**Aquifer Exemption Evaluation**

**Regulatory Agency**: Colorado Oil and Gas Conservation Commission (COGCC) 1425 Program

**Date of Aquifer Exemption Request**:

**Substantial or Non-Substantial Program Revision**: (EPA fills out)

**Basis for** **Substantial or Non-Substantial Determination:** (EPA fills out)

**Operator**:

**Well Class/Type:** Class II SWD Well

**Well/Project Name**:

**Well/Project Permit Number:** N/A

**Well API number:**

**Field**:

**Tribal Reservation:**

**Well/Project Location**: Qtr: Section: Township: Range:

**Footage Call:** feet from (NS) line feet from (EW) line

**County**: **State**: CO

**Latitude: Longitude: (decimal degrees, 5-decimals)**

**DESCRIPTION OF PROPOSED AQUIFER EXEMPTION (depths are approximate values at the well bore)**

**Aquifer to be Exempted**:  **Top:** feet **Bottom:** feet

**Lithology:**

**Water Quality – TDS (mg/L)**: (in mg/L) **Source of WQ Data**:

**Areal Extent and Description of Exempted Aquifer (i.e. radial distance, encompassed Sec-Twn-Rng)**

**Total Area of Aquifer to be Exempted**: (in Acres)

**Description:** QtrQtr(s), Section, Twn S/N, Rng E/W

**Confining Zone(s)**:

**Upper:** **Lithology:** **Top:** feet **Bottom:** feet

**Lower:** **Lithology:** **Top:** feet **Bottom:** feet

**BACKGROUND**

**USDW(s):**

**Injectate Characteristics**:

**BASIS FOR DECISION**

**Regulatory Criteria under which the exemption is requested**

**146.4: ☐ (a)** Not currently used as a drinking water source and**:**

* How far from the AE boundary to review drinking water wells and how was this determined?
* Identify drinking water wells in area of review, their depths, and provide source of information.
* Identify any source water assessment and/or protection areas and designated sole source aquifers
* Identify nearest public water supply (PWS).
* What is the distance of the nearest drinking water well utilizing the aquifer proposed for exemption? If so, is it in close enough proximity to require a capture zone analysis?
* Provide map of AE boundary and location of drinking water wells.

**☐** **(b)(1)** It is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or Class II operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; or

* + Projections on future use of the proposed aquifer.

***Hydrocarbon Production Data:***

* Demonstrate that historical production occurred in the project area or field.
* Demonstrate the existence of hydrocarbons (logs, core data, etc) and provide estimation of the quantity of the hydrocarbon potential.

***Mineral Resources Available:***

* A summary of logging which indicates that commercially producible quantities of minerals are present, a description of the mining method to be used, general information on the mineralogy and geochemistry of the mining zone, and a development timetable.

**☐** **(b)(2)** It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; or

* + Projections on future use of the proposed aquifer.
  + Current sources of water supply in the area of the proposed exempted aquifer.
  + Availability, quantity and quality of alternative water supply source(s) to meet present and future needs.
  + Population trends in the area and analysis of future water supply needs within the general area.
  + Well construction and water transportation and/or treatment costs to develop aquifer proposed for exemption compared to costs to develop alternative resource(s).

**☐** **(b)(3)** It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

* Projections on future use of the proposed aquifer.
* Concentrations, types, and source of contaminants in the aquifer.
* If contamination is a result of a release, extent of contaminated area and whether contamination source has been abated.
* Ability of treatment to remove contaminants from ground water.
* Current sources of water supply in the area of the proposed exempted aquifer.
* Availability, quantity and quality of alternative water supply source(s) to meet present and future needs.
* Population trends in the area and analysis of future water supply needs within the general area.
* Well construction and water transportation and/or treatment costs to develop aquifer proposed for exemption compared to costs to develop alternative resource(s).

**☐** **(c)** TDS is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

* Projections on future use of the proposed aquifer.
* Include information about the quality and availability of water from the aquifer proposed for exemption.
* Analysis of the potential for public water supply use of the aquifer. This may include: a description of current sources of public water supply in the area, a discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology, and a discussion of other available water supply sources within the area.

**Describe what assurance exists to confine fluids within the AE boundary:**

* Discuss injection rate or volume limitation.
* Discuss existence and quality of confining zone(s). (Is the confining zone continuous, are there known fractures?)

**Public Comment**

Public Comment Conducted? ☐ Yes ☐ No

Results of Public Comment Process:

**Checklist of Questions to Consider**

**☐ Are there deeper aquifers with poorer quality water that can be used for injection (disposal wells)?**

**☐ Proximity to other jurisdictional boundaries?**

**☐ Is seismicity a concern in the area?**

**☐ Will injection of fluids cause any original formation fluid or injectate to migrate to any known USDW?**

**☐ Are all wells within the AE boundary and AOR properly cemented to prevent preferential flow paths?**

**Provide other considerations to support aquifer exemption approval:**