Ultra Petroleum/QEP Energy

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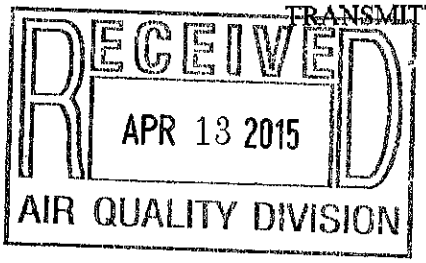

Steven A. Dietrich
Administrator, DEQ/AQD
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Cheyenne, WY 82002

Re: UQ Comments on Wyoming Air Quality Standards and Regulations for Nonattainment Area Regulations - Chapter 8, Section 6, Requirements for existing oil and gas production facilities or sources in the Upper Green River Basin, as revised on February 27, 2015

Dear Mr. Dietrich:

Thank you for the third opportunity to comment on the proposed revisions to the Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 8, Section 6. As described by our specific comments below, Ultra and QEP (UQ) have reviewed the proposed revisions. While UQ appreciates the revisions that were made based on comments provided by Industry during the first and second public comment period, and generally support the goals of this rulemaking, UQ continues to have significant concerns regarding the portion of the proposed rule that would require every open top tank to be emptied every 7 days, regardless of the amount of liquid in that tank. That portion of the proposed rule is based on inaccurate assumptions, provides no net environmental benefit, and may actually increase emissions and impacts on other important resources in the Upper Green River Basin by increasing truck traffic.

As you know, the open-top tank emptying requirement in the rule is as follows:

1.) ***Chapter 8, Section 6(c) Flashing Emissions at an Existing Facility or Source as of January 1, 2014 section (i) (C) states the following:***

"(C) Emergency, open-top and/or blowdown tanks shall not be used as active storage tanks but may be used for temporary storage.

(II) If emergency, open-top and/or blowdown tanks are utilized, they must be emptied within seven (7) calendar days."

Chapter 8, Section 6(c) Flashing Emissions at an Existing Facility or Source as of January 1, 2014 section (h) (ii) (D) states the following:

(D) Records of the date, duration, and reason for emergency and/or blowdown tank usage, shall be maintained pursuant to Subparagraph (c)(i)(C) of these regulations.

UQ raised well-supported objections to this language during the second commenting period, and the Division's Response to Comment document provided the following responses:

"The Division's intent for Subsection (c)(i)(C) is that emergency, open top, and/or blowdown tanks are not to be used as active storage tanks – but may be used for temporary storage. To ensure that

these tanks are not utilized as active storage tanks, the proposed regulation requires that the aforementioned tanks are emptied within 7 days. The Division has included the requirement to empty the tanks within 7 days in permit conditions and, consequentially, is also including it in this regulation to maintain consistency with previously issued Chapter 6, Section 2 permit requirements. These requirements are not more stringent than monitoring, recordkeeping and reporting requirements for new and modified wells permitted under the Chapter 6, Section 2, Oil and Gas Guidance (September 2013). Therefore, the Division concludes that if emergency, open-top, and/or blowdown tanks are utilized in accordance with the requirements of the proposed regulation, records satisfying Subsection (h)(ii)(D) are already being generated, and thusly, the recordkeeping requirement is not overly burdensome or duplicative.

As stated in the Division's October 31, 2014 Response to Comment, the proposed regulation is designed to require that emergency, open top, and/or blowdown tanks will not be used as active storage tanks. In order to guarantee these storage tanks are used on a temporary basis, the Division has included the requirement that emergency, open top, and/or blowdown tanks be emptied within seven (7) days. The Division has included the requirement to empty the tanks within 7 days in permit conditions pertaining to these sources, and is including it in this regulation to maintain consistency with previously issued Chapter 6, Section 2 permit requirements. It is not the Division's intent, however, to include blowdown tanks in the calculation for emissions due to the nature of this emission source. Additionally, the Division recognizes the practical limitations of emptying a tank based on its design (i.e. drain on the side of the tank). Therefore, if blowdown tanks are utilized in accordance with the requirements of the proposed regulation, it is not necessary to include blowdown tank emissions in the tank emission calculation. It is important to control flashing emissions from storage tanks to help protect public health in an Ozone Nonattainment Area, and therefore this requirement will not be removed from the proposed regulation."

Based on this response to comment, and the Division's failure to make changes to this portion of the rule, UQ is compelled to ask for reconsideration of very limited changes for the following four reasons:

1) **As shown in our previous comment response (provided again below), once flashing has occurred, emissions from these tanks are insignificant.**

Comment: As stated in UQ's previous comments, there are several streams other than blowdowns routed to the blowdown tanks, such as dehy blowcases and fuel gas scrubbers, and the tanks are used as storage tanks for these minor, low-emission streams. The volume routed to these tanks during well blowdowns is quite small. It is unnecessary to require tanks to be emptied after 7 days, as most emissions are from flash and will have already occurred by that time.

As reported to the Division in January of 2011 and enclosed with this letter, QEP Energy Company conducted emissions testing for QEP's test tank at the Stewart Point 5-20 Pad to provide quantitative analytical data for emissions seen through an infrared camera for test tanks used at the Pinedale Anticline. The results indicated that average VOC emissions were 0.0088 tons per year (17.6 pounds per year [*emphasis added*]) and HAP emissions were 0.0008 tpy from the tank. Based on this study, QEP has demonstrated that test tanks are insignificant emissions sources; therefore, it is unclear why these tanks would need to be emptied every 7 days. In addition to other environmental degradation and safety issues caused from increases in truck traffic, the emissions from perpetually emptying these tanks would lead to much higher emissions than the emissions currently coming from the tanks.

Furthermore, given the number of sources which discharge to these tanks, it would be impossible to show compliance with this requirement, without having trucks constantly traveling to each and every pad to drain inches of water from these tanks every 7 days. This previous emission study clearly illustrates that the increase in emissions from this truck traffic does not justify the environmental benefit from emptying these tanks as frequently as 7 days. Therefore, UQ would request that the division exempt sites which drain to a liquid gathering system from this requirement, or impose a more realistic volume based limit for emptying the tanks. To minimize truck traffic and set an enforceable limit, UQ suggests a volume limit for emptying the tanks of 100 barrels.

Your Response to Comments document (referenced above) states that flashing is the emissions source at issue and the reason the Division will not remove the requirement to empty open-top tanks every 7 days from the proposed regulation. Perhaps the most important point to be made is that *flashing emissions occur instantly when the liquids enter the tank. Emptying the tanks every seven days will not prevent these emissions. As the proposed rule is currently worded, all open top tanks at all well sites would need to be emptied every 7 days.*

The requirement to empty open-top tanks every 7 days will not only result in an insignificant reduction in emissions (as evidenced by QEP's tank emissions testing), but will act to contribute additional emissions from truck traffic (required to empty the tanks on such a frequent basis). Finally, the additional recordkeeping requirements may even further outweigh the utility of this proposed provision.

2) **The language in the proposed rule is not consistent with existing permit language related to open-top tank emptying requirements.**

The Division's Response to Comments document provides that the Division "included the requirement to empty the tanks within 7 days in permit conditions and, consequentially, is also including it in this regulation to maintain consistency with previously issued Chapter 6, Section 2 permit requirements." However, UQ has identified inconsistent conditions in separate permits on the Pinedale Anticline. Please note the following inconsistent permit conditions related to open-top and emergency tanks:

> "If the tanks are utilized, they must be emptied within seven (7) calendar days after the liquid volume reaches 200-barrels. Records of tank usage shall be maintained for a period of five (5) years and made available to the Division upon request."
>
> "If the emergency tanks are utilized, they must be emptied within seven (7) calendar days. Records of tank usage shall be maintained for a period of five (5) years and made available to the Division upon request."

Further, QEP does not have time constraints or documentation requirements for emptying emergency tanks in existing permits. The application analysis for QEP's permits state that the open top tanks on QEP's sites are "test tanks" and working and breathing losses are simulated using EPA's Tanks 4.0 software. Flash emissions of VOC and HAP are also estimated using ProMax simulation software. In addition, The Division required QEP to perform a source emissions test on a test tank located at the Stewart Point 5-20 Pad and those emissions were provided in our previous comment response. Based on these tank simulation runs and the testing performed, the Division considered these emissions to be *insignificant* and no conditions of approval for emptying the tanks are provided in the permits for QEP Energy.

The Division's assertion that the language, as it is currently proposed in the rule, is consistent with monitoring, recordkeeping and reporting requirements for new and modified wells permitted under the Chapter 6, Section 2, Oil and Gas Guidance (September 2013) is incorrect. *As the proposed rule is currently worded, and contrary to many existing permits as set forth above, tanks at all well sites would need to be emptied within 7 calendar days.*

3) **Additional record keeping will not add environmental benefit.**

As you can see from the above inconsistent permit conditions, records may currently be kept by some operators and not by others. While records are kept for blowdowns and emergency events, with VOC emissions as low as 17.6 lbs per year, additional record keeping requirements would be onerous and would not add environmental benefit, particularly for those low emission streams regularly routed to tanks. Keeping records of these small, low emission streams is not feasible.

4) **The increase in truck traffic needed to empty these open-top tanks is significant and outweighs any emission reductions associated with the seven-day emptying frequency.**

As the language is currently written in the proposed rule, open top tanks used for blowdowns or other emergency events with minor amounts of fluid in them would be required to be emptied every seven days. As you know, operations in the non-attainment area are connected to a liquids gathering system, specifically to prevent these tanks from being used as storage tanks, but overall to reduce the amount of truck trips needed to empty tanks on a frequent basis.

The U.S. Bureau of Land Management's 2008 Record of Decision for the Pinedale Anticline Production Area requires "Ultra, Shell and Questar (now QEP) to install a liquids gathering system to reduce the amount of truck traffic associated with production. This is expected to eliminate approximately 165,000 truck trips annually during peak production."

The increase in NOx and VOC emissions from 1 truck, operating 365 days per year (estimated at a 10 hour shift with continuous idle to empty the tanks) would be 8,718 lbs of NOx and 905 lb of VOC (calculations attached as Appendix A). Because the amount of fluid in the tanks is variable and unpredictable, it is difficult to say how many trucks would be needed to empty all of the tanks in the non-attainment area every seven days. The reduction in truck traffic specified in the Record of Decision was included based on evaluations in the Environmental Impact Statement. This reduction in truck traffic was not only to lower emissions, but also to reduce fugitive dust, noise and wildlife concerns. This rule runs contrary to the findings of this EIS.

Because the current wording of this proposed rule contains only a time requirement (e.g. 7 days) and not a volume requirement to empty the tanks, all tanks would need to be emptied every seven days to be compliant with the proposed rule. This is because minor amounts of fluid would be present in the tanks at all times. Given the constraints of documenting these small, low emission streams, the constant presence of fluid in the tanks and the current wording of the proposed rule, operators will be overwhelmed by a rule that provides the state minimal environmental benefit in return.

UQ understands that the Division does not want tanks to be used for storage; however, we believe that this can be corrected with a minor language change to the proposed rule as shown underlined in red below. Please note, UQ not only proposes a volume requirement to empty the open-top tanks (as we proposed in the past), but, in the alternative, UQ proposes an emission stream "category" requirement. To further explain, there are three types of emission streams that are directed to open-top tanks: blowdowns, emergency events and blow case pots. Blowdowns and emergency events are isolated events that can be recorded and addressed within a specific time frame (i.e. the 7-day emptying requirement). Blow case pots

are less isolated or succinct in form and result in very minor, low emission streams. The different characteristics between blowdowns/emergency events and blow case pots create a natural separation for regulatory purposes, as suggested below.

1.) ***Chapter 8, Section 6(c) Flashing Emissions at an Existing Facility or Source as of January 1, 2014 section (i) (C) states the following:***

"(C) Emergency, open-top and/or blowdown tanks shall not be used as active storage tanks but may be used for temporary storage.

(II) If emergency, open-top and/or blowdown tanks are utilized; they must be emptied within seven (7) calendar days, after the liquid volume reaches 100 bbls."

Alternatively, the language could state (to allow for the distinction between the streams going to the tanks as discussed in number 4 above):

(II) If emergency, open-top and/or blowdown tanks are utilized for a blowdown or emergency event; they must be emptied within seven (7) calendar days."

Chapter 8, Section 6(c) Flashing Emissions at an Existing Facility or Source as of January 1, 2014 section (h) (ii) (D) states the following:

(D) Records of the date, duration, and reason for emergency and/or blowdown tank usage, other than for minor, low-emission streams from blow case pots which are regularly routed to the tanks, shall be maintained pursuant to Subparagraph (c)(i)(C) or these regulations.

As stated above, UQ truly appreciates the Division's efforts to work with Industry and other stakeholders to address concerns during the rulemaking process. Thank you for allowing us to provide additional comment.

Sincerely,

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Construction Equipment

			EQUIPMENT ACTIVITY	Emission Factors		Emissions	
Equipment Type	Quantity of Equipment	Annual Operating Time (Days)	Daily Operating Period (hrs/day)	NOx (lb/hr)	VOC (lb/hr)	NOx (lb)	VOC (lb)
Water Truck	1	365	10	[illegible]	[illegible]	[illegible]	[illegible]
				TOTAL		[illegible]	[illegible]

NOTES:
Emission Factors are CARB SCAQMD 2010 off-road emission factors for diesel equipment

APPENDIX A