

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

Document Number:

400950432

Date Received:

12/14/2015

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 [] Intent [X] Subsequent UIC Facility ID 159980 UIC Facility ID Required for Subsequent Form 31

UIC FACILITY INFORMATION

Facility Name and Number: NGL C5A County: WELD
Facility Location: NESW / 29 / 2N / 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):

The NGL C5A well will take produced water from nearby oil & gas wells in Weld County. Water will be trucked to the Surface Facility, which is located in the SWSW of this same section, where residual hydrocarbons and sediments will be removed before injection. Under normal operating conditions, estimated fluid injection rates for produced water will be a minimum of 10,000 bbls per day @ 2200 psi to a maximum of 40,320 bbls per day @ 2500 psi. A Step Rate Test was used to determine maximum injection pressure. The above volumes are estimated for the single new well to be included in the adjacent Facility which will also service up to 3 separate UIC wells.

OPERATOR INFORMATION

OGCC Operator Number: 10373 Contact Name and Telephone:
Name of Operator: NGL WATER SOLUTIONS DJ LLC Name: Paul Gottlob
Address: 3773 CHERRY CRK NORTH DR #1000 Phone: (720) 420-5747 Fax: ()
City: DENVER State: CO Zip: 80209 Email: paul.gottlob@iptenergyservices.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

[] Other Fluids (describe):

Commercial Disposal Facility [X] Yes [] No Commercial UIC Bond Surety ID: 20150124

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

1. Physical region of Operation is Weld County and surrounding areas.
2. Water will be trucked to the Surface Facility, located in the SWSW of this same section, where residual hydrocarbons and sediments will be removed before injection. Under normal operating conditions, estimated fluid injection rates for produced water will be a minimum of 10,000 bbls per day @ 2200 psi to a maximum of 40,320 bbls per day @ 2500 psi.
3. Injected Fluid Types: Produced Water, Drilling Fluids, Flowback Fluids, Exempt Gas Plant Waste & Used Workover Fluids.
4. None other than listed above.

PROPOSED INJECTION FORMATIONS

FORMATION (Name):	ADMIRE	Porosity:	0 %
Formation TDS:	15000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	AMAZON	Porosity:	13 %
Formation TDS:	15000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	ATOKA	Porosity:	0 %
Formation TDS:	mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	COUNCIL GROVE	Porosity:	8 %
Formation TDS:	15000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	DES MOINES	Porosity:	0 %
Formation TDS:	mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	FOUNTAIN	Porosity:	0 %
Formation TDS:	14000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	LOWER SATANKA	Porosity:	0 %
Formation TDS:	11000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	LYONS	Porosity:	10 %
Formation TDS:	11000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	MISSOURI	Porosity:	0 %
Formation TDS:	14000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None
FORMATION (Name):	VIRGIL	Porosity:	7 %
Formation TDS:	14000 mg/L	Frac Gradient:	0.53 psi/ft
Permeability:	116 mD	Proposed Stimulation Program:	<input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None

FORMATION (Name): WOLFCAMP Porosity: 0 %
 Formation TDS: 15000 mg/L Frac Gradient: 0.53 psi/ft Permeability: 116 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 10000 to 40320 bbls/day
 Surface Injection Pressure Range From 2200 to 2500 psi
 FOR GAS: Daily Injection Rate Range From _____ to _____ mcf/day
 Surface Injection Pressure Range From _____ to _____ psi

Estimated Initial Injection Date: 12/14/2015

AREA OF REVIEW OIL and GAS WELL EVALUATION SUMMARY

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

Area Review Date: 11/5/2015

Total number of Oil & Gas Wells within Area of Review: 39

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	39
Number Requiring Casing Repair	0
Number To Be Plugged	0

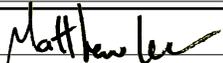
Operator's Area of Review Contact Email: paul.gottlob@iptenergyservices.com

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: Paul Gottlob Signed: _____

Title: Regulatory & Engin. Tech. Date: 12/14/2015 7:43:04 AM

COGCC Approved:  Date: 12/26/2015

Form 31 - Intent Expiration Date: 06/26/2016

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: 159980

CONDITIONS OF APPROVAL, IF ANY:

COA Type	Description
	NGL shall submit a Form 4 Sundry Notice notifying the COGCC of the date of initial injection within thirty (30) days of commencement of injection.
	Operator is required to file a Sundry Notice with injected water analysis; minimum analyses are TDS, major cations, and major anions. Data must also be submitted to COGCC Database in Electronic Data Deliverable (EDD) format. After the initial 1-year analysis the analysis shall be repeated at 5-year intervals from the first analysis.
	Initial daily injection rate restricted to 15,000 bbl/day. If operator wishes to increase daily rate above 15,000 bbl/day, they must request increase from COGCC via Sundry Notice.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400927011	TRIPLE COMBINATION
400937213	MECHANICAL INTEGRITY TEST
400937265	CEMENT BOND
400950432	FORM 31-SUBSEQUENT-SUBMITTED
400950502	NOTICE TO SURFACE & MINERAL OWNERS
400950518	CERTIFIED MAIL RECEIPT(S)
400950524	MAXIMUM SURFACE INJECTION PRESSURE DETERMINATION
400950531	MAXIMUM INJECTION VOLUME CALCULATION
400950544	STEP RATE/INJECTIVITY TEST DOCUMENTATION
400950559	OTHER
400951157	WATER ANALYSIS
400951248	WELLBORE DIAGRAM-SUBSEQUENT
400951249	SURFACE FACILITY DIAGRAM
400959013	CORRESPONDENCE
400959015	MAXIMUM INJECTION VOLUME CALCULATION
400959016	MAXIMUM SURFACE INJECTION PRESSURE DETERMINATION
400959039	OTHER
400959046	HYDROLOGY EVALUATION
400959606	CORRESPONDENCE
400959873	CORRESPONDENCE
400959875	SEISMIC EVALUATION
400959970	OFFSET WELL EVALUATION

Total Attach: 22 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
UIC	Operator states that based on their consultants advice seismic coverage for both NGL-C5A and NGL-C5 is adequate. Coverage provided by monitoring stations at NGL-C3A and NGL-C2 wells.	12/24/2015 8:17:22 AM
UIC	Operator given permission to use TDS values collected from NGL-C5 well (API: 123-40645) well 1 mile to the west. See Sundry # 400911624.	12/24/2015 8:01:26 AM
UIC	The COA imposed on the Form 31 Intent (#400931133) for updated Notice Letters to Surface and Mineral Owners is waived. Operator noticed Owners on 10/31/2014 (part of Withdrawn Form 31 Doc 2092811) and on 3/26/2015 (see Doc 400959606 here). Neither Operator or COGCC received any comments regarding these announcements.	12/23/2015 11:19:03 AM

Total: 3 comment(s)