

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY Document Number: 400926623 Date Received:

UNDERGROUND INJECTION FORMATION PERMIT APPLICATION

Per Rule 325, this form shall be submitted with all required attachments. A Form 31 - Intent shall be submitted and approved prior to completing an injection zone. A Form 31 - Subsequent shall be submitted following collection of water samples and injectivity test (if performed) and must be approved prior to injection in any new injection facility. NOTE: Per Rule 324B, an aquifer exemption is required for any injection formation with water quality less than 10,000 mg/L total dissolved solids (TDS). Contact the Commission for further requirements if the TDS as determined by water analysis for the injection zone is less than 10,000 mg/L.

Form 31 Type [X] Intent [] Subsequent UIC Facility ID 0 UIC Facility ID Required for Subsequent Form 31

UIC FACILITY INFORMATION

Facility Name and Number: Buffalo Ridge Energy Services Facil County: WELD Facility Location: NWSE / 26 / 3N / 64W / 6 Field Name and Number: WATTENBERG 90750 Facility Type: [] Enhanced Recovery [X] Disposal [] Simultaneous Disposal Single or Multiple Well Facility? [X] Single [] Multiple

Proposed Injection Program (Required):

This is a deep injection well for disposal of Class II fluids. It will be part of a waste processing facility serving the oil and gas industry. This is a commercial operation.

OPERATOR INFORMATION

OGCC Operator Number: 10473 Name of Operator: WASTE MANAGEMENT OF COLORADO INC Address: 5500 SOUTH QUEBEC STREET #250 City: GREENWOOD VILLAGE State: CO Zip: d80111 Contact Name and Telephone: Name: Jason Chan Phone: (303) 486-6063 Fax: (844) 840-2316 Email: jchan2@wm.com

INJECTED FLUID TYPE

All injected fluids must be Exempt E&P waste per RCRA Subpart C.

(Check all that apply.)

- [X] Produced Water [] Natural Gas [] CO2 [X] Drilling Fluids [X] Exempt Gas Plant Waste [X] Used Workover Fluids [X] Flowback Fluids

[X] Other Fluids (describe): Any other Class II (RCRA Subpart C exempt) waste.

Commercial Disposal Facility [X] Yes [] No Commercial UIC Bond Surety ID: 20160092

Commercial Facility Description: Describe the physical region of the facility, the details of the operations, and the type of fluids to be injected.

1. Oil and gas wells in southern Weld County
2. A waste facility is planned. Construction drawings are attached. The rest of the facility is being permitted by CDPHE.
3. E&P liquid waste.
4. Solid and liquid waste recycling and solid waste landfill (permitted by CDPHE).

PROPOSED INJECTION FORMATIONS

FORMATION (Name): <u>ADMIRE</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>AMAZON</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>ATOKA</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>COUNCIL GROVE</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>DES MOINES</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>FOUNTAIN</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>LOWER SATANKA</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>LYONS</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>MISSOURI</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	
FORMATION (Name): <u>VIRGIL</u>	Porosity: _____ %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft
Permeability: _____ mD	
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input type="checkbox"/> None	

FORMATION (Name): WOLFCAMP Porosity: _____ %
 Formation TDS: _____ mg/L Frac Gradient: _____ psi/ft Permeability: _____ mD
 Proposed Stimulation Program: Acid Frac Treatment None

ANTICIPATED FACILITY OPERATIONS CONDITIONS

Under normal operating conditions, estimated TOTAL fluid injection rates and pressures for this facility:

FOR WATER: Daily Injection Rate Range From 0 to 10000 bbls/day
 Surface Injection Pressure Range From 0 to 1438 psi
 FOR GAS: Daily Injection Rate Range From _____ to _____ mcf/day
 Surface Injection Pressue Range From _____ to _____ psi

Estimated Initial Injection Date: 5/1/2017

AREA OF REVIEW OIL and GAS WELL EVALUATION SUMMARY

Review all existing wells within 1/2 mile for injection formation isolation.

Area Review Date: 11/30/2016

Total number of Oil & Gas Wells within Area of Review:

ABANDONED WELLS (All wells that have been plugged: PA and DA status))

Total within Area of Review	0
Number To Be Re-Plugged	0

ACTIVE WELLS (All wells that have not been plugged: AC, DG, DM, IJ, PR, SU, SI, TA, WO, XX, UN status)

Total within Area of Review	21
Number Requiring Casing Repair	0
Number To Be Plugged	0

Operator's Area of Review Contact Email: _____

No Wells within 2,640'

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Denise M. Onyskiw, P.E. Signed: _____

Title: Engineer Date: _____

COGCC Approved: _____ Date: _____

Form 31 - Intent Expiration Date: _____

Per Rule 325.o, a 90 day extension of the Expiration Date may be requested via a Sundry Notice, Form 4 submitted prior to Form 31- Intent expiration

Order Number: _____ UIC FACILITY ID: 0

CONDITIONS OF APPROVAL, IF ANY:

COA Type	Description

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401095692	SURFACE FACILITY DIAGRAM
401100364	MAP OF SURFACE OWNERS ¼-MILE
401100365	LIST OF WATER WELLS ¼-MILE
401100368	LIST OF MINERAL OWNERS ¼-MILE
401100369	NOTICE TO SURFACE & MINERAL OWNERS
401160993	CERTIFIED MAIL RECEIPT(S)
401161012	MAP OF MINERAL OWNERS ¼-MILE
401161046	MAP OF O&G WELLS IN AREA OF REVIEW
401161048	SURFACE FACILITY DIAGRAM
401161078	OFFSET WELL EVALUATION
401164053	WELLBORE DIAGRAM-PROPOSED

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)