



Kerr-McGee Oil & Gas Onshore LP

Best Management Practices

**Acacia 13-17HZ – Well Pad and Facility
SW/4 SW/4 Section 17, T2N R63W 6th P.M.**

Keenesburg, Colorado

November 2023

1. All loadlines shall be bullplugged or capped.
2. Good housekeeping measures will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils. Housekeeping practices include routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage.
3. The completed wellsite will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMOG personnel will monitor the wellsite upon completion of the wells. Authorized representatives and/or KMOG personnel shall be on-site during drilling and completions operations.
4. An environmental assessment will be conducted immediately prior to pad construction, drilling, and completion operations.
5. KMOG will immediately conduct stormwater inspections after a storm event at active construction locations. At idle locations stormwater inspection will occur within 72 hours.
6. KMOG will perform bi-weekly stormwater inspections and post-precipitation or melt response, based on the COR40 permit.
7. KMOG will use a Modular Large Volume Storage Tank during completions.
8. KMOG recycles 100 percent of liquid and slurry non-produced E&P wastes streams from drilling and well preparations to offset freshwater use in completion operations.
9. KMOG will refuel vehicles only on impervious surfaces and never during storm events.
10. KMOG will ensure that a fueling contractor is present during the entire fueling process to prevent overfilling, leaks and drips from improper connections.
11. The ECMC permit will incorporate other agency water quality protection plans by reference as applicable (e.g. stormwater management plan).
12. KMOG will install adequate down gradient controls if they cannot have a control at the source.
13. Outlet protection will be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel.
14. KMOG will ensure that control measures are designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices.
15. it is infeasible to install or repair a control measure immediately after discovering a deficiency, KMOG will document and keep on record in the stormwater management plan:
 - a. a description of why it is infeasible to initiate the installation or repair immediately; and
 - b. a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.
16. KMOG will properly characterize and dispose of all waste (i.e. the specific landfill/waste disposal location allows for acceptance of the waste stream)
17. KMOG will properly test for and dispose of TENORM.
18. KMOG will not use fracturing fluids which contain PFAS compounds.
19. KMOG will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard.

20. If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination.
21. If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions.
22. If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water.
23. KMOG participates in the Colorado Preparedness Resources Network (CPRN), which has a non-PFAS foam location identification to be sure, in an emergency, that we would have non-PFAS foam available. If the non-PFAS foam is utilized on a KMOG location, it is replenished by KMOG.
24. All storage tanks used for active production rig drilling operations, used in lieu of pits, will contain pit level monitors with Electronic Drilling Recorders (EDR). KMOG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges will be used on tanks associated with the surface rig.
25. KMOG will anchor all tanks to resist flotation.
26. KMOG will not use produced water or other process fluids for dust suppression.
27. KMOG will create an access road off WCR 398 to access the location for drilling, completions, and production operations, including maintenance of equipment. The road will be properly constructed and maintained to accommodate for emergency vehicle access.
28. The completed wellsite will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMOG personnel will monitor the wellsite upon completion of the wells. Authorized representatives and/or KMOG personnel shall be on-site during drilling and completions operations.
29. KMOG will only construct during day light and there will be no nighttime operations that require lighting.
30. KMOG commits to monitoring ambient air quality on site during drilling and completion operations and for the first 6 months of production in accordance with Reg. 7
31. KMOG will properly maintain vehicles and equipment.
32. KMOG will use non-emitting pneumatic controllers.
33. Rig power will be supplied by two natural gas engines with a battery energy storage system and an automated engine management system. As necessary, a diesel generator will be used to supplement additional power during the highest demand portions of the wells.
34. KMOG will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified)
35. KMOG will utilize its green flowback setup, which is an emissions-controlled process that does not utilize tanks for oil storage, other than maintenance tanks. Oil will be piped off location. Produced water will be trucked off location.
36. KMOG will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations.

37. KMOG will control emergency flaring with an enclosed combustor with a destruction efficiency of 98% or better.
38. KMOG will control bradenhead/casinghead venting.
39. KMOG will use pipelines to transport water for hydraulic fracturing to the location.
40. KMOG will have adequate and committed pipeline take away capacity for all produced gas and oil.
41. KMOG will shut in the facility to reduce the need for flaring if the pipeline is unavailable.
42. KMOG will use tier IV or better engines for hydraulic fracturing.
43. KMOG will encourage contractors to use higher tier engines when available.
44. KMOG will use lease automated custody transfer (LACT) system for liquid hydrocarbons to remove/reduce the need for truck loadout.
45. KMOG will use group III drilling mud.
46. KMOG will cover trucks transporting drill cuttings.
47. KMOG will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore.
48. KMOG will ensure that all drilling fluid is removed from pipes before storage.
49. Ozone mitigation on forecasted high ozone days: KMOG will eliminate use of VOC paints and solvents.
50. Ozone mitigation on forecasted high ozone days: KMOG will minimize vehicle and engine idling.
51. On forecasted high ozone days, KMOG will reduce truck traffic and worker traffic as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations.
52. On forecasted high ozone days, KMOG will postpone the refueling of vehicles as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations.
53. On forecasted high ozone days, KMOG will suspend or delay the use of fossil fuel powered ancillary equipment as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations.
54. On forecasted high ozone days, KMOG will reduce truck traffic and worker traffic as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations.
55. On forecasted high ozone days, KMOG will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning.
56. Temporary ECD(s) will be utilized to mitigate releases of emissions from temporary produced water storage tanks for the duration which the tanks are on location and being used.
57. Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate 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, KMOG shall not produce the wells without an approved variance.
58. KMOG will utilize its Integrated Operations Center (IOC) for real-time remote monitoring of these wells. The IOC will be able to shut in the wells remotely and dispatch personnel to a

location within 5-15 minutes. The IOC is staffed 24-hours per day, seven days per week, 365 days per year.

59. Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.
60. 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.
61. Once the wells have been plugged and abandoned, KMOG will identify the location of the wellbores with permanent monuments that will detail the well names and date of plugging.