6.2.7 NMAC is present, in ground water at any place of withdrawal for present or reasonably foreseeable future use, or that the Water Quality Standards for Interstate and Intrastate Streams in New Mexico are being or may be violated in surface water, due to the discharge, except as provided in Subsection D of 20.6.2.3109 NMAC.

(1) The secretary may require a discharge permit modification within the shortest reasonable time so as to achieve compliance with this part and to provide that any exceeding of standards in ground water at any place of withdrawal for present or reasonably foreseeable future use, or in surface water, due to the discharge except as provided in Subsection D of 20.6.2.3109 NMAC will be abated or prevented. If the secretary requires a discharge permit modification to abate water pollution:

(a) the abatement shall be consistent with the requirements and provisions of 20.6.2.4101, 20.6.2.4103, Subsection C and E of 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC; and

(b) the discharger may request of the secretary approval to carry out the abatement under 20.6.2.4000 through 20.6.2.4115 NMAC, in lieu of modifying the discharge permit; the discharger shall make the request in writing and shall include the reasons for the request.

(2) The secretary may terminate a discharge permit when a discharger fails to modify the permit in accordance with Paragraph (1) of Subsection E of 20.6.2.3109 NMAC.

(3) The secretary may require modification, or may terminate a discharge permit for a class I [~~non-hazardous waste injection~~] well, a class III well or other type of well specified in Subsection A of 20.6.2.5101 NMAC, pursuant to the requirements of Subsection I of 20.6.2.5101 NMAC.

F. If a discharge permit expires or is terminated for any reason and the standards of 20.6.2.3103 NMAC are being or will be exceeded, or a toxic pollutant as defined in 20.6.2.7 NMAC is present in ground water, or that the Water Quality Standards for Interstate and Intrastate Streams in New Mexico are being or may be violated, the secretary may require the discharger to submit an abatement plan pursuant to 20.6.2.4104 and Subsection A of 20.6.2.4106 NMAC.

G. At the request of the discharger, a discharge permit may be modified in accordance with 20.6.2.3000 through 20.6.2.3114 NMAC.

H. The secretary shall not approve a proposed discharge plan, modification, or renewal for:

(1) any discharge for which the discharger has not provided a site and method for flow measurement and sampling;

(2) any discharge that will cause any stream standard to be violated;

(3) the discharge of any water contaminant which may result in a hazard to public health; or

(4) a period longer than five years, except that for new discharges, the term of the discharge permit approval shall commence on the date the discharge begins, but in no event shall the term of the approval exceed seven years from the date the permit was issued; for those permits expiring more than five years from the date of issuance, the discharger shall give prior written notification to the department of the date the discharge is to commence; the term of the permit shall not exceed five years from that date.

Section 20.6.2.5001 NMAC is amended to read:

20.6.2.5001 PURPOSE: The purpose of Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC controlling discharges from underground injection control wells is to protect all ground water of the State of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC include notification requirements, and requirements for discharges directly into the subsurface through underground injection control wells.

Section 20.6.2.5002 NMAC is amended to read:

20.6.2.5002 UNDERGROUND INJECTION CONTROL WELL CLASSIFICATIONS:

A. Underground injection control wells include the following.

- (1) Any dug hole or well that is deeper than its largest surface dimension, where the principal function of the hole is emplacement of fluids.
- (2) Any septic tank or cesspool used by generators of hazardous waste, or by owners or operators of hazardous waste management facilities, to dispose of fluids containing hazardous waste.
- (3) Any subsurface distribution system, cesspool or other well which is used for the injection of wastes.

B. Underground injection control wells are classified as follows:

- (1) Class I wells inject fluids beneath the lowermost formation that contains 10,000 milligrams per liter or less TDS. Class I hazardous or radioactive waste injection wells inject fluids containing any hazardous or radioactive waste as defined in 74-4-3 and 74-4A-4 NMSA 1978 or Section 20.4.1.200 NMAC (incorporating 40 C.F.R. § 261.3), including any combination of these wastes. Class I non-hazardous waste injection wells inject non-hazardous and non-radioactive fluids, and they inject naturally-occurring radioactive material (NORM) as provided by Section 20.3.1.1407 NMAC.
- (2) Class II wells inject fluids associated with oil and gas recovery.
- (3) Class III wells inject fluids for extraction of minerals or other natural resources, including sulfur, uranium, metals, salts or potash by in situ extraction. This classification includes only in situ production from ore bodies that have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.
- (4) Class IV wells inject fluids containing any radioactive or hazardous waste as defined in 74-4-3 and 74-4A-4 NMSA 1978, including any combination of these wastes, above or into a formation that contains 10,000 mg/l or less TDS.
- (5) Class V wells inject a variety of fluids and are those wells not included in Class I, II, III or IV. Types of Class V wells include, but are not limited to, the following:

(a) Domestic liquid waste injection wells

(i) domestic liquid waste disposal wells used to inject liquid waste volumes greater than that regulated by 20.7.3 NMAC through subsurface fluid distribution systems or vertical wells;

(ii) septic system wells used to emplace liquid waste volumes greater than that regulated by 20.7.3 NMAC into the subsurface, which are comprised of a septic tank and subsurface fluid distribution system;

(iii) large capacity cesspools used to inject liquid waste volumes greater than that regulated by 20.7.3 NMAC, including drywells that sometimes have an open bottom and/or perforated sides.

(b) Industrial waste injection wells

(i) air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling;

(ii) dry wells used for the injection of wastes into a subsurface formation;

(iii) geothermal energy injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electrical power;

(iv) stormwater drainage wells used to inject storm runoff from the surface into the subsurface;

(v) motor vehicle waste disposal wells that receive or have received fluids from vehicular repair or maintenance activities;

(vi) car wash waste disposal wells used to inject fluids from motor vehicle washing activities.

(c) Mining injection wells

(i) stopes leaching wells used for solution mining of conventional mines;

(ii) brine injection wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(iii) backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether water injected is a radioactive waste or not;

(iv) injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(d) Ground water management injection wells

(i) ground water remediation injection wells used to inject contaminated ground water that has been treated to ground water quality standards;

(ii) in situ ground water remediation wells used to inject a fluid that facilitates vadose zone or ground water remediation.

(iii) recharge wells used to replenish the water in an aquifer, including use to reclaim or improve the quality of existing ground water;

(iv) barrier wells used to inject fluids into ground water to prevent the intrusion of saline or contaminated water into ground water of better quality;

(v) subsidence control wells (not used for purposes of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(vi) wells used in experimental technologies.

(e) Agricultural injection wells - drainage wells used to inject fluids into ground water to prevent the intrusion of saline or contaminated water into ground water of better quality.

Section 20.6.2.5003 NMAC is amended to read:

20.6.2.5003 NOTIFICATION AND GENERAL OPERATION REQUIREMENTS FOR ALL UNDERGROUND INJECTION CONTROL WELLS: All operators of underground injection control wells, except those wells regulated under the Oil and Gas Act, the Geothermal Resources Conservation Act, and the Surface Mining Act, shall:

A. For existing underground injection control wells, submit to the secretary the information enumerated in Subsection C of Section 20.6.2.1201 NMAC of this Part; provided, however, that if the information in Subsection C of Section 20.6.2.1201 NMAC has been previously submitted to the secretary and acknowledged by him, the information need not be resubmitted; and

B. Operate and continue to operate in conformance with Sections 20.6.2.1 through ~~20.6.2.5299~~ 20.6.2.5399 NMAC.

C. For new underground injection control wells, submit to the secretary the information enumerated in Subsection C of Section 20.6.2.1201 NMAC of this Part at least 120 days prior to well construction.

Section 20.6.2.5004 NMAC is amended to read:

20.6.2.5004 PROHIBITED UNDERGROUND INJECTION CONTROL ACTIVITIES AND WELLS:

A. No person shall perform the following underground injection activities nor operate the following underground injection control wells:

(1) The injection of fluids into a motor vehicle waste disposal well is prohibited. Motor vehicle waste disposal wells are prohibited. Any person operating a new motor vehicle waste disposal well (for which construction began after April 5, 2000) must close the well immediately. Any person operating an existing motor vehicle waste disposal well must cease injection immediately and must close the well by December 31, 2002, except as provided in this Subsection.

(2) The injection of fluids into a large capacity cesspool is prohibited. Large capacity cesspools are prohibited. Any person operating a new large capacity cesspool (for which construction began after April 5, 2000) must close the cesspool immediately. Any person operating an existing large capacity cesspool must cease injection immediately and must close the cesspool by December 31, 2002.

(3) The injection of any hazardous or radioactive waste into a well is prohibited, except as provided in Sections 20.6.2.5300 through 20.6.2.5399 NMAC or this Subsection.

(a) Class I [~~hazardous or radioactive waste injection~~] wells are prohibited, except naturally-occurring radioactive material (NORM) regulated under Section 20.3.1.1407 NMAC is allowed as a Class I non-hazardous waste injection well pursuant to Subsection B (1) of Section 20.6.2.5002 NMAC;

(b) Class IV wells are prohibited, except for wells re-injecting treated ground water into the same formation from which it was drawn as part of a removal or remedial action if the injection has prior approval from the Environmental Protection Agency (EPA) or the department under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA).

(4) Barrier wells, drainage wells, recharge wells, return flow wells, and motor vehicle waste disposal wells are prohibited, except when the discharger can demonstrate that the discharge will not adversely affect the health of persons, and

(a) the injection fluid does not contain a contaminant which may cause an exceedance at any place of present or reasonable foreseeable future use of any primary state drinking water maximum contaminant level as specified in the water supply regulations, "Drinking Water" (20 NMAC 7.1) [20.7.10 NMAC], adopted by the Environmental Improvement Board under the Environmental Improvement Act or the standard of Section 20.6.2.3103 NMAC, whichever is more stringent;

(b) the discharger can demonstrate that the injection will result in an overall or net improvement in water quality as determined by the secretary.

B. Closure of prohibited underground injection control wells shall be in accordance with Section 20.6.2.5005 NMAC and Section 20.6.2.5209 NMAC.

Section 20.6.2.5101 NMAC is amended to read:

20.6.2.5101 DISCHARGE PERMIT AND OTHER REQUIREMENTS FOR CLASS I [NON-HAZARDOUS WASTE INJECTION] WELLS AND CLASS III WELLS:

A. Class I [~~non-hazardous waste injection~~] wells and Class III wells must meet the requirements of Sections 20.6.2.5000 through [~~20.6.2.5299~~] 20.6.2.5399 NMAC in addition to other applicable requirements of the commission regulations. The secretary may also require that some Class IV and Class V wells comply with the requirements for Class I [~~non-hazardous waste injection~~] wells in Sections 20.6.2.5000 through [~~20.6.2.5299~~] 20.6.2.5399 NMAC if the secretary determines that the additional requirements are necessary to prevent the movement of water contaminants from a specified injection zone into ground water having 10,000 mg/l or less TDS. No Class I [~~non-hazardous waste injection~~] well or Class III well may be approved which allows for movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC, or pursuant to a temporary designation as provided in Paragraph (2) of Subsection C of Section 20.6.2.5101 NMAC.

B. Operation of a Class I [~~non-hazardous waste injection~~] well or Class III well must be pursuant to a discharge permit meeting the requirements of Sections 20.6.2.3000 through 20.6.2.3999 NMAC and Sections 20.6.2.5000 through [~~20.6.2.5299~~] 20.6.2.5399 NMAC.

C. Discharge permits for Class I [~~non-hazardous waste injection~~] wells, or Class III wells affecting ground water of 10,000 mg/l or less TDS submitted for secretary approval shall:

(1) Receive an aquifer designation if required in Section 20.6.2.5103 NMAC prior to discharge permit issuance; or

(2) For Class III wells only, address the methods or techniques to be used to restore ground water so that upon final termination of operations including restoration efforts, ground water at any place of withdrawal for present or reasonably foreseeable future use will not contain either concentrations in excess of the standards of Section 20.6.2.3103 NMAC or any toxic pollutant. Issuance of a discharge permit or project discharge permit for Class III wells that provides for restoration of ground water in accordance with the requirements of this Subsection shall substitute for the aquifer designation provisions of Section 20.6.2.5103 NMAC. The approval shall constitute a temporary aquifer designation for a mineral bearing or producing aquifer, or portion thereof, to allow injection as provided for in the discharge permit. Such temporary designation shall expire upon final termination of operations including restoration efforts.

D. The exemptions from the discharge permit requirement listed in Section 20.6.2.3105 NMAC do not apply to underground injection control wells except as provided below:

(1) Wells regulated by the Oil Conservation Division under the exclusive authority granted under Section 70-2-12 NMSA 1978 or under other Sections of the "Oil and Gas Act";

(2) Wells regulated by the Oil Conservation Division under the "Geothermal Resources Act";

(3) Wells regulated by the New Mexico Coal Surface Mining Bureau under the "Surface Mining Act";

(4) Wells for the disposal of effluent from systems which are regulated under the "Liquid Waste Disposal and Treatment" regulations (20 NMAC 7.3) [20.7.3 NMAC] adopted by the Environmental Improvement Board under the "Environmental Improvement Act".

E. Project permits for Class III wells.

(1) The secretary may consider a project discharge permit for Class III wells, if the wells are:

(a) Within the same well field, facility site or similar unit,

(b) Within the same aquifer and ore deposit,

(c) Of similar construction,

(d) Of the same purpose, and

(e) Operated by a single owner or operator.

(2) A project discharge permit does not allow the discharger to commence injection in any individual operational area until the secretary approves an application for injection in that operational area (operational area approval).

(3) A project discharge permit shall:

(a) Specify the approximate locations and number of wells for which operational area approvals are or will be sought with approximate time frames for operation and restoration (if restoration is required) of each area; and

(b) Provide the information required under the following Sections of this Part, except for such additional site-specific information as needed to evaluate applications for individual operational area approvals: Subsection C of Section 20.6.2.3106, Sections 20.6.2.3107, 20.6.2.5204 through 20.6.2.5209, and Subsection B of Section 20.6.2.5210 NMAC.

(4) Applications for individual operational area approval shall include the following:

(a) Site-specific information demonstrating that the requirements of this Part are met, and

(b) Information required under Sections 20.6.2.5202 through 20.6.2.5210 NMAC and not previously provided pursuant to Subparagraph (b) of Paragraph (3) of Subsection E of this Section.

(5) Applications for project discharge permits and for operational area approval shall be processed in accordance with the same procedures provided for discharge permits under Sections 20.6.2.3000 through 20.6.2.3114 NMAC, allowing for public notice on the project discharge permit and on each application for operational area approval pursuant to Section 20.6.2.3108 NMAC with opportunity for public hearing prior to approval or disapproval.

(6) The discharger shall comply with additional requirements that may be imposed by the secretary pursuant to this Part on wells in each new operational area.

F. If the holder of a discharge permit for a Class I [~~non-hazardous waste injection~~] well, or Class III well submits an application for discharge permit renewal at least 120 days before discharge permit expiration, and the discharger is in compliance with his discharge permit on the date of its expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved. An application for discharge permit renewal must include and adequately address all of the information necessary for evaluation of a new discharge permit. Previously submitted materials may be included by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

G. Discharge Permit Signatory Requirements: No discharge permit for a Class I [~~non-hazardous waste injection~~] well or Class III well may be issued unless:

(1) The application for a discharge permit has been signed as follows:

(a) For a corporation: by a principal executive officer of at least the level of vice-president, or a representative who performs similar policy-making functions for the corporation who has authority to sign for the corporation; or

(b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(c) For a municipality, state, federal, or other public agency: by either a principal executive officer who has authority to sign for the agency, or a ranking elected official; and

(2) All reports required by Class I hazardous waste injection well permits and other information requested by the Director pursuant to a Class I hazardous waste injection well permit shall be signed by a person described in paragraph (1) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in paragraph (1) of this section;

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(c) The written authorization is submitted to the Director.

(3) Changes to authorization. If an authorization under paragraph (2) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (2) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

~~[(2)]~~ (4) The signature on an application, report or other information requested by the Director must be [is] directly preceded by the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

H. Transfer of Class I non-hazardous waste injection well and Class III well Discharge Permits.

(1) The transfer provisions of Section 20.6.2.3111 NMAC do not apply to a discharge permit for a Class I non-hazardous waste injection well or Class III well.

(2) A Class I non-hazardous waste injection well or Class III well discharge permit may be transferred if:

(a) The secretary receives written notice 30 days prior to the transfer date; and

(b) The secretary does not object prior to the proposed transfer date. The secretary may require modification of the discharge permit as a condition of transfer, and may require demonstration of adequate financial responsibility.

(3) The written notice required by Subparagraph (b) of Paragraph (2) of Subsection I above shall:

(a) Have been signed by the discharger and the succeeding discharger, including an acknowledgement that the succeeding discharger shall be responsible for compliance with the discharge permit upon taking possession of the facility; and

(b) Set a specific date for transfer of discharge permit responsibility, coverage and liability; and

(c) Include information relating to the succeeding discharger's financial responsibility required by Paragraph (17) of Subsection B of Section 20.6.2.5210 NMAC.

I. Modification or Termination of a Discharge Permit for a Class I non-hazardous waste injection well or Class III well: If data submitted pursuant to any

monitoring requirements specified in the discharge permit or other information available to the secretary indicate that this Part are being or may be violated, the secretary may require modification or, if it is determined by the secretary that the modification may not be adequate, may terminate a discharge permit for a Class I [~~non-hazardous-waste-injection~~] Well, or Class III well or well field, that was approved pursuant to the requirements of this under Sections 20.6.2.5000 through [~~20.6.2.5299~~] 20.6.2.5399 NMAC for the following causes:

- (1) Noncompliance by the discharger with any condition of the discharge permit; or
- (2) The discharger's failure in the discharge permit application or during the discharge permit review process to disclose fully all relevant facts, or the discharger's misrepresentation of any relevant facts at any time; or
- (3) A determination that the permitted activity may cause a hazard to public health or undue risk to property and can only be regulated to acceptable levels by discharge permit modification or termination.

Section 20.6.2.5102 NMAC is amended to read:

20.6.2.5102 PRE-CONSTRUCTION REQUIREMENTS FOR CLASS I [~~NON-HAZARDOUS-WASTE-INJECTION~~] WELLS AND CLASS III WELLS:

A. Discharge Permit Requirement for Class I [~~non-hazardous-waste-injection~~] wells.

(1) Prior to construction of a Class I [~~non-hazardous-waste-injection~~] well or conversion of an existing well to a Class I [~~non-hazardous-waste-injection~~] well, an approved discharge permit is required that incorporates the requirements of Sections 20.6.2.5000 through [~~20.6.2.5299~~] 20.6.2.5399 NMAC, except Subsection C of Section 20.6.2.5210 NMAC. As a condition of discharge permit issuance, the operation of the Class I [~~non-hazardous-waste-injection~~] well under the discharge permit will not be authorized until the secretary has:

(a) Reviewed the information submitted for his consideration pursuant to Subsection C of Section 20.6.2.5210 NMAC, and

(b) Determined that the information submitted demonstrates that the operation will be in compliance with this Part and the discharge permit.

(2) If conditions encountered during construction represent a substantial change which could adversely impact ground water quality from those anticipated in the discharge permit, the secretary shall require a discharge permit modification or may terminate the discharge permit pursuant to Subsection I of Section 20.6.2.5101 NMAC, and the secretary shall publish public notice and allow for comments and hearing in accordance with Section 20.6.2.3108 NMAC.

B. Notification Requirement for Class III wells.

(1) The discharger shall notify the secretary in writing prior to the commencement of drilling or construction of wells which are expected to be used for in situ extraction, unless the discharger has previously received a discharge permit or project discharge permit for the Class III well operation.

(a) Any person, proposing to drill or construct a new Class III well or well field, or convert an existing well to a Class III well, shall file plans, specifications and pertinent documents regarding such construction or conversion, with the Ground Water Quality Bureau of the Environment Department.

(b) Plans, specifications, and pertinent documents required by this Section, if pertaining to geothermal installations, carbon dioxide facilities, or facilities for the exploration, production, refinement or pipeline transmission of oil and natural gas, shall be filed instead with the Oil Conservation Division.

(c) Plans, specifications and pertinent documents required to be filed under this Section must be filed 90 days prior to the planned commencement of construction or conversion.

(d) The following plans, specifications and pertinent documents shall be provided with the notification:

(i) Information required in Subsection C of Section 20.6.2.3106 NMAC;

(ii) A map showing the Class III wells which are to be constructed. The map must also show, in so far as is known or is reasonably available from the public records, the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells and other pertinent surface features, including residences and roads, that are within the expected area of review (Section 20.6.2.5202 NMAC) of the Class III well or well field perimeter;

(iii) Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site, the position of such ground water within this area relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation;

(iv) Maps and cross-sections detailing the geology and geologic structure of the local area, including faults, if known or suspected;

(v) The proposed formation testing program to obtain an analysis or description, whichever the secretary requires, of the chemical, physical, and radiological characteristics of, and other information on, the receiving formation;

(vi) The proposed stimulation program;

- (vii) The proposed injection procedure;
- (viii) Schematic or other appropriate drawings of the surface and subsurface construction details of the well;
- (ix) Proposed construction procedures, including a cementing and casing program, logging procedures, deviation checks, and a drilling, testing, and coring program;
- (x) Information, as described in Paragraph (17) of Subsection B of Section 20.6.2.5210 NMAC, showing the ability of the discharger to undertake measures necessary to prevent groundwater contamination; and
- (xi) A plugging and abandonment plan showing that the requirements of Subsections B, C and D of Section 20.6.2.5209 NMAC will be met.

(2) Prior to construction, the discharger shall have received written notice from the secretary that the information submitted under item 10 of Subparagraph (d) of Paragraph (1) of Subsection B of Section 20.6.2.5102 NMAC is acceptable. Within 30 days of submission of the above information the secretary shall notify the discharger that the information submitted is acceptable or unacceptable.

(3) Prior to construction, the secretary shall review said plans, specifications and pertinent documents and shall comment upon their adequacy of design for the intended purpose and their compliance with pertinent Sections of this Part. Review of plans, specifications and pertinent documents shall be based on the criteria contained in Section 20.6.2.5205, Subsection E of Section 20.6.2.5209, and Subparagraph (d) of Paragraph (1) of Subsection B of Section 20.6.2.5102 NMAC.

(4) Within thirty (30) days of receipt, the secretary shall issue public notice, consistent with Subsection B of Section 20.6.2.3108 NMAC, that notification was submitted pursuant to Subsection B of Section 20.6.2.5102 NMAC. The secretary shall allow a period of at least thirty (30) days during which comments may be submitted. The public notice shall include:

- (a) Name and address of the proposed discharger;
- (b) Location of the discharge;
- (c) Brief description of the proposed activities;
- (d) Statement of the public comment period; and
- (e) Address and telephone number at which interested persons may obtain further information.

(5) The secretary shall comment in writing upon the plans and specifications within sixty (60) days of their receipt by the secretary.

(6) Within thirty (30) days after completion, the discharger shall submit written notice to the secretary that the construction or conversion was completed in accordance with submitted plans and specifications, or shall submit as-built plans detailing changes from the originally submitted plans and specifications.

(7) In the event a discharge permit application is not submitted or approved, all wells which may cause groundwater contamination shall be plugged and abandoned by the applicant pursuant to the plugging and abandonment plan submitted in the notification; these measures shall be consistent with any comments made by the secretary in his review. If the wells are not to be permanently abandoned and the discharger demonstrates that plugging at this time is unnecessary to prevent groundwater contamination, plugging pursuant to the notification is not required. Financial responsibility established pursuant to Sections 20.6.2.5000 through 20.6.2.5299 NMAC will remain in effect until the discharger permanently abandons and plugs the wells in accordance with the plugging and abandonment plan.

Section 20.6.2.5103 NMAC is amended to read:

20.6.2.5103 DESIGNATED AQUIFERS FOR CLASS I [~~NON-HAZARDOUS WASTE INJECTION~~] WELLS AND CLASS III WELLS:

A. Any person may file a written petition with the secretary seeking commission consideration of certain aquifers or portions of aquifers as "designated aquifers". The purpose of aquifer designation is:

(1) For Class I [~~non-hazardous waste injection~~] wells, to allow as a result of injection, the addition of water contaminants into ground water, which before initiation of injection has a concentration between 5,000 and 10,000 mg/l TDS; or

(2) For Class III wells, to allow as a result of injection, the addition of water contaminants into ground water, which before initiation of injection has a concentration between 5,000 and 10,000 mg/l TDS, and not provide for restoration or complete restoration of that ground water pursuant to Paragraph (2) of Subsection C of Section 20.6.2.5101 NMAC.

B. The applicant shall identify (by narrative description, illustrations, maps or other means) and describe such aquifers, in geologic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite.

C. An aquifer or portion of an aquifer may be considered for aquifer designation under Subsection A. of this Section, if the applicant demonstrates that the following criteria are met:

(1) It is not currently used as a domestic or agricultural water supply; and

(2) There is no reasonable relationship between the economic and social costs of failure to designate and benefits to be obtained from its use as a domestic or agricultural water supply because:

(a) It is situated at a depth or location which makes recovery of water for drinking or agricultural purposes economically or technologically impractical at present and in the reasonably foreseeable future; or

(b) It is already so contaminated that it would be economically or technologically impractical to render that water fit for human consumption or agricultural use at present and in the reasonably foreseeable future.

D. The petition shall state the extent to which injection would add water contaminants to ground water and why the proposed aquifer designation should be approved. For Class III wells, the applicant shall state whether and to what extent restoration will be carried out.

E. The secretary shall either transmit the petition to the commission within sixty (60) days recommending that a public hearing be held, or refuse to transmit the petition and notify the applicant in writing citing reasons for such refusal.

F. If the secretary transmits the petition to the commission, the commission shall review the petition and determine to either grant or deny a public hearing on the petition. If the commission grants a public hearing, it shall issue a public notice, including the following information:

- (1) Name and address of the applicant;
- (2) Location, depth, TDS, areal extent, general description and common name or other identification of the aquifer for which designation is sought;
- (3) Nature of injection and extent to which the injection will add water contaminants to ground water; and
- (4) Address and telephone number at which interested persons may obtain further information.

G. If the secretary refuses to transmit the petition to the commission, then the applicant may appeal the secretary's disapproval of the proposed aquifer designation to the commission within thirty (30) days, and address the issue of whether the proposed aquifer designation meets the criteria of Subsections A, B, C, and D of this Section.

H. If the commission grants a public hearing, the hearing shall be held in accordance with the provisions of Section 74-6-6, NMSA 1978.

I. If the commission does not grant a public hearing on the petition, the aquifer designation shall not be approved.

J. After public hearing and consideration of all facts and circumstances included in Section 74-6-4(D), NMSA 1978, the commission may authorize the secretary to approve a proposed designated aquifer if the commission determines that the criteria of Subsection A, B, C, and D of this section are met.

K. Approval of a designated aquifer petition does not alleviate the applicant from complying with other Sections of Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC, or of the responsibility for protection, pursuant to this part, of other nondesignated aquifers containing ground water having 10,000 mg/l or less TDS.

L. Persons other than the petitioner may add water contaminants as a result of injection into an aquifer designated for injection, provided the person receives a discharge permit pursuant to the requirements of Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC. Persons, other than the original petitioner or his designee, requesting addition of water contaminants as a result of injection into aquifers previously designated only for injection with partial restoration shall file a petition with the commission pursuant to the requirements of Subsections A, B, C, and D of this Section.

Section 20.6.2.5104 NMAC is amended to read:

20.6.2.5104 WAIVER OF REQUIREMENT BY SECRETARY FOR CLASS I [~~NON-HAZARDOUS WASTE INJECTION~~] WELLS AND CLASS III WELLS:

A. Where a Class I [~~non-hazardous waste injection~~] well or a Class III well or well field, does not penetrate, or inject into or above, and which will not affect, ground water having 10,000 mg/l of less TDS, the secretary may:

(1) Issue a discharge permit for a well or well field with less stringent requirements for area of review, construction, mechanical integrity, operation, monitoring, and reporting than required by Sections 20.6.2.5000 through ~~[20.6.2.5299]~~ 20.6.2.5399 NMAC; or

(2) For Class III wells only, issue a discharge permit pursuant to the requirements of Sections 20.6.2.3000 through 20.6.2.3114 NMAC.

B. Authorization of a reduction in requirements under Subsection A of this Section shall be granted only if injection will not result in an increased risk of movement of fluids into ground water having 10,000 mg/l or less TDS, except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC.

Section 20.6.2.5200 NMAC is amended to read:

20.6.2.5200 TECHNICAL CRITERIA AND PERFORMANCE STANDARDS FOR CLASS I [~~NON-HAZARDOUS WASTE INJECTION~~] WELLS AND CLASS III WELLS:

Section 20.6.2.5201 NMAC is amended to read:

20.6.2.5201 PURPOSE: Sections 20.6.2.5200 through 20.6.2.5210 NMAC provide the technical criteria and performance standards for Class I [~~non-hazardous waste injection~~] wells and Class III wells. (Sections 20.6.2.5300 through 20.6.2.5399 NMAC provide certain additional technical and performance standards for Class I hazardous waste injection wells.)

Section 20.6.2.5204 NMAC is amended to read:

20.6.2.5204 MECHANICAL INTEGRITY FOR CLASS I [~~NON-HAZARDOUS WASTE INJECTION~~] WELLS AND CLASS III WELLS:

A. A Class I [~~non-hazardous waste injection~~] well or Class III well has mechanical integrity if there is no detectable leak in the casing, tubing or packer which the secretary considers to be significant at maximum operating temperature and pressure; and no detectable conduit for fluid movement out of the injection zone through the well bore or vertical channels adjacent to the well bore which the secretary considers to be significant.

B. Prior to well injection and at least once every five years or more frequently as the secretary may require for good cause during the life of the well, the discharger must demonstrate that a Class I [~~non-hazardous waste injection~~] well or Class III well has mechanical integrity. The demonstration shall be made through use of the following tests:

- (1) For evaluation of leaks,
 - (a) Monitoring of annulus pressure (after an initial pressure test with liquid or gas before operation commences), or
 - (b) Pressure test with liquid or gas;
- (2) For determination of conduits for fluid movement,
 - (a) The results of a temperature or noise log, or
 - (b) Where the nature of the casing used for Class III wells precludes use of these logs, cementing records and an appropriate monitoring program as the secretary may require which will demonstrate the presence of adequate cement to prevent such movement;
- (3) Other appropriate tests as the secretary may require.

C. The secretary may consider the use by the discharger of equivalent alternative test methods to determine mechanical integrity. The discharger shall submit information on the proposed test and all technical data supporting its use. The secretary may approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. For Class III wells this demonstration may be made by submission of adequate monitoring data after the initial mechanical integrity tests.

D. In conducting and evaluating the tests enumerated in this Section or others to be allowed by the secretary, the discharger and the secretary shall apply methods and standards generally accepted in the affected industry. When the discharger reports the results of mechanical integrity tests to the secretary, he shall include a description of the test(s), the method(s) used, and the test results. In making an evaluation, the secretary's review shall include monitoring and other test data submitted since the previous evaluation.

Section 20.6.2.5210 NMAC is amended to read:

20.6.2.5210 INFORMATION TO BE CONSIDERED BY THE SECRETARY FOR CLASS I [~~NON-HAZARDOUS WASTE INJECTION~~] WELLS AND CLASS III WELLS:

A. This Section sets forth the information to be considered by the secretary in authorizing construction and use of a Class I [~~non-hazardous waste injection~~] well or Class III well or well field. Certain maps, cross-sections, tabulations of all wells within the area of review, and other data may be included in the discharge permit application submittal by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved.

B. Prior to the issuance of a discharge permit or project discharge permit allowing construction of a new Class I [~~non-hazardous waste injection~~] well, operation of an existing Class I non-hazardous waste injection well, or operation of a new or existing Class III well or well field, or conversion of any well to injection use, the secretary shall consider the following:

- (1) Information required in Subsection C of Section 20.6.2.3106 NMAC;
- (2) A map showing the Class I non-hazardous waste injection well, or Class III well or well fields, for which approval is sought and the applicable area of review. Within the area of review, the map must show, in so far as is known or is reasonably available from the public records, the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells and other pertinent surface features, including residences and roads;
- (3) A tabulation of data on all wells within the area of review which may penetrate into the proposed injection zone. Such data shall include, as available, a description of each well's type, the distance and direction to the injection well or well field, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the secretary may require;
- (4) For wells within the area of review which penetrate the injection zone, but are not properly completed or plugged, the corrective action proposed to be taken under Section 20.6.2.5203 NMAC;
- (5) Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within the area of review, the position of such ground water within the area of review relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation;
- (6) Maps and cross-sections detailing the geology and geologic structure of the local area, including faults, if known or suspected;
- (7) Generalized maps and cross-sections illustrating the regional geologic setting;
- (8) Proposed operating data, including:

- be injected;
- (a) Average and maximum daily flow rate and volume of the fluid to be injected;
 - (b) Average and maximum injection pressure;
 - (c) Source of injection fluids and an analysis or description, whichever the secretary requires, of their chemical, physical, radiological and biological characteristics;

(9) Results of the formation testing program to obtain an analysis or description, whichever the secretary requires, of the chemical, physical, and radiological characteristics of, and other information on, the receiving formation, provided that the secretary may issue a conditional approval of a discharge permit if he finds that further formation testing is necessary for final approval;

(10) Expected pressure changes, native fluid displacement, and direction of movement of the injected fluid;

(11) Proposed stimulation program;

(12) Proposed or actual injection procedure;

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

(14) Construction procedures, including a cementing and casing program, logging procedures, deviation checks, and a drilling, testing, and coring program;

(15) Contingency plans to cope with all shut-ins or well failures so as to prevent movement of fluids into ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to Section 20.6.2.5103 NMAC;

(16) Plans, including maps, for meeting the monitoring requirements of Section 20.6.2.5207 NMAC; and

(17) The ability of the discharger to undertake measures necessary to prevent contamination of ground water having 10,000 mg/l or less TDS after the cessation of operation, including the proper closing, plugging and abandonment of a well, ground water restoration if applicable, and any post-operational monitoring as may be needed. Methods by which the discharger shall demonstrate the ability to undertake these measures shall include submission of a surety bond or other adequate assurances, such as financial statements or other materials acceptable to the secretary, such as: (1) a surety bond; (2) a trust fund with a New Mexico bank in the name of the State of New Mexico, with the State as Beneficiary; (3) a non-renewable letter of credit made out to the State of New Mexico; (4) liability insurance specifically covering the contingencies listed in this paragraph; or (5) a performance bond, generally in conjunction with another type of financial assurance. Such bond or materials shall be approved and executed prior to discharge permit issuance and shall become effective upon commencement of construction. If an adequate bond is posted by the discharger to a federal or another state agency, and this bond covers all of the measures referred to above, the secretary

shall consider this bond as satisfying the bonding requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC wholly or in part, depending upon the extent to which such bond is adequate to ensure that the discharger will fully perform the measures required hereinabove.

C. Prior to the secretary's approval that allows the operation of a new or existing Class I [~~non-hazardous waste injection~~] well or Class III well or well field, the secretary shall consider the following:

- (1) Update of pertinent information required under Subsection B of Section 20.6.2.5210 NMAC;
- (2) All available logging and testing program data on the well;
- (3) The demonstration of mechanical integrity pursuant to Section 20.6.2.5204 NMAC;
- (4) The anticipated maximum pressure and flow rate at which the permittee will operate;
- (5) The results of the formation testing program;
- (6) The physical, chemical, and biological interactions between the injected fluids and fluids in the injection zone, and minerals in both the injection zone and the confining zone; and
- (7) The status of corrective action on defective wells in the area of review.

II. Proposed New UIC Class I Hazardous Waste Injection Well Provisions.

20.6.2.5300 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.

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

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.

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.

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]

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

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 Subsection A(3)(b) of Section 20.6.2.5004 NMAC.)

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 Section 20.6.2.5102 NMAC within 6 months after the approval or promulgation of the State UIC program.

C. *Requirements.* In addition to complying with the applicable requirements of this Part, the owner or operator of each facility meeting the requirements of Subsection 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.

(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).

(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).

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

(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)).

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

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

(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).

(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 Section 20.6.2.5209 NMAC.

20.6.2.5311 – 20.6.2.5319: [RESERVED]

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 CONDITIONS APPLICABLE TO ALL PERMITS: The following conditions apply to all Class I hazardous 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 must be given in the permit.

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 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 a variance issued under Section 20.6.2.1210 NMAC.

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 permit renewal pursuant to Subpart F of Section 20.6.2.3106 NMAC.

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. *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. *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. *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. *Property rights.* This permit does not convey any property rights of any sort, or any exclusive privilege.

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.

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, 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:

(a) 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

(b) the nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under Subsection A(6) of Section 20.6.2.5342 NMAC, or under Sections 20.6.2.5351 through 20.6.2.5363 NMAC as appropriate. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.

(3) Records of monitoring information shall include:

- (a) the date, exact place, and time of sampling or measurements;
- (b) the individual(s) who performed the sampling or measurements;
- (c) the date(s) analyses were performed;
- (d) the individual(s) who performed the analyses;
- (e) the analytical techniques or methods used; and
- (f) the results of such analyses.

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

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

(4) *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.

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

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

(b) 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. 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; 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.

(6) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under Subsections M(3), (4), and (5) of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in Subsection M(5) of this Section.

(7) *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.

N. *Requirements prior to commencing injection.* 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) (a) the Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

(b) the permittee has not received notice 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 Subsection N(1) of this Section, 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.

O. The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well.

P. The permittee shall meet the requirements of Section 20.6.2.5209 NMAC.

Q. *Plugging and abandonment report.* 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 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 Director; or

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

R. *Duty to establish and maintain mechanical integrity.*

(1) The permittee shall meet the requirements of Section 20.6.2.5204 NMAC.

(2) When the Director determines that a Class I hazardous well lacks mechanical integrity pursuant to Section 20.6.2.5204 NMAC, 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 NMAC 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 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 NMAC.

(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 NMAC 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.

S. *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 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.

20.6.2.5342 ESTABLISHING PERMIT CONDITIONS:

A. In addition to conditions required in Section 20.6.2.5341 NMAC, the Director shall establish conditions, as required on a case-by-case basis under Subsection H of Section 20.6.2.3109 NMAC (duration of permits), Subsection A of Section 20.3.2.5343 NMAC (schedules of compliance), and Section 20.3.2.5344 NMAC. Permits for owners or operators of hazardous waste injection wells shall also include conditions meeting the requirements of Section 20.6.2.5310 NMAC (requirements for wells injecting hazardous waste), Subsections A(1) and A(2) of this section, and Sections 20.6.2.5351 through 20.6.2.5363 NMAC.

(1) *Financial responsibility.*

(a) 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:

(i) 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, and Section 20.6.2.5209 NMAC, and submitted a plugging and abandonment report pursuant to Subsection P of Section 20.6.2.5341 NMAC; or

(ii) the well has been converted in compliance with the requirements of Subsection N of Section 20.6.2.5341 NMAC; or

(iii) 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.

(b) The owner or operator of a well injecting hazardous waste must comply with the financial responsibility requirements of Section 20.6.2.5320 NMAC.

(2) *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.

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 this part.

(2) An applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. An applicable

requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit.

(3) New or renewed permits, and to the extent allowed under Section 20.6.2.3109 NMAC modified or terminated permits, shall incorporate each of the applicable requirements referenced in Section 20.6.2.5342 NMAC.

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 SCHEDULE OF COMPLIANCE:

A. *General.* The permit may, when appropriate, specify a schedule of compliance leading to compliance with this part.

(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 B(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.

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

(b) 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 A(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. *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:

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

(b) 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:

(a) both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;

(b) one schedule shall lead to timely compliance with applicable requirements;

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

(d) each permit containing two schedules shall include a requirement that after the permittee has made a final decision under Subsection B(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.

20.6.2.5344 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. Reporting shall be no less frequent than specified in the above regulations.

20.6.2.5345 – 20.6.2.5350: [RESERVED]

20.6.2.5351 APPLICABILITY: Sections 20.6.2.5351 through 20.6.2.5363 NMAC establish criteria and standards for underground injection control programs to regulate Class I hazardous

waste injection wells. Unless otherwise noted in these Sections supplement the requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC and apply instead of any inconsistent requirements for Class I non-hazardous waste injection wells.

20.6.2.5352 MINIMUM CRITERIA FOR SITING:

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.

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

(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.

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; and

(2) the confining zone:

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

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

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 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 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, considering density effects, injection pressures and any significant pumping in the overlying groundwater of the State of New Mexico; or

(3) there is no groundwater of the State of New Mexico present.

(4) The Director may approve a site which does not meet the requirements in Subsections 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.

20.6.2.5353 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. The area of review for Class I hazardous waste injection 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 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.

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. 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:

(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. 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. 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 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.

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 C 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 D(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. 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. In determining the adequacy of corrective action proposed by the applicant under Subsection C of this section and in determining the additional steps needed to prevent fluid movement into and between groundwater of the State of New Mexico, 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;
- (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.

20.6.2.5355 CONSTRUCTION REQUIREMENTS:

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 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.

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, or comparable standards acceptable to the Director.

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, 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:

- (a) depth to the injection zone;
- (b) injection pressure, external pressure, internal pressure and axial loading;
- (c) hole size;
- (d) size and grade of all casing strings (wall thickness, diameter, nominal weight, length, joint specification and construction material);
- (e) corrosiveness of injected fluid, formation fluids and temperature;
- (f) lithology of injection and confining zones;
- (g) type or grade of cement; and
- (h) 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 groundwater of the State of New Mexico 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:

(a) of sufficient quantity and quality to withstand the maximum operating pressure; and

(b) 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:

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

(b) 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 must be of sufficient quality and quantity to maintain integrity over the design life of the well.

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:

(a) depth of setting;

(b) characteristics of injection fluid (chemical content, corrosiveness, temperature and density);

(c) injection pressure;

(d) annular pressure;

- (e) rate (intermittent or continuous), temperature and volume of injected fluid;
- (f) size of casing; and
- (g) 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:

- (a) the operator demonstrates that the seal will provide a level of protection comparable to a packer;
- (b) 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;
- (c) the permit contains specific limitations on variations in annular pressure and loss of annular fluid;
- (d) the design and construction of the well allows continuous monitoring of the annular pressure and mass balance of annular fluid; and
- (e) 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.

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

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, 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 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 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:

- (a) upon installation of the surface casing:
 - (i) resistivity, spontaneous potential, and caliper logs before the casing is installed; and
 - (ii) a cement bond and variable density log, and a temperature log after the casing is set and cemented;
- (b) upon installation of the long string casing:
 - (i) resistivity, spontaneous potential, porosity, caliper, gamma ray, and fracture finder logs before the casing is installed; and
 - (ii) as cement bond and variable density log, and a temperature log after the casing is set and cemented.
- (c) 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:
 - (a) a pressure test with liquid or gas;
 - (b) a radioactive tracer survey;
 - (c) a temperature or noise log;
 - (d) a casing inspection log, if required by the Director; and
 - (e) any other test required by the Director.

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. The fluid temperature, pH, conductivity, pressure and the static fluid level of the injection zone must be recorded.

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. 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. The Director shall have the opportunity to witness all logging and testing required by Sections 20.6.2.5351 through 5363 NMAC. 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 OPERATING REQUIREMENTS:

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.

B. Injection between the outermost casing protecting groundwater of the State of New Mexico and the well bore is prohibited.

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.

D. The owner or operator shall maintain mechanical integrity of the injection well at all times.

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. 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. 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 F 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. If a loss of mechanical integrity is discovered pursuant to Subsection G 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. 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:

(a) notify the Director within 24 hours of obtaining such evidence;

(b) take all necessary steps to identify and characterize the extent of any release;

- (c) comply with any remediation plan specified by the Director;
- (d) implement any remediation plan approved by the Director; and
- (e) where such release is into groundwater of the State of New Mexico 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.

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

20.6.2.5358 TESTING AND MONITORING REQUIREMENTS: Testing and monitoring requirements shall at a minimum include:

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:

- (a) the parameters for which the waste will be analyzed and the rationale for the selection of these parameters;
- (b) the test methods that will be used to test for these parameters; and
- (c) 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. 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.

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.

(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:

(a) placing coupons of the well construction materials in contact with the waste stream; or

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

(c) using an alternative method approved by the Director.

(3) If a corrosion monitoring program is required:

(a) 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

(b) 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.

D. *Periodic mechanical integrity testing.* In fulfilling the requirements of Section 20.6.2.5204 NMAC, 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) may also be used.

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 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:

(a) 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;

(b) 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;

(c) periodic monitoring of the ground water quality in the first aquifer overlying the injection zone;

(d) periodic monitoring of the ground water quality in the lowermost groundwater of the State of New Mexico; and

(e) any additional monitoring necessary to determine whether fluids are moving into or between groundwater of the State of New Mexico.

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.

20.6.2.5359 REPORTING REQUIREMENTS: Reporting requirements shall, at a minimum, include:

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 and the response taken;

(4) the total volume of fluid injected;

(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.

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.

20.6.2.5360 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.

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 are met:

(1) information required in Section 20.6.2.5102 NMAC;

(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 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 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;

(a) average and maximum daily rate and volume of the fluid to be injected; and

(b) 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;

(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 Mexico;

(14) plans (including maps) for meeting monitoring requirements of Section 20.6.2.5358 NMAC;

(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;

(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 NMAC, that the applicant has the resources necessary to close, plug or abandon the well and for post-closure care.

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;
- (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;
- (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;
- (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; and
- (8) the status of corrective action on wells identified in Subsection A(15) of Section 20.6.2.5360 NMAC.

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.

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 CLOSURE:

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 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 notice of closure is required to be submitted to the Director under Subsection B of this section.

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

(4) The plan shall include the following information:

- (a) the type and number of plugs to be used;
- (b) the placement of each plug including the elevation of the top and bottom of each plug;
- (c) the type and grade and quantity of material to be used in plugging;
- (d) the method of placement of the plugs;
- (e) any proposed test or measure to be made;
- (f) the amount, size, and location (by depth) of casing and any other materials to be left in the well;
- (g) the method and location where casing is to be parted, if applicable;
- (h) the procedure to be used to meet the requirements of Subsection D(5) of this section;
- (i) the estimated cost of closure; and
- (j) 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.

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

(a) has received authorization from the Director; and

(b) 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 during the period of temporary disuse. These 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. *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. *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. *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 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:

(a) pressure tests with liquid or gas;

- (b) radioactive tracer surveys;
 - (c) noise, temperature, pipe evaluation, or cement bond logs; and
 - (d) any other test required by the Director.
- (3) Prior to well closure, the well shall be flushed with a buffer fluid.
- (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.
- (5) Placement of the cement plugs shall be accomplished by one of the following:
- (a) the Balance Method;
 - (b) the Dump Bailer Method;
 - (c) the Two-Plug Method; or
 - (d) 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).

20.6.2.5362 POST-CLOSURE CARE:

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 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.

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

(4) The plan shall include the following information:

(a) the pressure in the injection zone before injection began;

(b) the anticipated pressure in the injection zone at the time of closure;

(c) 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;

(d) predicted position of the waste front at closure;

(e) the status of any cleanups required under Section 20.6.2.5354 NMAC; and

(f) 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.

B. The owner or operator shall:

(1) Continue and complete any cleanup action required under Section 20.6.2.5354 NMAC, 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. 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.

(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 Director.

(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.

(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.

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;
- (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.

20.6.2.5363 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, 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. 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 – 20.6.2.5370: [RESERVED]

20.6.2.5371 ADOPTION OF 40 CFR PART 148 (HAZARDOUS WASTE INJECTION RESTRICTIONS). Except as otherwise provided, the regulations of the EPA set forth in 40 CFR Part 148 [insert current effective date] are hereby incorporated by reference.

20.6.2.5372 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 used in 40 CFR Part 148 have the meanings set forth herein when the terms are used in this part:

- (1) “administrator” means the Director of the New Mexico energy, minerals and natural resources department, oil conservation division or his/her designee.

B. The following provisions of 40 CFR Part 148 are modified in Section 20.6.2.5381 NMAC:

- (1) the cross reference to 40 C.F.R. § 146.6(a) in Section 148.1(d)(1) shall be replaced by a cross reference to Subsection B(1) of Section 20.6.2.5002 NMAC;

(2) the cross reference to § 146.63 in Section 148.20(a)(2) shall be replaced by a cross reference to Section 20.6.2.5353 NMAC;

(3) the cross reference to § 146.64 in Section 148.20(a)(2) shall be replaced by a cross reference to Section 20.6.2.5354 NMAC;

(4) the cross reference to § 124.10 in Section 148.22(b) shall be replaced by a cross reference to Section 20.6.2.3108 NMAC;

(5) the cross reference to § 146.67(i) in Section 148.24(b)(2)(ii) shall be replaced by a cross reference to Subsection I of Section 20.6.2.5357 NMAC;

(6) the cross reference to § 124.5 in Section 148.24(c) shall be replaced by a cross reference to Sections 20.6.2.3108 through 20.6.2.3112 NMAC;

(7) references to “Underground Source of Drinking Water” or “USDW” shall be replaced with references to “groundwater of the State of New Mexico” as defined in 20.6.2.5301 NMAC.

C. The following provisions of 40 CFR Part 148, Subpart B are omitted from Section 20.6.2.5371 NMAC:

(1) Section 148.15(c);

(2) Section 148.16(d).

