

## Kubeczko, Dave

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**From:** Kubeczko, Dave  
**Sent:** Tuesday, May 17, 2011 5:08 PM  
**To:** Kubeczko, Dave  
**Subject:** FW: Oxy USA WTP, Cascade Creek 697-04D Pad, NWSW Sec 4 T6S R97W, Garfield County, Form 2A (#400153914) Review

**Categories:** Orange Category

Scan No 2033619      CORRESPONDENCE      2A#400153914

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**From:** Joan\_Proulx@oxy.com [mailto:Joan\_Proulx@oxy.com]  
**Sent:** Tuesday, May 10, 2011 3:53 PM  
**To:** Kubeczko, Dave  
**Subject:** RE: Oxy USA WTP, Cascade Creek 697-04D Pad, NWSW Sec 4 T6S R97W, Garfield County, Form 2A (#400153914) Review

Dave:

In reference to the COAs listed below for the 697-04D pad, please note:

1. Oxy concurs with items 2 and 4.
2. Oxy agrees with you making the change regarding the closer water well.

Thank you.

Joan

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**From:** Kubeczko, Dave [mailto:Dave.Kubeczko@state.co.us]  
**Sent:** Tuesday, May 10, 2011 9:55 AM  
**To:** Proulx, Joan M  
**Subject:** Oxy USA WTP, Cascade Creek 697-04D Pad, NWSW Sec 4 T6S R97W, Garfield County, Form 2A (#400153914) Review

Joan,

I have been reviewing the Cascade Creek 697-04D Pad **Form 2A** (#400153914). COGCC requests the following clarifications regarding the data Oxy USA has submitted on or attached to the Form 2A. In addition, COGCC would like to attach the following conditions of approval (COAs) based on the information on the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

1. **Soils (Section 12):** Form 2A indicates that the primary soil type is Map #55 – Parachute-Irigul complex, 5 to 30 percent slopes. COGCC's review indicates that the well pad extends onto a second soil type; Map #52 – Northwater-Adel complex, 5 to 30 percent slopes (COGCC has attached this report). This information is very helpful to our reclamation inspectors during the interim reclamation period.
2. **Water Resources (Section 14):** Form 2A indicates that the distance to the nearest surface water is 545 feet. COGCC guidelines require designating all locations within close proximity to surface water (the exact distance varies with the location and takes into consideration soil type, surface geology, initial grade/topographic slope, the grade/topographic slope adjacent to the location, vegetative cover, as well as other factors) a *sensitive area* and requiring the following conditions of approval (COAs):  
**COA 4** - Location is in a sensitive area because of close proximity to surface water, therefore, 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., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

**COA 5** - Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines.

1. **Water Resources (Section 14):** Form 2A indicates the depth to groundwater to be 200 feet bgs for a well located 15857 feet from the well pad. COGCC's review found a closer water well (Permit No. 32696-M-Cities Services Oil and Gas Corp, monitoring well) approximately 5544 feet to the west; with a total depth of 430 feet bgs and a depth to groundwater of 190 feet bgs. I believe this well is indicative of groundwater conditions in this area. I can make the change if you send an email with this request.
2. **General:** COGCC's review indicates that the well pad location is approximately 5040 feet to the east of the current edge of the area defined in the notice to operators (NTO) for drilling wells on the Roan Plateau in Garfield County. Although this well pad location does not fall within the current Roan Rim NTO boundaries, those boundaries are currently being revised, that coupled with the highly fractured nature of the surface material in the area around the Roan Rim, this location will be designated a **sensitive area**; and the following conditions of approval (COAs) will apply:

**COA 9** - Reserve pit (or any other pit used to contain/hold fluids) must be lined or a closed loop system must be implemented during drilling.

**COA 40** - The nearby hillside must be monitored for any day-lighting of drilling fluids throughout the drilling of the surface casing interval.

**COA 25** - Flowback and stimulation fluids must be sent to tanks to allow the sand to settle out before the fluids can be placed into any pipeline or pit located on the well pad. The flowback and stimulation fluid tanks must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material (per Rule 604.a.(4)). Under unforeseen upset conditions during flowback operations, operator may discharge flowback fluids directly into the pit, as needed (notice of intent to directly discharge into the pit must be sent to Dave Kubeczko; email [dave.kubeczko@state.co.us](mailto:dave.kubeczko@state.co.us)).

**COA 58** - Berms or other containment devices shall be constructed in compliance with Rule 604.a.(4) around crude oil, condensate, and produced water storage tanks.

**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 99** - Operator must comply with all provisions of the June 12, 2008 Notice to Operators (NTO) (which Oxy has indicated on the Form 2A) Drilling Wells Within ¾ Mile of the Rim of the Roan Plateau in Garfield County – Pit Design, Construction, and Monitoring Requirements.

COGCC would appreciate your concurrence with attaching these COAs (items 2 and 4) to the Form 2A permit prior to passing the OGLA review. The other issue (item 3) also needs to be addressed prior to permit approval. 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**

Colorado Oil & Gas Conservation Commission

Northwest Area Office  
707 Wapiti Court, Suite 204  
Rifle, CO 81650  
Phone: (970) 625-2497x5  
FAX: (970) 625-5682  
Cell: (970) 309-2514  
[dave.kubeczko@state.co.us](mailto:dave.kubeczko@state.co.us)



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