

a. Preferred Option: It is the intent of the County that operators utilize closed-loop or modified closed-loop systems for drilling and completion operations in order to minimize or eliminate the need for earthen pits; however, notwithstanding the foregoing, where appropriate, and subject to prior County approval, the County generally supports: 1) the use of unlined drilling pits when bentonite or a similar clay additive is used during the drilling process, and 2) the use of lined single- or multi-well water storage pits in order to minimize the transport of water and promote recycling, subject to the requirements set forth in this subsection. Permitted modified closed-loop systems include oil and gas wells where air or fresh water is used to drill through the surface casing interval, defined as fifty (50) feet below the depth of the deepest aquifer, and a closed loop system is used for the remainder of the drilling and/or completion or recompletion procedures. Multi-well pits are defined as lined, engineered pits, constructed over an engineered base, with construction or liner specifications meeting or exceeding Commission pit lining rules, that will serve the functions of drilling, completion, and/or flowback pits for more than one well.

b. Water Storage Pits to Contain Fresh Water or Brine Water: Water stored in pits approved by the County and allowed under Commission Rules, must meet the definition of fresh water or brine water, except for water stored in pits listed in 2c below. Fresh water is defined as containing total dissolved solids (TDS) less than or equal to 5,000 milligrams/liter (mg/l). Brine water is defined as water produced from an oil and/or gas well with TDS of greater than 5,000 mg/l. The Operator is required to remove all free and visible oil within 24 hours of discovery. Upon closure of the pit, the Operator will ensure the protection of the public health and environment by following all Commission pit closure rules, including collecting analytical data to ensure compliance with state standards. As long as the pit is open and containing fluid, a representative water sample shall be taken every six months from the surface of the pit fluids, the first sample to be taken within 6 months of the pit becoming operational. Water quality data will also include an analysis of Sodium Adsorption Ratio (SAR). The County will review water quality data provided by the Operator every six (6) months. TDS, pH, and specific conductance can be measured with a field meter. TEPH (total extractable petroleum hydrocarbons), BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes), and SAR will be analyzed by an accredited laboratory. If the presence of TEPH and/or BTEX is indicated after County review and/or inspection, other water quality analyses may be required by the County.

c. Additional Pits that Require County Review and Approval: Skimming, settling, percolation, evaporation, and any type of netted pits are generally discouraged by the County; however such pits may be approved on a case-by-case basis through the Use by Special Review ("USR") process. A copy of the Pit Plan submitted to the Commission will be provided to the County at the same time as the plans are submitted to the Commission. Construction of these pits will be preceded by collection of "baseline" soil samples from the center of the planned pit at 6 and 18 inches depth. Soil samples will be analyzed for pH, Sodium Adsorption Ratio (SAR), and Electrical Conductivity (EC). The Operator shall stake and photograph from the center of the planned pit (toward north, south, east, and west directions) for inclusion in the County's copy of the Pit Plan. Upon closure of these pits, pH, SAR, EC, BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes), and TEPH (total extractable petroleum hydrocarbons) analyses may be required if there is evidence of leaks or spills in the immediate area of the pits.

d. Pits That Do Not Require County Approval:

Flare, Emergency, Plugging, and Workover pits will not require county review or approval prior to construction (unless within 1/4 mile of a residence as set forth below); however, the County will be copied on the notification(s) sent to the Commission and any pit plans, remediation plans, or analytical results submitted to the Commission.

e. Pit Setbacks: All pit construction within ¼ mile of

a residence

or water well is generally discouraged by the County and may have additional County requirements, such as fencing. Such pits will be reviewed on a case-by-case basis by the County.

f. Multi-Well Pits: In addition to any requirements stated

above, multi-well pits will be lined per the Commission's lining standards. If a multi-well pit is planned for use over a 2-year or greater period, the pit will be double-lined with leak detection. Fluids stored in multi-well pits will be circulated through a four-phase separator or an API-approved settling tank or similar equipment prior to such fluids entering the pit, specifically designed to remove solids and reduce hydrocarbon content and emissions. Retention time in a settling tank and the volume of the tank must be sufficient to separate out any floating, dissolved, or emulsified hydrocarbon phases. Lined multi-well pits may be inspected and/or reviewed on an as-needed basis, over the life of the pit, to determine if the water to be stored in the pit or already stored in the pit meets the definition of fresh water or brine water. Upon closure of the pit, the Operator will ensure the protection of the public health and environment by following all Commission pit closure rules, including collecting analytical data to ensure compliance with state standards. As long as the pit is open and containing fluid, a representative water sample shall be taken from the surface of the pit every six months. Additional requirements, such as fencing, may be required by the County, pre- or post-construction, if such a pit is determined by the County to be adversely impacting residences, water wells, or wildlife habitats and migrations.

g. Technological Advances: The County may require

additional measures, if new technological methods for pit construction or maintenance are developed pre- or post-construction and such methods are technologically sound, economically practical, and reasonably available to the Operator.

3. Berms. Berms shall be inspected by Operator on a weekly basis for evidence of discharge. Berms shall be inspected within 48 hours of a precipitation event.

4. Regular Meetings to Monitor and Discuss MOU Issues. The County and Operator agree to meet quarterly or as necessary, to monitor and discuss any pertinent issues associated with oil and gas facilities within the County.

5. Water Supply and Quality. In an effort to reduce truck traffic, where feasible, the Operator will identify a water source lawfully available for industrial use, including oil and gas development, close to the facility location, to be utilized by Operator and its suppliers. Operator will comply with the Colorado Department of Public Health and Environment requirements concerning water quality. Where feasible, temporary surface water

lines are encouraged and will be utilized. Operator may be permitted to utilize County Road Right-of-Way, and County drainage culverts, where practical, for the laying and operation of temporary water lines on the surface. If necessary, operator will bury temporary water lines at existing driveway and gravel road crossings, or utilize existing culverts, if available.

6. Baseline Water Quality Testing. Operator agrees to comply with the Commission's Statewide Groundwater Baseline Sampling and Monitoring Rule 609, and thereafter with Rule 609 as adopted or modified, in addition to the requirements provided herein. Facilities subject to the requirements of this section are oil and gas wellsites, tank batteries, compressor stations, pits/ponds, below-grade tanks and dehydration units. To the extent the requirements of Rule 609 and the requirements provided herein are in conflict, Operator will comply with the stricter standard.

a. Criteria and Protocol: Using the Commission's criteria and protocol for sample analyses, types, orientation, and number, Operator will test up to four available water sources within a one half (1/2) mile radius of a new oil and gas facility.

b. No available water sources within one half mile: If there are no available water sources located within a 1/2 mile radius of a new oil and gas facility, the Operator will test the nearest downgradient available water source that is within a one-mile of the oil and gas facility.

c. Private Water Well Owner Request. Operator agrees to conduct a baseline test of any water well requested by the owner, on a one-time basis, if such well is within a 1/2 mile radius of a new oil and gas well or facility, or if such well is determined to be the closest downgradient well that is within a one-mile radius of the oil and gas facility. The requirement to test a well upon request does not apply if the water well has already been tested by any Operator.

7. Spill and Release Management. Any spill or release that is reportable to the Commission shall be simultaneously reported to the County.

8. Weed Control and Management. Operator will be responsible for noxious weed control on any well pad, facility, or disturbed area, from the drilling or installation phase to the closure of the well or facility.

9. Noise. Operator shall provide and post 24-hour, 7 days per week contact information to deal with all noise complaints arising from Operator's oil and gas facilities.

10. Emergency Response Plan. Operator will provide the County with an Emergency Response Plan (ERP) to address all potential emergencies that may be associated with an oil and gas facility. Operator shall also provide a copy of such plan to all emergency

service providers that would respond to such emergencies. A “will-serve” letter must be obtained from the appropriate emergency provider(s).

11. Erosion Control. When required by the County’s Grading and Erosion/Sedimentation (“GESC”) Regulations, the Operator agrees to apply for and obtain a GESC permit through the Public Works and Development Department. The County will permit the Operator to submit a standard GESC plan applicable to all of the Operator’s oil and gas facilities in cases where GESC collateral is required, and the County will also accept a blanket collateral in a form and amount acceptable to the County so that separate collateral will not be required for each oil and gas facility with a GESC permit. A general performance bond in a form and amount acceptable to the County will also be allowed to guarantee performance under sections 10 and 11 of this MOU.

12. Private Roads. The Operator agrees to construct (unless already constructed) and maintain an access road designed to support an imposed load of 75,000 pounds that will accommodate emergency response vehicles such as, but not limited to, law enforcement, emergency command vehicles (cars/SUVs), ambulances, hazardous materials response vehicles, water tenders, and fire apparatus during construction and operation of new tank batteries (post MOU), new drilling activity and reworks or recompletions of existing wells, unless a local fire department or fire district agrees to a different or lesser standard or waived by the County. With respect to new roads to new tank batteries, the Operator agrees to construct access roads at least sixteen (16’) feet wide with at least four (4”) inch road base. Best efforts will be made to improve inadequate access to existing tank battery sites identified by the fire district or County, based on service calls and demonstrated problems of accessing the site. Operator and County agree that spot inspections of access roads may be done by the County and/or appropriate emergency response agency, at such County or agency’s sole risk and expense, to insure that emergency access in accordance with this section is maintained.

13. Public Roads.

a. Operator agrees to apply for and obtain access permits for its oil and gas facilities from the Public Works and Development Department. Requirements for the access permit may include the following: a) access location providing for a safe entrance/exit and utilization of main roadways to minimize impact /conflict with residents on local roadways; b) haul route and traffic data; c) pre/post inspection of roadways used by the Operator; d) collateral or bond to insure that road damage caused by the Operator is repaired; e) dust control (material used for dust control must be pre-approved by the County); f) road maintenance agreement during drilling phase; and g) payment of all applicable filing fees. Operator also agrees to exercise reasonable efforts to minimize heavy truck traffic on local roads within residential neighborhoods between the hours of 9 p.m. and 6 a.m. and further agrees to work with the applicable school district(s) to minimize traffic conflicts with school buses.

b. Operator agrees to obtain any legally valid and applicable oversize and/or over weight moving permit from the Public Works and Development Department for all vehicles that exceed legal vehicle dimensions or weights as specified by the Colorado Department of Transportation.

14. Floodplain. Any disturbance within a floodplain will be allowed if the Operator has obtained a Floodplain Development Permit from the County and has complied with all the County's legally adopted floodplain and engineering regulations. Pits will not be allowed in floodplains, as defined in the County's Stormwater Management Manual.

15. Painting of Oil and Gas Facilities. Except for such facilities that must be painted a certain color for safety reasons, Operator agrees to paint all new (post-MOU) production facilities with uniform, non-contrasting, non-reflective color tones and with colors matched to, but slightly darker, than surrounding landscapes.

16. Lighting. All permanent lighting of oil and gas well sites shall be directed downward and internally. Temporary lighting shall conform to the Commission's Rules and Regulations.

17. County Inspections. Operator agrees to allow County access to all oil and gas facilities for inspection, provided County personnel are equipped with all appropriate personal protection equipment (PPE), the personnel comply with the Operator's other and customary safety rules and the County is responsible for all costs and expenses of such inspections. The County shall use its best efforts to provide advance notice to the Operator prior to an inspection; however, the County reserves the right in its discretion to make spot inspections or to inspect without notice in the event of an issue potentially involving an immediate risk to public safety, health or welfare or damage to the property of another.

The County reserves the right to inspect pit locations prior to construction, during construction, and after construction. The County also reserves the right to contact the appropriate Commission area inspector if non-compliance issues are suspected or identified as a result of construction plan reviews, reclamation plan review, field inspections, or if non-compliance issues are not resolved as soon as possible.

18. County Land Use Approvals. The Operator understands and agrees that prior to the development or operation of any oil and gas facility in unincorporated portions of the County, that Operator must first obtain approval from the County pursuant to any validly adopted provisions in the Land Development Code. The Operator agrees and consents that the provisions of this MOU are to be included among any conditions for the issuance of any land use approval or permit issued by the County under its Land Use Development Code (LDC), unless, and to the extent, waived or modified in writing by the Director of the Arapahoe County Public Works and Development Department, or waived or modified on the record at a public hearing before the Arapahoe County Board of County Commissioners; further, the Operator understands and agrees that the provisions of this MOU shall remain conditions of such land use approval or permit regardless of the subsequent sale or other transfer of any oil and gas facilities, or interest therein, by the Operator.

19. State Oil and Gas Permit Approvals. The Operator agrees to include the contents of Exhibit A of this MOU in all Forms 2 and 2A that it submits to the Commission and consents to the inclusion of the contents of Exhibit A of this MOU as

conditions of the issuance of any permit or other form of approval by the Commission with regard to the location, development or operation of an oil and gas facility in unincorporated portions of the County, unless, and to the extent, waived or modified in writing by the Director of the Arapahoe County Public Works and Development Department, or waived or modified on the record at a public hearing before the Arapahoe County Board of County Commissioners; further, Operator understands and agrees that the provisions of this MOU shall remain conditions of permit or other form of approval regardless of the subsequent sale or other transfer of any oil and gas facilities, or interest therein, by Operator. The County through the LGD process described in the Commission's Rules may request that the Commission impose site specific conditions as part of the state permit process that are in addition to the Operator's practices or procedures agreed upon herein and the Operator may respond to same as set forth in the Commission's Rules. If the state permit has already been approved and the County and Operator are in agreement as to any subsequent, additional conditions to be placed on the state permit, the Operator agrees to apply to the Commission to modify the state permit by allowing such subsequent, additional conditions to be placed on the state permit.

20. Applicability. This MOU shall only apply to Oil and Gas Facilities for which Operator has applied for permits as of the date of this MOU and to any facilities with respect to which Operator receives Commission approval after the date of this MOU. This MOU shall not be construed to apply to Oil and Gas Facilities for which another operator applies for a permit even though the Operator may have an interest but is not the Operator, and does not apply to wells drilled by the Operator prior to the date of this MOU. Additional facilities may be exempted from some or all of the terms of this MOU, but only if in approved in writing by the Director of the Arapahoe County Public Works and Development Department or approved on the record at a public hearing before the Arapahoe County Board of County Commissioners.

21. Term. This MOU is effective upon the execution by both Parties and shall remain in effect so long as Operator, its subsidiaries, successors or assigns, are engaged in the development or operation of oil and gas facilities within the unincorporated portions of the County; provided, however, this MOU may be terminated by either Party with thirty (30) days prior written notice to the other Party. If there is a new development in state law, rules or judicial decisions that substantially affect any provision of this MOU, the Parties agree to negotiate in an attempt to update this MOU in light of same by a written amendment executed by both Parties. In the event this MOU expires or is otherwise terminated, the substantive requirements stated in this MOU shall survive and remain enforceable against the owner or operator of any oil and gas facilities that were permitted or otherwise approved during the term of this MOU, except to the extent waived or modified pursuant to the provisions of this MOU. Additionally, in the event this MOU expires or is otherwise terminated, no re-permitting of the wells shall be required solely as a result of the termination of this MOU.

22. Obligation of Funds. Nothing in this MOU shall commit either Party to obligate or transfer any funds to the other.

23. Force Majeure. Neither Party will be liable for any delay or failure in performing under this MOU in the event and to the extent that the delay or failure arises out of causes beyond a Party's reasonable control, including, without limitation, war, civil commotion,

act of God, strike or other stoppage (whether partial or total) of labor, or any law, decree, regulation or order of any government or governmental body (including any court or tribunal).

24. Authority to Execute MOU. Each Party represents that it has the full right and authority to enter into this MOU.

25. Governing Law. This MOU shall be governed and construed in accordance with the laws of the State of Colorado without reference to its conflict of law provisions.

26. Entire Agreement. Except as expressly set forth herein, this MOU embodies the complete agreement between the Parties hereto with respect to the subject matter hereof and supersedes and preempts any prior understandings, agreements, or representations by or between the Parties, written or oral, which may have related to the subject matter hereof. No amendment to this MOU shall be effective unless in writing, signed by the Parties.

27. Third Party Beneficiaries. Except as specifically stated herein, this MOU is not intended to, and does not, create any right, benefit, responsibility or obligation that may be enforced by any non-party.

28. Notices. All notices and other correspondence related to this MOU shall be in writing and shall be delivered by: (i) certified mail with return receipt, (ii) hand delivery with signature or delivery receipt provided by a third party courier service (such as FedEx, UPS, etc.), (iii) fax transmission if verification of receipt is obtained, or (iv) email with return receipt, to the designated representative of the Party as indicated below. A Party may change its designated representative for notice purposes at any time by written notice to the other Party. The initial representatives of the Parties are as follows:

29. Subsidiaries/Successors. The provisions of this MOU shall apply to all subsidiaries and successors-in-interest of the Operator with respect to any oil and gas facilities permitted or otherwise approved during the term of this MOU.

30. Default. If a Party defaults in the performance of an obligation under this MOU, the defaulting Party shall have ten (10) days to cure the default after receipt of written notice of such default from the non-defaulting Party, provided the defaulting Party shall be entitled to a longer cure period if the default cannot reasonably be cured within thirty (30) days and the defaulting Party commences the cure within such ten (10) day period and diligently pursues its completion; however, in the event that the default involves an issue that could have an immediate impact on public health, safety or welfare, or cause damage to property of another, the defaulting party shall immediately begin action to cure the default. Each alleged default shall be treated separately under this paragraph and notice of an alleged default shall not affect the processing of permit applications while the notice is being evaluated, contested or corrected. In the event of a default, the Parties shall be entitled to seek specific performance as well as any other available remedies.

31. Jurisdiction: Waiver of Rights. The parties acknowledge, understand and agree that this agreement shall not be used as evidence that either party has waived any rights to assert

its claims concerning the validity or extent of the County's land use jurisdiction. Nothing in this agreement shall be construed as an admission regarding the existence of proper jurisdictional authority or waiver by either party of any legal right or obligation, nor shall anything be construed as a bar to either party to seek any legal remedy available to it. The Operator agrees, however, that it will not exert jurisdictional or preemption arguments with respect to the specific performance obligations contained in this MOU.