

Operator BMP #	Rule Reference / Citation	Ursa BMP
1	<b>PLANNING</b>	
2	1	<ul style="list-style-type: none"> <li>Ursa conducts voluntary inspections and corrective actions of all locations at least monthly using a self-implemented checklist of key actions (including environmental) that require compliance with COGCC, Federal, and other state and county requirements.</li> </ul>
3	2	<ul style="list-style-type: none"> <li>Ursa will comply with CDPHE regulations regarding air permitting, compliance monitoring, inspections and reporting. All air sources will be assigned AIRS ID numbers by the CDPHE and tracked for compliance and reporting purposes. In addition, Ursa is required to track, monitor and report Greenhouse Gas (GHG) emissions to EPA annually.</li> </ul>
4	3	<ul style="list-style-type: none"> <li>Safety requirements and buffers as required by the COGCC 602, 603, and 606A and 606B Series Rules, among others, and the Office of Safety and Health Administration (OSHA) will be observed at all time. Daily safety briefings and Job Safety Assessments (JSA's) are routinely conducted in all phases of operations. In addition, Ursa employees a full-time safety manager to oversee all field contractors.</li> </ul>
5	4	<ul style="list-style-type: none"> <li>As part of the siting rationale and alternatives analysis, Ursa has developed a comprehensive fly-over tool allowing for viewshed analysis from selected points of interest proximate to the pad location in an effort to better illustrate proposed operations impacts to the surrounding community. The fly-over tool for the BMC F temporary water facility can be accessed through this link: <a href="https://skfb.ly/6nUHW">https://skfb.ly/6nUHW</a></li> </ul>
6	5	<ul style="list-style-type: none"> <li>Ursa held a LUMA consultation site visit in February, 2017. The following BMPs have been adopted as a direct result of the LUMA consultation process and are included and site-specific mitigation measures:</li> </ul> <p>Per request of Garfield County Vegetation Manager:</p> <ul style="list-style-type: none"> <li>Prior to delivery to site, equipment will be cleaned of soils and other materials remaining from previous construction sites.</li> <li>Equipment and material handling will be done on established sites to reduce the area and extent of soil compaction.</li> <li>Ursa commits to use only weed free straw or mulch and weed-free wattles for sediment retention work.</li> <li>Reclaimed areas will be stable and will be free from large rills and gullies, perceptible soil movement or head-cutting in drainages, slope instability on or adjacent to the reclaimed area</li> <li>Slopes will be stabilized using appropriate reshaping and earthwork measures, including proper placement of soils and materials.</li> <li>Topsoil will be salvaged from areas to be disturbed and managed for later use in reclamation. Topsoil stockpiles will be seeded to prevent erosion.</li> </ul>
7	<b>COMMUNITY OUTREACH AND NOTIFICATION</b>	
8	6	<ul style="list-style-type: none"> <li>Ursa has a dedicated phone line to address complaints and responds 24 hours per day, 7 days a week. All complaints received by Ursa are documented, investigated, responded to immediately with appropriate corrective actions and communicated to the complainant, landowner, county LGD and appropriate state agency officials. Coordination with Kirby Wynn, Garfield County LGD, will be ongoing to ensure the effectiveness of our complaint management process. The following phone numbers and websites are available to the community members to report complaints:                     <ul style="list-style-type: none"> <li>- Ursa complaint / 24 hr hotline: 970-620-2787</li> <li>- Ursa emergency / 24 hotline: 855-625-9922</li> <li>- Community Counts: 866-442-9034</li> <li>- Garfield County (Kirby Wynn): 970-987-2557</li> <li>- Colorado Oil &amp; Gas Conservation Commission: <a href="http://cogcc.state.co.us/complaints.html#complaints">http://cogcc.state.co.us/complaints.html#complaints</a></li> </ul> </li> </ul>
9	<b>TRAFFIC CONTROL</b>	
10	7	<ul style="list-style-type: none"> <li>In consultation with Garfield County and the local emergency response agencies (Fire/police), Ursa has developed a site-specific Emergency Response Plan and Haul Route Map which is communicated to local emergency response agencies and stakeholders, as well as contractors performing work at the location. The preferred/primary haul route for this location is the Upper Route (I-70 exit 75). The Lower Route (I-70 exit 72) shall be a secondary route.</li> </ul>
11	<b>CONSTRUCTION</b>	
12	8	<ul style="list-style-type: none"> <li>The construction of the BMC F Pad shall be limited to the hours of 7:00AM to 7:00PM, with the exception of emergencies and episodic events beyond Ursa's control.</li> </ul>
13	9	<ul style="list-style-type: none"> <li>Access road will be maintained as an all-weather access route for operator and emergency response. Accumulations of snow that prevent or limit access to the location will be removed within 24 hours or as soon as conditions allow after a weather event. The road will be timely maintained to prevent ruts, potholes and other damage.</li> </ul>
14	10	<ul style="list-style-type: none"> <li>An earthen berm will be constructed around the pad location as secondary containment and will be sized to hold 150% of the volume of the largest single tank in the containment. Black base will be used for areas where tanks will be placed to help alleviate permeability into soil should a leak occur.</li> </ul>
15	<b>DUST CONTROL</b>	
16	11	<ul style="list-style-type: none"> <li>The pad and access road will be graveled to reduce fugitive dust and maintained as required by COGCC rules. In addition, Operator will have water trucks onsite for dust abatement during construction. Water and other dust suppressants are used as required, dependent upon the level of activity, moisture conditions, etc. throughout all phases of operations. Ursa commits to ensuring truckloads of dirt, sand, aggregate materials, and similar materials are covered to reduce dust and PM emissions during transport.</li> </ul>
17	<b>NOISE MITIGATION</b>	
18	12	<ul style="list-style-type: none"> <li>Volume of the sound generated: Every use shall be so operated that the volume of sound inherently and recurrently generated does not exceed 70 dB(A) from 7:00 AM to 7:00 PM and 65 dB(A) from 7:00 PM to 7:00 AM, measured 350 feet from the edge of the pad. As set forth in COGCC Regulation 802(b), the noise levels shall be subject to an increase by 10 dB(A) for a period not to exceed 15 minutes in any one (1) hour period and cannot exceed 65 dB(A) for shrill or periodic impulsive noise. Complaint protocols shall be governed by COGCC Rule 802(c).</li> </ul>
19	13	<ul style="list-style-type: none"> <li>Lighting, noise, odors, dust and related nuisances are managed in accordance with COGCC 600 and 802, 803, 804 and 805 Series Rules, and in accordance with Ursa policies, procedures and checklists. Additional noise monitoring above and beyond COGCC regulations may be conducted by Ursa on a voluntary basis. If conditions warrant further mitigation at the time of operations, Ursa will request approval as necessary from the COGCC to implement additional measures.</li> </ul>
20	<b>MATERIAL HANDLING AND SPILL PREVENTION</b>	
21	14	<ul style="list-style-type: none"> <li>BMC F temporary water storage facility will be manned 24 hours a day while the facility is in use.</li> </ul>
22	15	<ul style="list-style-type: none"> <li>MAINTENANCE - Corrective actions relating to the tanks will have effected equipment repaired or replaced as necessary.</li> </ul>
23	16	<ul style="list-style-type: none"> <li>TANK INSPECTIONS - will be formally inspected quarterly under the Spill Prevention Control and Countermeasures (SPCC) plan.</li> </ul>
24	17	<ul style="list-style-type: none"> <li>Spill prevention and response are addressed in Ursa's Spill Prevention and Management Plan which includes training of employees and contractors personnel on at least an annual basis. Spill response includes notifications, reporting, response actions, remediation and corrective actions. As a BMP, Ursa tracks and cleans up all spills, including those that are not reportable.</li> </ul>
25	<b>WILDLIFE</b>	
26	18	<ul style="list-style-type: none"> <li>Ursa will operate in accordance with the Wildlife Mitigation Plan (signed with CPW in 2011) that allows for up to 15 well pads in the Battlement Mesa area (including within the PUD). Ursa has met with CPW to determine the appropriate BMP implementation and has completed all wildlife mitigation commitments required per the 2011 Wildlife Mitigation Plan in the Battlement Mesa area.</li> </ul>

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27	19	<ul style="list-style-type: none"> <li>• The Ursa BMC A, L and F Pad locations were provided to CPW and analyzed as part of the Antero (now Ursa) Battlement Mesa Wildlife Mitigation Plan (WMP). The terms and conditions agreed upon within the WMP document are still adequate to avoid, minimize, and mitigate any impacts to wildlife from the proposed actions. Agreed upon BMPs from the WMP document have been sent for inclusion as an attachment to the Form 2A permit and are listed below:</li> <li>• Annual raptor and other bird surveys will be conducted in accordance with protocols provided by CPW.</li> <li>• Location visits during the production phase of operations (post drilling and completion for all wells on a well pad location) will be restricted when/where possible to between the hours of 10am and 3pm to minimize impacts to wildlife unless operational concerns warrant pad visits outside this timeframe.</li> <li>• Buried water and gas pipelines will be utilized as means to reduce truck traffic and impacts to wildlife.</li> <li>• Maintaining a ¼ mile no surface occupancy buffer around active bald eagle nests.</li> <li>• Bury all gas and water pipelines adjacent to roads whenever possible.</li> <li>• A weed management plan will be developed and implemented to monitor and control noxious and invasive weeds.</li> <li>• Noxious weed control includes three treatments per year.</li> <li>• Existing weed infestations will be mapped prior to the development of each pad, access road and pipeline when practicable.</li> <li>• Ursa has completed all habitat restoration contributions contained within the WMP.</li> </ul>
28	<input type="checkbox"/> GENERAL HOUSEKEEPING	
29	20	<ul style="list-style-type: none"> <li>• Weeds will be managed in accordance COGCC Rule 1003.f. and 1004.e. as incorporated into Ursa's Noxious Weed plan; to include up to three treatments per year depending upon the species being managed and mapping as needed, throughout the life cycle of the location (construction – final reclamation). Additionally, once construction begins, the Operator shall treat all List A, B, C noxious weeds within pad site perimeter and along access road according to Ursa's noxious weed management plan. This shall include up to three treatments annually by a licensed and certified herbicide applicator.</li> </ul>
30	21	<ul style="list-style-type: none"> <li>• The location will be managed in accordance with COGCC 907 and 907A Rules, which are incorporated into Ursa's Waste Management Plan, which addresses both E&amp;P and non-E&amp;P waste, including those under the jurisdiction of the CDPHE and EPA. The plan, in combination with Ursa's Spill Prevention and Management Plan, minimizes the potential for any exploration and production wastes, chemicals, fluids, etc. from leaving the location, using BMPs including berms, barriers, and use of spill control materials.</li> </ul>