

RULE MAKING DOCUMENT
Responses to Comments
Submitted Per § W.S. 35-11-313
By
State Geologist
And
Oil and Gas Conservation Commission Supervisor

Wyoming Water Quality Rules and Regulations

Chapter 24

CLASS VI INJECTION WELLS AND FACILITIES



WYOMING

June 9, 2016

List of Commenters

Tom Drean, Wyoming State Geologist

Tom Kropatsch, Deputy Oil and Gas Supervisor, Wyoming Oil and Gas Conservation Commission

Comments and Responses

General Comments

Entity: Tom Drean, Wyoming State Geologist

Comment: Mr. Drean believes the proposed rule covers potential vertical migration well, but requests more consideration of potential migration to basin margins or subcrops through potential horizontal/lateral migration over time.

Response: WDEQ/WQD reviewed Chapter 24 and we believe that potential migration to basin margins or subcrops are adequately covered in Section 14, Testing and Monitoring Requirements. Section 14 requires the owner/operator to verify, through monitoring and testing, that the project is “operating as permitted and is not endangering USDWs.” The verification is broad—the section does not limit it to verification of only vertical migration. This section grants discretion to the administrator so that through the testing and monitoring report verification, the administrator may require additional monitoring and testing.

Sections 9(b)(iv) and 10(f)(ii)(C)

Entity: Tom Kropatsch, Deputy Oil and Gas Supervisor, Wyoming Oil and Gas Conservation Commission

Comment: Mr. Kropatsch recommends editing the passage to include an option to set surface casing at a shallower depth, followed by setting intermediate casing at the depths required in Sections 9 and 10.

Response: WDEQ/WQD reviewed the passage and edited 10(f)(ii)(C) by removing the phrase “surface” so that the passage now states “the casing shall extend through the base of the nearest USDW...”

Section 10(a)(i)

Entity: Tom Drean, Wyoming State Geologist

Comment: Mr. Drean notes that most Wyoming formations would outcrop or subcrop at the basin margin. He requests that a minimum distance to the outcrop or subcrop be considered without proof of isolation from the outcrop/subcrop.

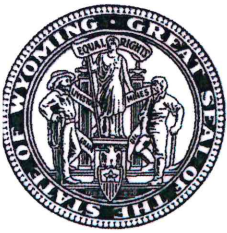
Response: WDEQ/WQD reviewed the passage and edited it to state “does not outcrop within the area of review”

Section 11(a)(i)(B)(II)

Entity: Tom Drean, Wyoming State Geologist

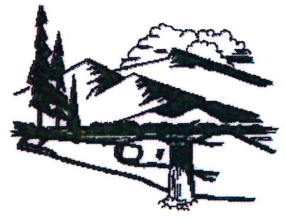
Comment: Mr. Drean asks for consideration of potential future devices or tools to evaluate and measure cement quality.

Response: WDEQ/WQD reviewed the passage and edited it to include “or other approved device”.



Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

MEMORANDUM

TO: Mark Watson, State Oil and Gas Supervisor
Tom Drean, State Geologist

FROM: Kevin Frederick, Water Quality Division Administrator *KF*

DATE: **March 9, 2016**

PRIORITY: **HIGH** – Deadline for response is **March 23, 2016**

SUBJECT: **Request for review of proposed rules**

The Department of Environmental Quality, Water Quality Division (WQD) is proposing to revise Chapter 24 of the Water Quality Rules and Regulations. The proposed revisions incorporate federal regulations for carbon sequestration for financial assurance, incorporate federal and state statutory conditions for conversion of other class wells to Class VI wells, incorporate conditions for a waiver of the requirement to inject below the lowermost underground source of drinking water (USDW), and correct grammar and punctuation errors.

On September 11, 2015, the Water and Waste Advisory Board recommended adoption of the proposed rules to the Environmental Quality Council. On March 4, 2016, Governor Mead signed into law SEA026, which specified criteria for the conversion of enhanced oil recovery (EOR) operations to geologic sequestration at W.S. 35-11-313(c). The Oil and Gas Conservation Commission shall recommend transfer of oversight of the EOR operation to DEQ if the primary purpose of the well changes to long term storage of CO2 and there is an increased risk to a USDW, compared to the EOR operation. WQD has incorporated language in Chapter 24, Section 3 that references this statutory update. Per W.S. 35-11-313 (f), WQD is now seeking a proposed rule review by the state geologist and Oil and Gas Commission.

You will find enclosed a copy of the draft Statement of Principal Reasons for Adoption, a copy of Chapter 24 in strike and underline format, and a copy of Chapter 24 in clean format. If you have any questions or need additional information regarding the proposed rules please do not hesitate to contact me or William Tillman of my staff.

KF/gjt/16-0150

Enclosures

----- Forwarded message -----

From: **Tom Drean** <tom.drean@wyo.gov>
Date: Tue, Mar 15, 2016 at 11:06 AM
Subject: Proposed rules
To: Kevin Frederick <kevin.frederick@wyo.gov>

I have reviewed the proposed rule changes for revising Chapter 24 of the Water Quality Rules and Regulations that was recently sent to me. I have a few comments/suggestions on these Draft Rules. They are:

Page 24-27: Section 10. Class VI Injection Depth Waiver Requirements

under(a) (i): A demonstration that the injection zone(s).....does not outcrop.....

The reality is that in Wyoming most , if not all, of the formations that one could inject into outcrop , or subcrop at the margins of the basins. Perhaps a minimum distance to where it outcrops, or subcrops should be considered without proof of isolation from the outcrop/subcrop (for example; 10 miles?? or proof of structural, fault or other isolation).

Page 24-31: Section 11. Logging, sampling, and testing prior to injection well operations:

Under (B) (II); Given that it refers to only current tools/technologies (Cement Bond and variable density log) you may want to broaden it to consider potential future devices or tools to evaluate and measure cement quality. For example, perhaps it could read: A cement bond, variable density or other approved device to evaluate cement quality.....

General comment: The rules cover potential vertical migration well, but not potential horizontal/lateral migration over time very well. This would include the potential migration to basin margins, or subcrops. You may want to give a little more consideration of this potential.

Tom Drean
Director; Wyoming State Geological Survey

----- Forwarded message -----

From: **Tom Kropatsch** <tom.kropatsch@wyo.gov>
Date: Wed, Mar 23, 2016 at 2:45 PM
Subject: WOGCC Comments to Proposed Class VI rules
To: Kevin Frederick <kevin.frederick@wyo.gov>

Kevin,

We have reviewed the proposed revisions to the WQD's Chapter 24 rules and regulations relating to Class VI wells. We don't have any official comments, but did have a concern relating to the requirement in the proposed rule regarding surface casing setting depths.

In Section 9(b)(iv) the rule states: Surface casing must extend through the base of the lowermost USDW above the injection zone and be cemented to the surface.

In Section 10(f)(ii)(C) the rule states: Surface casing shall extend through the base of the nearest USDW directly above the injection zone and shall be cemented to the surface; or at the administrator's discretion, another formation above the injection zone and below the nearest USDW above the injection zone.

The requirement to set surface casing below the lowermost USDW or deeper than the lowermost USDW above the injection zone may result in the setting of surface casing at a significant depth. Until surface casing is set a blow out preventer (BOP) cannot be installed on the well. The drilling of a well through any pressurized zones without a BOP installed on the well could result in loss of well control and could pose a risk to human health and the environment.

We would recommend an option in the proposed Class VI rule to set surface casing at a shallower depth, to be followed by setting intermediate casing at the depths required in Sections 9 and 10 of the proposed rule and cementing the intermediate casing back to surface or at least above the surface casing shoe. This would provide the same isolation of the USDWs but would be more protective during the drilling of the well.

Please let me know if you would prefer that we formally submit this as a comment.

Thanks,

Tom Kropatsch
Deputy Oil and Gas Supervisor
Wyoming Oil and Gas Conservation Commission
2211 King Blvd
PO Box 2640
Casper, WY 82602
Office: [\(307\) 234-7147](tel:3072347147)
Cell: [\(307\) 274-7487](tel:3072747487)

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.