

## Kubeczko, Dave

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**From:** Kubeczko, Dave  
**Sent:** Wednesday, November 10, 2010 7:23 AM  
**To:** Kubeczko, Dave  
**Subject:** FW: Antero Resources, Monument Ridge Pad, SESE Sec 18 T7S R95W, Garfield County, Form 2A (#400097171) Review

**Categories:** Brown Category

Scan No 2033496      CORRESPONDENCE      2A#400097171

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**From:** Hannah Knopping [mailto:hknopping@anteroresources.com]  
**Sent:** Wednesday, November 03, 2010 9:26 AM  
**To:** Kubeczko, Dave  
**Subject:** RE: Antero Resources, Monument Ridge Pad, SESE Sec 18 T7S R95W, Garfield County, Form 2A (#400097171) Review

Hi Dave,

Antero does concur with the conditions of approval listed below, including the reworded COA 25, for the **Monument Ridge Pad**.

Thanks,

*Hannah Knopping*  
**Permit Representative**  
**Antero Resources Corporation**  
1625 17th Street  
Denver, CO 80202  
Office: (303) 357-6412  
Cell: (720) 985-6647

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**From:** Kubeczko, Dave [mailto:Dave.Kubeczko@state.co.us]  
**Sent:** Tuesday, November 02, 2010 6:03 PM  
**To:** Hannah Knopping  
**Subject:** RE: Antero Resources, Monument Ridge Pad, SESE Sec 18 T7S R95W, Garfield County, Form 2A (#400097171) Review

Hannah,

I have reworded COA 25 as follows:

**COA 25** - Flowback to tanks only. Flowback and stimulation fluids shall be contained within tanks that are placed on the well pad in an area with additional downgradient perimeter berming. In addition, operator must implement odor controls during fracing operations.

Thanks.

Dave

**David A. Kubeczko, PG**  
**Oil and Gas Location Assessment Specialist**

Colorado Oil & Gas Conservation Commission  
Northwest Area Office  
707 Wapiti Court, Suite 204  
Rifle, CO 81650  
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Cell: (970) 309-2514  
[dave.kubeczko@state.co.us](mailto:dave.kubeczko@state.co.us)



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**From:** Hannah Knopping [mailto:hknopping@anteroresources.com]  
**Sent:** Tuesday, November 02, 2010 3:19 PM  
**To:** Kubeczko, Dave  
**Subject:** RE: Antero Resources, Monument Ridge Pad, SESE Sec 18 T7S R95W, Garfield County, Form 2A (#400097171) Review

Hi Dave,

I think our Environmental Department will be fine with these, but can you let me know what is triggering COA 25 (tertiary containment) just so I can relay that to them?

Thanks,

Hannah Knopping  
Permit Representative  
Antero Resources Corporation  
1625 17th Street  
Denver, CO 80202  
Office: (303) 357-6412  
Cell: (720) 985-6647

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**From:** Kubeczko, Dave [mailto:Dave.Kubeczko@state.co.us]  
**Sent:** Saturday, October 30, 2010 11:29 AM  
**To:** Hannah Knopping  
**Subject:** Antero Resources, Monument Ridge Pad, SESE Sec 18 T7S R95W, Garfield County, Form 2A (#400097171) Review

Hannah,

I have been reviewing the Monument Ridge Pad **Form 2A** (#400097171). COGCC COGCC would like to attach the following conditions of approval (COAs) based on the information and the data Antero has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

**Water Resources (Section 14):** Form 2A indicates the distance to the nearest surface water is 568 feet. COGCC guidelines require designating all locations within close proximity to surface water a ***sensitive area***. The following conditions of approval (COAs) will apply:

**COA 4** - Location is in a sensitive area because of its proximity to surface water; therefore, operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., BMPs associated with stormwater management) sufficiently protective of nearby surface water. If fluids are conveyed via pipeline, operator must implement best management practices to contain any unintentional release of fluids.

**COA 5** - Operator must implement best management practices to contain any unintentional release of fluids.

**Water Resources (Section 14):** Form 2A indicates the depth to groundwater to be 77 feet bgs for a well located 595 feet from the proposed well pad. COGCC guidelines require designating all locations with close proximity of a domestic water well (1/8 mile or 660 feet) a ***sensitive area***. The following conditions of approval (COA) will apply:

**COA 7** - Location is in a sensitive area because of proximity to a domestic water well and potential for shallow groundwater; therefore either a lined drilling pit or closed loop system (which Antero has already indicated on the Form 2A) must be implemented.

**COA 8** - Location is in a sensitive area because of proximity to a domestic water well and potential for shallow groundwater; therefore production pits must be lined.

**General:** The following conditions of approval (COAs) will also apply:

**COA 6** - Reserve pit (if constructed) must be lined or a closed loop system (which has already been indicated by Antero on the Form 2A) must be implemented during drilling; however, Antero will be using a closed loop drilling system, therefore, a reserve pit will not be constructed.

**COA 25** - Flowback to tanks only. Operator must submit a secondary and tertiary containment plan via sundry notice Form 4 for the tanks to Dave Kubeczko. In addition, operator must implement odor controls during fracing operations.

**COA 38** - The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.

**COA 39** - No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

**COA 46** - The surface soils and materials are fine-grained and highly unconsolidated; therefore the pad shall be constructed as quickly as possible and appropriate BMPs need to be in place both during, after well pad construction completion, as well as during all drilling and well completion operations. Standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater runoff.

COGCC would appreciate your concurrence with attaching these COAs (items 1, 2, and 3) to the Form 2A permit prior to passing the OGLA review. If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

David A. Kubeczko, PG  
Oil and Gas Location Assessment Specialist

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