

FORM
2A

Rev
08/19

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401801129

Date Received:

11/01/2018

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: _____

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

470396

Expiration Date:

12/29/2022

This location assessment is included as part of a permit application.

CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # _____
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 47120

Name: KERR MCGEE OIL & GAS ONSHORE LP

Address: P O BOX 173779

City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: John PIEKARA

Phone: (720) 929-3094

Fax: ()

email: JOHN.PIEKARA@ANADARKO.COM

FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): 20010124 Gas Facility Surety ID (Rule 711): _____
- Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: DAMORE Number: 5-18HZ PAD

County: WELD

Quarter: SWNW Section: 18 Township: 5N Range: 67W Meridian: 6 Ground Elevation: 4921

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2167 feet FNL from North or South section line

652 feet FWL from East or West section line

Latitude: 40.401012 Longitude: -104.942349

PDOP Reading: 1.9 Date of Measurement: 09/07/2018

Instrument Operator's Name: PRESTON KNUITSEN

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>8</u>	Oil Tanks*	<u> </u>	Condensate Tanks*	<u>2</u>	Water Tanks*	<u>7</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u> </u>
Pump Jacks	<u>8</u>	Separators*	<u>23</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u> </u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u>4</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u>2</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

<u>Other Facility Type</u>	<u>Number</u>
Temp diesel generators	2
Air Compressor	4
Compressed Air Supply Lines	8
Flow Lines	8
Temp 500 bbl tanks w/optional ECDs	8
Meter Building	3
Oil Pipeline	1
Gas Pipelines	3
Gas Lift Lines	8
Temp purge flares	2
temp ECDs	4
temp tanks	38

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Please see Comments section for flow line description.

Please see Comments section. Description of pipelines and flow lines does not fit in space provided.

500 barrel skid-mounted frac tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud.

CONSTRUCTION

Date planned to commence construction: 01/15/2020 Size of disturbed area during construction in acres: 15.82

Estimated date that interim reclamation will begin: 02/01/2021 Size of location after interim reclamation in acres: 4.56

Estimated post-construction ground elevation: 4922

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see Comments section. Disposal description will not fit in space provided.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: 149021

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: ANADARKO E&P ONSHORE LLC Phone: _____

Address: 1099 18TH ST Fax: _____

Address: _____ Email: _____

City: DENVER State: CO Zip: 80217

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: applicant is owner

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation 10/01/2018

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s): _____

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

Non-Crop Land: Rangeland Timber Recreational Other (describe): _____

Subdivided: Industrial Commercial Residential

Future Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

Non-Crop Land: Rangeland Timber Recreational Other (describe): _____

Subdivided: Industrial Commercial Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	426 Feet	116 Feet
Building Unit:	573 Feet	330 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	646 Feet	191 Feet
Above Ground Utility:	571 Feet	121 Feet
Railroad:	690 Feet	910 Feet
Property Line:	321 Feet	23 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	5280 Feet	5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? Yes No

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.
- Large UMA Facility – as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 10/12/2018

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

The Buildings and Building Units closest to the production facilities on the Damore pad are owned by Anadarko E&P Onshore LLC. These buildings are unoccupied and trigger an Exception Zone designation, however KMG felt that siting facilities closer to the Anadarko-owned, unoccupied buildings was a more conservative option than siting facilities to the east (and closer to the neighborhood) and avoiding the Exception Zone designation. The home located directly to the south is owned by CO 13 LLC, they have been informed of the proposed location. CO 13 LLC signed a NICO waiver and had stated they would sign other documents if needed.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 42—Nunn clay loam, 1 to 3 percent slopes

NRCS Map Unit Name: 82—Wiley-Colby complex, 1 to 3 percent slopes

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes No

Plant species from: NRCS or, field observation Date of observation: _____

List individual species:

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): _____

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 0 Feet

water well: 760 Feet

Estimated depth to ground water at Oil and Gas Location 24 Feet

Basis for depth to groundwater and sensitive area determination:

Farmer's Ditch: 0' Elev 4927'

Ditch: 52' S Elev: 4914'

Ditch: 440' NW Elev: 4934'

Loc Elev: 4921'

Nearest water wells:

760' W, Permit 35678-MH, depth 200', Static Water Level unknown, Elev 4922'

1466' SW, Permit 343-RN, depth 16', Static Water Level 8', Elev 4905'

Sensitive Area Determination: SENSITIVE AREA, downgradient surface water feature within 1,000'

Location is NOT in floodplain according to Weld County and FEMA

Water level calc

(SWL calc: $(4921 - 4905) + 8 = 24$)

Irrigation Ditch: We have revised access plans so that a ditch crossing will not be needed.

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area

Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)

- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments	<p>PLEASE ENSURE ALL CORRESPONDENCE ASSOCIATED WITH THIS PERMIT GOES TO ANALYST AND DJREGULATORY AS LISTED ON THIS PERMIT.</p> <p>The nearest building unit is currently vacant and remain vacant until development is finished.</p> <p>As of the current date and corresponding schedules, pad construction to commence following the approval of the Form 2A but no later than 1/15/2020. This will be followed by Production Drilling to commence approximately mid - March 2020. The approximate completions start date is mid November 2020 followed by a mid-December 2020 completions finished date. Interim reclamation to commence within three months post-completion operations due to this location being sited on irrigated crop land.</p> <p>Pipelines: Buried pipelines will be utilized to gather the gas and oil product from the location (3 gas pipelines, 1 oil pipeline). Both gas and oil pipelines will be constructed from steel of suitable wall thickness and material grade to meet the respective gathering systems design pressure. Gas pipelines will range in diameter from 4" to 20"; oil pipelines from 4" to 12". Capacity of pipelines will vary based on diameter. Pipelines will begin at the location and terminate at larger trunk lines in the area. Temporary above ground polyethylene water pipelines (diameter 10" – 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines.</p> <p>Flow Lines: 8 flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the well head to the production facility. The size of flow lines is typically 2". Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 100'.</p> <p>8 compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 100'.</p> <p>Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery, approximately 100'.</p> <p>Drilling fluids disposal: KMG will reuse water-based drilling fluids to the maximum extent possible, at which point they will either be land applied or taken to a licensed, commercial disposal site; the decision will be based upon laboratory analysis of fluids. KMG will reuse oil-based drilling fluids to the maximum extent possible, at which point they will be returned to the fluids manufacturer for reconditioning or disposal at a licensed, commercial disposal site.</p> <p>Cuttings disposal: If the surface owner authorizes, and if it is feasible for this location at the time of drilling, water-based cuttings will be disposed of onsite using bioremediation/solidification product. If the surface owner does not authorize onsite disposal and/or it is not feasible for this location at the time of drilling, water-based cuttings will be disposed of using a Centralized E&P Waste Management facility or a private spread field. Oil-based cuttings will be disposed of offsite and at a licensed, commercial disposal site.</p> <p>CUSTODY TRANSFER: Gas custody transfer occurs at the custody transfer meter located on the proposed production facility location. Oil custody transfer occurs at the LACT Unit located on the proposed production facility location. Oil is transferred from the LACT Unit into a pipeline owned by Anadarko Wattenberg Oil Complex LLC.</p>
----------	--

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

Signed: _____ Date: 11/01/2018 Email: DJREGULATORY@ANADARKO.COM

Print Name: JOHN PIEKARA Title: SR REGULATORY ANALYST

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 12/30/2019

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

<u>COA Type</u>	<u>Description</u>
Emissions mitigation	Operator shall not begin well drilling operations on the location until an Air Monitoring Plan has been submitted to the COGCC and approved by the Director.
Construction	Operator must implement site-specific best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect the Farmer's Ditch that bisects the location and the irrigation ditch located 52 feet south of the oil and gas location from a release of drilling, completion, produced fluids, and chemical products.
Drilling/Completion Operations	Green Completions -Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b.(3)C.
Planning	Operator shall post a copy of the approved Form 2A on the location during all construction, drilling, and well completion activities.
Material Handling and Spill Prevention	The location is in a sensitive area due to shallow groundwater, therefore, the operator shall line the secondary containment areas for the tanks (temporary and permanent) and separators with an impervious material.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	604c.(2).E. Multi-Well Pads: In order to reduce surface impact, this application is for a 8-well pad.
2	Planning	604c.(2).Q. Guy Line Anchors: Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.
3	Planning	604c.(2).R. Tank Specifications: A geosynthetic liner will be laid under the tanks on this location and a steel containment will be constructed. Storage tanks will be designed, constructed and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). KMG will maintain written records to verify proper design, construction and maintenance. All records will be available for inspection by the Director. Two 500 barrel skid-mounted frac tanks will be temporarily placed on-site for use of the pre-spud rig only. One tank will store water and the other will store water based mud.
4	Planning	604c.(2).S. Access Roads: KMG will utilize a lease access road from CR 13 for drilling, completions, and production operations, including maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.

5	Community Outreach and Notification	<p>305.a.(2) A Notice of Intent to Conduct Operations was sent to each building unit owner within the Exception Zone or Buffer Zone Setback. Recipients signed a 305.a (2) waiver, waiving the required 30 day timeframe.</p> <p>As a part of planning this proposed location, Kerr-McGee held multi-disciplinary Surface Impact Planning Meetings regarding the impacts and mitigations associated with this proposed location. The toll-free hotline number and email for the Anadarko Colorado Response Line will be posted at the entrance to the lease access road for stakeholders during drilling and completion operations at this proposed location. Courtesy Notifications will be sent to impacted stakeholders prior to drilling operations and again prior to completions operations, providing contact information for the Anadarko Colorado Response Line and online resources.</p>
6	Traffic control	<p>604c.(2).D. Traffic Plan: Prior to the commencement of operations, the operator will obtain access and ROW permits per Weld County and Larimer Codes if required and implement COAs or traffic control plans as required.</p> <p>KMG currently plans to use the water-on-demand system on this location which is a network of over 140 miles of underground pipeline that stretches the length of the 20-mile by 30-mile field to source and transport water to completions crews. This system eliminates more than 2,000 truck trips per day, also reducing associated concerns of traffic, noise, emissions and dust.</p>
7	General Housekeeping	<p>604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.</p>
8	General Housekeeping	<p>604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation. Upon completion of operations, the commercial trash bin will be removed from the location and disposed of in an appropriate manner.</p>
9	Storm Water/Erosion Control	<p>604c.(2).G. & 604.c.(3).B. Berm Construction: A geosynthetic liner will be laid under the tanks on this location and a metal containment will be constructed. Berms or other secondary containment devices will be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for 150% of the largest single tank. Berms and other secondary containment devices shall be inspected at scheduled intervals and maintained in good condition.</p> <p>Kerr-McGee will create tertiary containment by construction of a berm or diversion dike, site grading, or other comparable measures sufficient to further protect the Farmers Ditch located between the drill pad and Prowant Production facility, and the unmanned irrigation ditch located 52 feet south of this proposed oil and gas location.</p>
10	Storm Water/Erosion Control	<p>604c.(2).W. Site-Specific Measures: KMG maintains a Storm Water Management Plan that assesses erosion control for every KMG operated location. This location will be added to this plan once construction begins. This site will be inspected every fourteen (14) days during construction activities, every twenty-eight (28) days after construction is completed, and after any major weather event.</p>
11	Material Handling and Spill Prevention	<p>604c.(2).N. Control of Fire Hazards: KMG and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire. KMG will ensure that any material that might be deemed a fire hazard will remain no less than twenty-five (25) feet from the wellhead(s), tanks and separator(s).</p>
12	Material Handling and Spill Prevention	<p>606.A.d. Fire Prevention and Protection: KMG and its contractors will employ best management practices during the drilling and production of its wells and and will comply with appropriate COGCC rules concerning fire prevention. Flammable liquids will not be stored within (fifty) 50' of the proposed wellheads. If storage of flammable liquid is to be conducted within (fifty) 50' of the wellhead, sufficient safety measures will be implemented.</p>

13	Material Handling and Spill Prevention	604.c.(2)F - Leak Detection: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.
14	Material Handling and Spill Prevention	During the construction phase, we will ensure that on-pad compaction is adequate as to serve as a secondary barrier to protect shallow groundwater and prevent the migration of spills or leaks to shallow groundwater. In order to prevent incidental spills from impacting groundwater a liner will be placed beneath the rig during drilling. During completions secondary containment (liners) will be in place for heavy equipment, transfer manifolds and tanks (excluding fresh water tanks).
15	Dust control	805.c. Dust: Water will be placed on dirt access roads to mitigate dust as needed. Magnesium chloride will also be used as needed on access roads to further abate dust.
16	Construction	604c.(2).M. Fencing Requirements: The completed wellsites will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMG personnel will monitor the wellsites regularly upon completion of the wells. Authorized representatives and/or KMG personnel shall be on-site during drilling and completion operations.
17	Construction	803. Lighting: Site lighting shall be shielded and directed downward and inward toward operations to avoid glare on public roads and nearby Building Units.
18	Noise mitigation	604c.(2).A. Noise: Sound surveys have been conducted on each rig type and are utilized to anticipate any additional effective noise mitigation once a drilling rig is determined. At a minimum, and pending a safety review after construction of the location, sound mitigation barriers (sound walls) will be placed around the entire perimeter of the pad location to dampen noise and minimize impact to the nearby residences and to Weld County Roads 13 and Larimer CR 1 during drilling and completions. Should technological advancements allow for better noise mitigation at the time of drilling and completion operations on this location, Kerr-McGee will re-evaluate the most effective method at that time.
19	Emissions mitigation	604c.(2).C. Green Completions: Temporary above ground polyethylene water pipelines will deliver water to location operations from larger trunk lines to reduce truck traffic and minimize air pollution. Pipeline infrastructure is in place prior to completions operations to ensure saleable gas, once hydrocarbons are cut, is sent directly to sales without flaring during flowback. Environmental Control Devices or Volatile Organic Compound (VOC) Combustors will be used to control working and breathing vapor losses for oil and water tanks.
20	Odor mitigation	805b. Odors: KMG will comply with the provisions of 805.b. Additional BMPs for the Damore 5-18HZ location are: 1) the storage of excess drilling fluid (e.g., fluid not being used in the active mud system) in closed, upright tanks; and 2) the use of an odor neutralizer in the active mud system.
21	Drilling/Completion Operations	604.c.(2)B - Closed Loop Drilling-Pit Restrictions Closed Loop Drilling System: KMG will use a closed loop or "pitless" system for drilling and fluid management and will not construct a reserve pit.
22	Drilling/Completion Operations	604.c.(2)K - Pit level Indicators: All storage tanks used for active drilling operations (used in lieu of pits) contain pit level monitors with Electronic Drilling Recorders (EDR). KMG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges are used on tanks utilized for the surface rig.
23	Final Reclamation	604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.
24	Final Reclamation	604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a.(5)., once the well has been plugged and abandoned, KMG will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging.

Total: 24 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2479043	MULTI-WELL PLAN
2479045	WASTE MANAGEMENT PLAN
2479063	OTHER
2479064	NRCS MAP UNIT DESC
2479067	RULE 306.E. CERTIFICATION
2479068	CORRESPONDENCE
2479072	CORRESPONDENCE
2479073	ACCESS ROAD MAP
2479331	CORRESPONDENCE
2479332	FACILITY LAYOUT DRAWING
2479335	OBJECTIVE CRITERIA REVIEW MEMO
401801129	FORM 2A SUBMITTED
401815085	HYDROLOGY MAP
401815088	LOCATION DRAWING
401815090	PRE-APPLICATION NOTIFICATION CERTIFICATION
401817105	LOCATION PICTURES
401818675	WAIVERS

Total Attach: 17 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	Final review task passed.	12/27/2019
Final Review	Operator held a community meeting on December 12, 2019 with invitations sent to Building Unit (BU) occupants within 2,000 feet of the proposed location. This was done in lieu of the operator voluntarily sending notices with information regarding the CDPHE health study to all BU occupants within 2,000 (see comment from 11/19/19).	12/27/2019
Final Review	Rule 604.a.(1)A Exception Zone box was incorrectly checked. Contacted operator via email and unchecked the box.	12/27/2019
Permit	Updated contact with current employee Updated Local Government Information with the WOGLA permit number provided by the operator.	12/23/2019
OGLA	The Objective Criteria Review Memo (Doc #2479335) is attached to this Form 2A. Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	12/20/2019
OGLA	Operator updated the date of construction and interim reclamation starts, provided a BMP to protect groundwater from impacts during well drilling, revised the Dust mitigation, Lighting mitigation, and Odor mitigation BMPs, updated the Noise mitigation BMP, confirmed the nearest Building Unit is vacant and will remain vacant until development is completed, & indicated that Windsor and Johnstown were contacted about their planned operations.	12/18/2019
OGLA	Per the operator: The Town of Windsor was contacted on 9/19/19 via email to advise of the proposed oil and gas development for the Damore wells and production facility. No comments received from the Town of Windsor. The Town of Johnstown was contacted on 9/26/19 via email to advise of the proposed oil and gas development for the Damore wells and production facility. No comments received from the Town of Johnstown.	12/18/2019
OGLA	Operator provided the Local Government Information and cultural distances to the nearest School Facility, School Property Line, & Child Care Center.	11/21/2019
OGLA	ON HOLD - Waiting on operator to send notice letters to Building Unit residents within 2,000 feet of the location.	11/19/2019

Permit	Multi-well plan has been reviewed and is consistent with the submitted APDs and the approved DSU. Docket #190100006 was heard at Commission hearing in March 2019; DSU Order 407-2796 was approved effective March 2019. Permitting task has been passed.	10/25/2019
OGLA	Operator provided the following responses to the Director's Objective Criteria that were triggered: * Oil and Gas Locations within 1,500' of a Building Unit. - Operator has provided the required 604.c.(2) & 604.c.(3) BMPs * Oil and Gas Locations within 1,500' of a municipal boundary, platted subdivision, or county boundary - The WOGLA has been approved. Larimer County LGD was notified during the WOGLA Notification Process as required. They did not provide any comments. WCR 13 / LCR 1 is under the jurisdiction of Weld County. Access Permit was approved by Weld County and is available upon request. The EAP (Emergency Action Plan) was approved by both Weld County OEM and Windsor Severance Fire District. No action was required by Larimer County on this EAP * Oil and Gas Locations within a Sensitive Area for water resources - Operator concurred with a COA to protect shallow groundwater. * Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels - coordination with local emergency responders from Weld County OEM and from the Windsor Severance Fire Protection District were completed in the EAP	05/24/2019
OGLA	Per the operator, the nearest production facility to a Building is a temporary generator. The nearest tank is 202 feet from a Building. The distance to the property line is from a temporary tank that has a 9 foot width.	05/22/2019
OGLA	This proposed Oil & Gas Location triggers the following Director's Objective Criteria: * Oil and Gas Locations within 1,500' of a Building Unit. * Oil and Gas Locations within 1,500' of a municipal boundary, platted subdivision, or county boundary. * Oil and Gas Locations within a Sensitive Area for water resources * Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels. Contacted operator to discuss additional measures (e.g. BMPs, COAs, etc.) to protect public health, safety, welfare, environment, and wildlife from impacts pursuant to SB 19-181.	05/22/2019
OGLA	Operator concurred with listing meter buildings and air compressors in the Facilities section, updated the Related Remote Location section, provided the required 604.c.(2)G & 604.c.(3) B - Berm Construction BMP, provided BMPs for Lighting mitigation, Closed Loop Drilling, Green Completions, Leak Detection, & Pit level Indicators, provided the required NRCS Map Unit Description attachments, provided more info on how the Farmers Ditch will be crossed to access both sides of the location, and provided the Rule 306.e. Certification letter.	05/22/2019
OGLA	Requested operator concur with listing meter buildings and air compressors in the Facilities section, update the Related Remote Location section, provide the required 604.c.(2)G & 604.c.(3)B - Berm Construction BMP, provide BMPs for Lighting mitigation, Closed Loop Drilling, Green Completions, Leak Detection, & Pit level Indicators, provide the required NRCS Map Unit Description attachments, provide more info on how the Farmers Ditch will be crossed to access both sides of the location, and provide the Rule 306.e. Certification letter. Due by 7/10/19.	05/10/2019
OGLA	Operator provided revised Multi-Well Plan and Waste Management Plant attachments.	04/04/2019
Permit	Passed completeness.	11/27/2018
OGLA	Passed Buffer Zone completeness review.	11/14/2018
OGLA	Did not pass completeness review - missing Facility Layout Drawing, box not checked for Exception Zone. Contacted Operator and pushed to Draft.	11/13/2018

Total: 19 comment(s)