

State of Colorado
Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

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2091730

Date Received:

09/12/2014

UNDERGROUND INJECTION FORMATION PERMIT APPLICATION

1. Submit original and one copy of this form.
2. If data on this form is estimated, indicate as such.
3. Attachments - see checklist and explanation of attachments.
4. Aquifer exemption is required for all injection formations with water quality < 10,000 TDS (Rule 322B). Immediately contact the Commission for further requirements if the total dissolved solids (TDS) as determined by water analysis for the injection zone is less than 10,000 ppm.
5. Attach a copy of the certified receipt to each notice to surface and mineral owner(s) or submit a sample copy of the notice and an affidavit of mailing or delivery with names and addresses of those notified. Each person notified shall be specified as either a surface or mineral owner as defined by C.R.S. 34-60-103(7).

OPERATOR INFO

OGCC Operator Number: <u>10373</u> Name of Operator: <u>NGL WATER SOLUTIONS DJ LLC</u> Address: <u>3773 CHERRY CRK NORTH DR #1000</u> City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80209</u>	Contact Name and Telephone: Name: <u>PAUL GOTTLÖB</u> Phone: <u>(720) 420-5747</u> Fax: <u>(720) 420-5800</u> Email: <u>PAUL.GOTTLÖB@IPTENERGYSERVICES.COM</u>
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Facility Name: NGL C1C Facility Location: SESE / 8 / 4N / 64W / 6

Facility Type: Enhanced Recovery Disposal Simultaneous Disposal

Single or Multiple Well Facility? Single Multiple

County: WELD Field Name and Number: WATTENBERG 90750

Injection Fluid Type: Produced Water Natural Gas CO2 Drilling Fluids
 Exempt Gas Plant Waste Used Workover Fluids Other Fluids (describe):

Commercial Facility? Yes No

If Yes, describe area of operation and types of fluids to be injected at this facility:

PROPOSED INJECTION PROGRAM: The NGL C1C well will take produced water from nearby oil & gas wells in Weld County. Water will be trucked to the Surface Facility 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 10,000 bbls per day @ 2350 psi. A Step Rate Test will be used to determine maximum injection pressure.

The above volumes are estimated for the single new well to be added to the existing injection facility at the NGL Kersey Site. Related UIC Facility Numbers are #159139 and #159254.

PROPOSED INJECTION FORMATIONS

FORMATION (Name): WOLFCAMP Porosity: 3

Formation TDS: 25920 Frac Gradient: 0.69 psi/ft Permeability: 123

Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): VIRGIL Porosity: 18

Formation TDS: 21302 Frac Gradient: 0.69 psi/ft Permeability: 123

Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): MISSOURI Porosity: 10
Formation TDS: 23223 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): MORROW Porosity: 0
Formation TDS: 20642 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): LYONS Porosity: 7
Formation TDS: 19762 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): LOWER SATANKA Porosity: 0
Formation TDS: 29850 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): FOUNTAIN Porosity: 0
Formation TDS: 23223 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): DES MOINES Porosity: 0
Formation TDS: 20642 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): COUNCIL GROVE Porosity: 6
Formation TDS: 25920 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): ATOKA Porosity: 10
Formation TDS: 20642 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): AMAZON Porosity: 3
Formation TDS: 25920 Frac Gradient: 0.69 psi/ft Permeability: 123
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): ADMIRE Porosity: 0
 Formation TDS: 21302 Frac Gradient: 0.69 psi/ft Permeability: 123
 Proposed Stimulation Program: Acid Frac Treatment None

Anticipated Project Operating Conditions

Under normal operating conditions, estimated fluid injection rates and pressures:

FOR WATER: A minimum of 10000 bbls/day @ 2200 psi to A maximum of 10000 bbls/day @ 2350 psi
 FOR GAS: A minimum of mcf/day @ psi to A maximum of mcf/day @ psi

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: REG & ENGINEER TECH Date: 9/12/2014 12:00:00 AM

OGCC Approved:  Title: _____ Date: 03/25/2015

Order No: _____

UIC FACILITY NO: 159957

CONDITIONS OF APPROVAL, IF ANY:

COA Type	Description
	Operator required to install seismometer at a location to be determined by NGL and COGCC from which seismic activity in the vicinity of the NGL #C1C injection well can be monitored. NGL will be responsible for maintenance of the seismometer. Data gathered by the seismometer will be made available to one or more third parties (such as the USGS, CU-Boulder, CSM, or CSU) for analysis.
	Initial daily injection rate restricted to 10,000 bbl/day. If operator wishes to increase daily rate above 10,000 bbl/day, they must request increase from COGCC via Sundry Notice.
	After 1-year submit analysis of injected water, analyze for TDS, major cations, and major anions. Submit analyses via sundry notice and EDD. Repeat at 5-year intervals after that.

Attachment Check List

Att Doc Num	Name
261835	SEISMIC EVALUATION
2091730	FORM 31 SUBMITTED
2091731	FORMATION DATA
2091732	PROPOSED INJECTION PROGRAM
2091733	EASEMENT AGREEMENT WITH GRUBER
2091734	EASEMENT AGREEMENT WITH CAMPBELL
2091735	STATEMENT OF SURFACE OWNERSHIP
2091736	NOTICE TO SURFACE & MINERAL OWNERS
2091737	NOTICE TO SURFACE & MINERAL OWNERS
2091738	REMEDIAL CORRECTION PLAN FOR WELLS WITHIN 1/4 MILE
2091739	MAP O&g/WATER WELLS 1/4-MILE
2091740	LIST OF O&G/WATER WELLS 1/2-MILE
2091741	LIST OF SURFACE OWNERS 1/4-MILE
2091742	MAP OF SURF. OWNERS 1/4 MILE
2091743	LIST OF MIN. OWNERS 1/4 MILE
2091744	MAP OF MIN. OWNERS 1/4 MILE
2091745	SURFACE FACILITY DIAGRAM
2091746	WELLBORE DIAGRAM- PROPOSED
2091747	OPERATIONS SUMMARY
2618345	FORMATION DATA-FINAL
2618346	OPERATIONS SUMMARY-FINAL
2618347	MAXIMUM INJECTION PRESSURE REQUEST
2618348	AREA REVIEW MAP+LIST
2618349	WELLBORE DIAGRAM-CURRENT
2618350	SURFACE FACILITY DIAGRAM-FINAL
2618351	PROPOSED INJECTION PROGRAM-FINAL
2618352	MAXIMUM INJECTION VOLUME-OPERATOR
2618353	MAXIMUM INJECTION VOLUME-COGCC
2618354	NOTICE TO SURFACE & MINERAL OWNERS-SAMPLE
2618355	FORMATION CORRELATION TABLE
2618356	ANALY. OF INJ. ZONE
2618358	HYDROLOGY EVALUATION
2618359	PROOF OF PUBLICATION

Total Attach: 33 Files

General Comments

User Group	Comment	Comment Date
UIC	Source of original operator comments on Submittal Tab uncertain. Paul Gottlob does not recognize them and the depths for the formations do not match either the Proposed Wellbore Diagram or the As Drilled Wellbore Diagram. Comments deleted with permission of operator.	3/24/2015 12:27:09 PM

Total: 1 comment(s)