

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

Document Number:

400937641

Date Received:

11/17/2015

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

Subsequent

UIC Facility ID 159982

UIC Facility ID Required for Subsequent Form 31

UIC FACILITY INFORMATION

Facility Name and Number: NGL Apollo 11 County: WELD

Facility Location: SENE / 18 / 6N / 63W / 6 Field Name and Number: WATTENBERG 90750

Facility Type: Enhanced Recovery Disposal Simultaneous Disposal

Single or Multiple Well Facility? Single Multiple

Proposed Injection Program (Required):

The NGL Apollo 11 well will take produced water from nearby oil & gas wells in Weld County. Water will be trucked to the Surface Facility (Adjacent to this well pad) 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 24,000 bbls per day @ 2500 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 included in the adjacent Facility.

OPERATOR INFORMATION

OGCC Operator Number: 10373

Name of Operator: NGL WATER SOLUTIONS DJ LLC

Address: 3773 CHERRY CRK NORTH DR #1000

City: DENVER State: CO Zip: 80209

Contact Name and Telephone:

Name: Paul Gottlob

Phone: (720) 420-5747 Fax: ()

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.)

Produced Water Natural Gas CO2 Drilling Fluids

Exempt Gas Plant Waste Used Workover Fluids Flowback Fluids

Other Fluids (describe):

Commercial Disposal Facility Yes No

Commercial UIC Bond Surety ID: 20150086

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 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 24,000 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): <u>ADMIRE</u>		Porosity: <u>2</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>AMAZON</u>		Porosity: <u>24</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>ATOKA</u>		Porosity: <u>2</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>COUNCIL GROVE</u>		Porosity: <u>10</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>DES MOINES</u>		Porosity: <u>10</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>FOUNTAIN</u>		Porosity: <u>4</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>LOWER SATANKA</u>		Porosity: <u>2</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>LYONS</u>		Porosity: <u>16</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>MORROW</u>		Porosity: <u>2</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		
FORMATION (Name): <u>MISSOURI</u>		Porosity: <u>18</u> %
Formation TDS: _____ mg/L	Frac Gradient: _____ psi/ft	Permeability: _____ mD
Proposed Stimulation Program: <input type="checkbox"/> Acid <input type="checkbox"/> Frac Treatment <input checked="" type="checkbox"/> None		

FORMATION (Name): VIRGIL Porosity: 14 %
 Formation TDS: _____ mg/L Frac Gradient: _____ psi/ft Permeability: _____ mD
 Proposed Stimulation Program: Acid Frac Treatment None

FORMATION (Name): WOLFCAMP Porosity: 1 %
 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 10000 to 24000 bbls/day
 Surface Injection Pressure Range From 2200 to 2500 psi
 FOR GAS: Daily Injection Rate Range From _____ to _____ mcf/day
 Surface Injection Pressue Range From _____ to _____ psi

Estimated Initial Injection Date: 12/1/2015

AREA OF REVIEW OIL and GAS WELL EVALUATION SUMMARY

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

Area Review Date: 11/16/2015

Total number of Oil & Gas Wells within Area of Review: 45

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

Total within Area of Review	5
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	40
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: 11/17/2015 8:34:07 AM

COGCC Approved:  Date: 01/07/2016

Form 31 - Intent Expiration Date: 07/07/2016

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: 159982

CONDITIONS OF APPROVAL, IF ANY:

<u>COA Type</u>	<u>Description</u>
	<p>1.Injection is not authorized until approval of SUBSEQUENT-Forms 31 and 33.</p> <p>2.Operator is required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination.</p> <p>3.Prior approval of Form 4 is required for step rate and injectivity tests.</p> <p>4.Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</p> <p>5.For all new drill Underground Injection Control wells a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs is required from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DILS file version of each log is required.</p> <p>6.For all new and converted Underground Injection Control wells a Cement Bond Log (CBL) is required on the cased portions of the hole from the bottom of the casing to the top of the next shallower casing string for all casing strings other than the Surface Casing. Only a PDF, TIFF, or PDS visual image is required.</p> <p>7.Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</p>

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400937641	FORM 31-INTENT-SUBMITTED
400937953	OTHER
400937957	LIST OF WATER WELLS ¼-MILE
400937960	MAP OF O&G WELLS IN AREA OF REVIEW
400937961	MAP OF WATER WELLS ¼-MILE
400937969	LIST OF MINERAL OWNERS ¼-MILE
400937970	WELLBORE DIAGRAM-PROPOSED
400937971	CERTIFIED MAIL RECEIPT(S)
400937972	NOTICE TO SURFACE & MINERAL OWNERS
400937973	OTHER
400937975	SURFACE FACILITY DIAGRAM
400938020	MAP OF MINERAL OWNERS ¼-MILE
400938125	OIL & GAS WELL PLAT
400938126	REMEDIAL CORRECTION PLAN FOR WELLS ¼-MILE
400938127	SURFACE USE AGREEMENT FOR SALT WATER DISPOSAL
400938129	LIST OF SURFACE OWNERS ¼-MILE
400938142	MAP OF SURFACE OWNERS ¼-MILE
400962942	OTHER
400963018	OFFSET WELL EVALUATION

Total Attach: 19 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
UIC	Because operator is requesting a maximum daily injection rate greater than 10,000 bpd (barrels per day, request is for 24,000 bpd) on the UIC Form 31-INTENT permit, there will be a COA on the Form 31-SUBSEQUENT for the operator to install and maintain a seismic monitoring station within a 1-mile radius of this well.	1/6/2016 3:48:07 PM

Total: 1 comment(s)