

**BEFORE THE  
ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

<b>IN THE MATTER OF REVISIONS TO</b>	)	
<b>WATER QUALITY RULES AND</b>	)	<b>STATEMENT OF</b>
<b>REGULATIONS, CHAPTER 24</b>	)	<b>PRINCIPAL REASONS</b>
<b>CLASS VI INJECTION WELLS</b>	)	<b>FOR ADOPTION</b>
<b>AND FACILITIES</b>	)	

**INTRODUCTION**

The Environmental Quality Council, pursuant to the authority vested in it by the Wyoming Statutes 35-11-112 (a)(i) has adopted revisions to the following chapter of the Wyoming Water Quality Rules and Regulations: Chapter 24, Class VI Injection Wells and Facilities.

Section 35-11-302 (a) of the Environmental Quality Act (the Act) states that the administrator, after receiving public comment and after consultation with the advisory board, shall recommend to the director rules, regulations, standards and permit systems to promote the purposes of this act. Such rules, regulations, standards and permit systems shall prescribe:

(iii) Standards for the issuance of permits for construction, installation, modification or operation of any public water supply and sewerage system, subdivision water supply, treatment works, disposal system or other facility, capable of causing or contributing to pollution.

(vi) In recommending any standards, rules, regulations, or permits, the administrator and advisory board shall consider all the facts and circumstances bearing upon the reasonableness of the pollution involved including:

- (A) The character and degree of injury to or interference with the health and well being of the people, animals, wildlife, aquatic life and plant life affected;
- (B) The social and economic value of the source of pollution;
- (C) The priority of location in the area involved;
- (D) The technical practicability and economic reasonableness of reducing or eliminating the source of pollution; and
- (E) The effect upon the environment.

Section 35-11-313 (f) of the Act states that the administrator of the water quality division of the department of environmental quality, after receiving public comment and after consultation with

the state geologist, the Wyoming oil and gas conservation commission and the advisory board created under this act, shall recommend to the director rules, regulations and standards for:

(i) The creation of subclasses of wells within the existing Underground Injection Control (UIC) program administered by the United States Environmental Protection Agency under Part C of the Safe Drinking Water Act to protect human health, safety and the environment and allow for the permitting of the geologic sequestration of carbon dioxide;

#### **SUMMARY OF PROPOSED REVISIONS TO CHAPTER 24**

Water Quality Rules and Regulations Chapter 24 governs the construction, operation, and closure of Class VI wells for the purposes of geologic sequestration. Chapter 24 is based upon federal requirements under the Safe Drinking Water Act for underground injection of carbon dioxide (CO<sub>2</sub>) for the purpose of geologic sequestration, located at 40 CFR Parts 124, 144, 145, 146, and 147. Subsequent to promulgation of Chapter 24 on November 5, 2010, the Class VI final federal rule was posted in the Federal Register on December 10, 2010. Proposed revisions to Chapter 24 include: requirements for financial assurance, requirements for transition from Class I, II, or V injection wells into Class VI wells, and requirements for operators or owners seeking waivers of the requirement to inject below the lowermost underground source of drinking water (USDW).

**Section 1.** Within the Authority and Purpose section is a provision noting that “the injection of carbon dioxide for purposes of a project for enhanced recovery of oil or other minerals approved by the Wyoming Oil and Gas Conservation Commission shall not be subject to the provisions of this regulation unless the operator converts to geologic sequestration upon the cessation of oil and gas recovery operations.” To this statement was added “or as otherwise required by the Commission or director.”

A reference was added which ties the new financial assurance requirements to the provisions of W.S. 35-11-313.

**Section 2.** Capitalization and grammar errors were corrected.

The definition of plume stabilization was added, as required by W.S. 35-11-313 (f)(vi)(F).

The definitions for “class VI well,” “confining zone,” and “injection zone” were expanded to more closely match the federal definitions for these terms in order to comply with the necessary requirements for primacy of the Class VI program.

The definitions for “plume stabilization” and “US EPA regional administrator” were clarified to make the terms more specific.

**Section 3.** Conditions were added that explain that a demonstration to the administrator, for Class I or V wells, or a demonstration to the director, for Class II wells, will be required for owners and operators of injection wells who are seeking to convert to a Class VI well. The conditions are as stringent as the federal requirements of 40 CFR part 146.82. Capitalization errors were corrected.

The passages located at Section 3(c)(i) through 3(c)(iii) were added to satisfy requirements at 40 CFR 144.19 and were tailored in response to a discussion between the Oil and Gas Conservation Commission and the Department of Environmental Quality, Water Quality Division that was presented to the Joint Minerals Committee of the Wyoming Legislature. The Legislature amended W.S 35-11-313(c) as SEA026 on March 1, 2016 and Governor Mead signed it into effect on March 4, 2016.

**Section 4.** Capitalization errors were corrected. Cross references were updated. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional requirements were added: a requirement was added outlining the permit procedure when the administrator determines there is need for a permit modification; and a requirement was added incorporate the well plugging plan into the permit.

**Section 5.** Capitalization and grammar errors were corrected. Cross references were updated. Language was added to clarify acronyms. Requirements were added to more closely match the federal requirements for primacy of Class VI wells: requirements include the stimulation plan and the injection and monitoring well plugging plans into the permit; a requirement to list contacts and notification method for Tribes within the area of review; requirements of the administrator review prior to granting approval for Class VI well operation. Conditions requiring public liability insurance, per W.S. 35-11-313, were added.

**Section 6.** Capitalization and grammar errors were corrected. In order to more closely match the federal regulations for primacy of Class VI wells, a passage was added that new aquifer exemptions shall not be issued for Class VI injection wells, other than EPA approved aquifer exemption expansions.

**Section 7.** Capitalization errors were corrected.

**Section 8.** Capitalization and grammar errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: a passage clarifying that the area of review delineation and corrective action must meet the requirements of Section 8 and be acceptable to the administrator; corrective action materials need to be compatible with the carbon dioxide stream; any amendments to the area of review and corrective action plan must be approved by the administrator, incorporated into the permit, and are subject to modification requirements in Section 4; a requirement that all modeling inputs and data for areas of review reevaluations need to be retained for ten years.

**Section 9.** Capitalization errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: requirements for circulation of cement; requirements for tubing and packer materials; and specific characteristics of the carbon dioxide stream.

**Section 10.** Section 10, has been renamed from Logging, Sampling, and Testing Prior to Injection Well Operation to Class VI Injection Waiver Requirements. The language from the Logging, Sampling, and Testing Prior to Injection Well Operation section has shifted down to Section 11, and the remaining sections in the Chapter have shifted down also.

Class VI Injection Waiver Requirements is a new section which explains the requirements that must be met before the Division will waive the requirement to inject below a USDW. The new requirements are as stringent as the federal requirements of 40 CFR part 146.95.

**Section 11.** Capitalization and punctuation errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, passages were reworded and added to clarify report and test requirements.

**Section 12.** Capitalization errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: clarification of injection pressure ratio to fracture pressure of injection zone; clarification of annulus pressure; clarification of use of continuous monitoring devices and shut-off systems; addition of formation fluids to list of unauthorized injection release agents.

**Section 13.** Capitalization errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: clarification of owner/operator requirements for determination of absence of significant fluid movement; clarification that approval of alternate mechanical integrity evaluations must be granted by the US EPA regional administrator.

**Section 14.** Capitalization and grammar errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added to clarify monitoring and testing requirements.

**Section 15.** Capitalization and grammar errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added to clarify retention time for records and to clarify that reporting needs to also be submitted to EPA.

**Section 16.** Capitalization and grammar errors were corrected. Cross references were updated. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: any amendments to the injection well plugging plan must be approved by the administrator, be incorporated into the permit, and are subject to Section 4 requirements; owner or operator and person who performed the plugging operation must certify the accuracy of the final report; retention time for final report.

**Section 17.** Capitalization, punctuation, and grammar errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: clarification of the enforceability of maintenance and implementation of an approved post-injection site care and site closure plan; amendment requirements for the post-injection site care and site closure plan; monitoring requirements for the post-injection site care and site closure plan; records retention time for well plugging reports and site closure report.

Paragraph (ii) and the accompanying subparagraphs (A) through (C) were added to subsection (d). The additional language explains public notice requirements for site closure activities, required by W.S. 35-11-313 (f)(ii)(N) and W.S. 35-11-313 (f)(vi)(F).

**Section 18.** Capitalization and grammar errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: requirements for emergency and remedial response plan amendments; notification of the administrator within 24 hours.

**Section 19.** The language previously contained in Section 18 was removed and replaced with specific conditions and requirements for financial assurance. The new financial assurance requirements are as stringent as the federal requirements of 40 CFR part 146.85.

**Section 20.** Capitalization errors were corrected. In order to more closely match the federal requirements to meet the requirements for primacy of Class VI wells, additional language was added: Clarification of interested parties at US EPA and Wyoming DEQ, Land Quality Division.

**Appendix A.** Appendix A, the Risk Activity Table, is a new appendix which was added to assist in determining the risk associated with various activities in different phases of geologic sequestration.

The Council finds that these regulations are reasonable and necessary to accomplish the policy and purpose of the ACT, as stated in W.S. 35-11-102, and that they have been promulgated in accordance with rulemaking provisions of the Wyoming Administrative Procedures Act.

Dated this 15<sup>th</sup> day of June, 2016.

Megan Degenfelder  
Hearing Examiner – *Printed Name*  
Wyoming Environmental Quality Council

  
Hearing Examiner – **Signed Name**  
Wyoming Environmental Quality Council