



February 10, 2020

Jason Thomas, WYPDES Permitting Supervisor  
WDEQ – Water Quality  
200 West 17th Street  
Cheyenne, WY 82002

**Re: WYPDES Permit No. WY0002062, Comments to Revised Draft Permit**

Dear Mr. Thomas:

Aethon filed a permit renewal application in 2017 to include future development actions and increase its ability to surface discharge. As you are aware, Aethon worked collaboratively with your agency throughout this renewal process, which included extensive SWAT & GEMMS modeling efforts, conducting routine status update meetings, and presenting modeling results to key stakeholders. Critical takeaways from those collaborations included Aethon obtaining a clear understanding of what future permit compliance conditions would be.

The extensive modeling effort demonstrated that a higher load limit is technically justified while maintaining downstream protections in accordance with WDEQ's antidegradation policy. The initial draft proposed an increased TDS load limit that still resulted in discharging less tons per month than what had been historically discharged. The collaborative process with your agency centered around drafting a defensible draft permit that satisfied Wyoming Water Rules & Regulations and was workable for Aethon. This was accomplished in the first draft.

The revised second draft now includes unprecedented additions that are not necessary, some of which are not practicable nor achievable for Aethon to implement. Aethon is discouraged by this outcome, especially given the extensive collaborative effort. It was our understanding that WDEQ fully defended the initial draft. Since the revised draft has removed the TDS load limit increase, Aethon no longer agrees with implementing layers of unprecedented additions, some of which are a clear departure from existing WYPDES process and decades of legal permitting precedence.



The ability to surface discharge produced water provides value to the State of Wyoming by contributing to the overall water shed and providing beneficial use to livestock and wildlife. Discharges from this field have been occurring for over 60 years, predating the existence of the Clean Water Act or any Class designation of streams. These legally permitted point source discharges represent background conditions and their ability to continue should be protected. Aethon has a right to develop its valid and existing mineral lease rights and compliance requirements cannot be a moving target.

Aethon appreciates the opportunity to provide the following technical comments on the revised draft permit:

- 1) The revised draft is not practical for immediate implementation as it threatens the ability to produce this asset. The following compliance requirements appear to be unprecedented additions:
  - a. Total Recoverable Barium is not an appropriate constituent for immediate compliance limits. In accordance with Table 2 from the WYPDES application for Oil and Gas Production Unit Discharges, Total Recoverable Barium is noted as applicable to “New Facilities Only” and is not an appropriate addition for renewal.
  - b. Total Sulfide is not an appropriate constituent for immediate compliance limits. Implementing a total sulfide limit of 20 ug/L would be unprecedented and impractical as laboratories cannot provide accurate detection to that level. In addition, Aethon disagrees with WDEQ concluding there is reasonable potential to exceed a hydrogen-sulfide standard when laboratory methods cannot detect to the level of the established standard. Aethon’s position is that inappropriate designations of Badwater and Alkali Creek were made when the presence of these legally permitted point source discharges were not considered. Aethon agrees with continuing to test and report total sulfide for monitoring purposes, as has been done historically.
- 2) “Other Routine Monitoring” includes unprecedented additions that are no longer necessary or impracticable to implement.
  - a. Regarding Instream Monitoring Points, Aethon now disagrees with conducting additional monitoring beyond the Downstream Monitoring Point (DMP1) as these conditions were unprecedented additions associated with the load increase that has been removed. Monitoring location WRC1 is more than 35 miles away from our outfalls (as the crow flies). At WDEQ’s request, Aethon and its predecessor voluntarily collected and provided WDEQ more than 60 consecutive months of extensive data at this location. That baseline data represents discharge loads greater than the revised draft



now authorizes. Aethon requests removal of Instream Monitoring Points (BWC1, BWB1, WRC1).

- b. Regarding screening for well additives and hydraulic fracturing fluids, Aethon understands that only 4 of the 14 listed parameters have established analytical methods (Methanol, 2-Propanol, Diethanolamine and Ethylene Glycol). Additional constituents may be available in the future so keeping the comprehensive list may be appropriate as long as it is clearly stated that testing cannot be conducted when no method exists. Aethon also notes this is an unprecedented addition to any WYPDES permit or EPA administered NPDES permit and may not be appropriate or necessary at this time considering the load increase has been removed.
  - c. Regarding Whole Effluent Toxicity Testing, Aethon now disagrees with the addition of this requirement, as this condition is another unprecedented addition associated with load increase that has been removed in the revised draft. In summary, new and unprecedented additions that were associated with monitoring efforts aligning with the ability to discharge additional volumes are not appropriate without a load increase. Because no load increase is authorized in the revised draft permit, this renewal should now be handled consistent with past precedence.
- 3) Achieving 230 mg/L chloride limit is not practical based on 1) existing technology and 2) commodity pricing. The average chloride level of these discharges while Neptune was running ranged from 1,765 to 1,918 mg/L (eDMR data 9/2015-3/2019). Implementing an end-of-pipe chloride limit of 230 mg/L, results in prematurely rendering this field uneconomic. Aethon understands this limit is associated with a blanket designation of Badwater Creek that was not appropriate, as presence of these legally permitted point source discharges was not considered. Aethon requests that the proposed chloride concentration limit requirement be eliminated based on the same “beneficial use for livestock and wildlife” justification used to eliminate the TDS concentration limit requirement. Alternatively, Aethon requests that the WDEQ maintain and defend its original UAA justification to the EPA which relied on the background chlorides being the historical discharge concentration of 2,419 mg/L. In the absence of these two legitimate arguments to grandfather discharge water quality, Aethon would request a 14-year timeframe be established for the chloride compliance schedule.
- 4) Aethon requests the State of Wyoming and WDEQ complete this permit renewal consistent with the previous historic permitting and the decades of legal permitting precedence. The extremely important allowances contained within Wyoming Water Quality Rules & Regulation Chapter 2, Appendix H regarding beneficial use of this resource have been clearly established. Aethon’s right to produce its valid and existing mineral lease rights essentially functions as appropriation of this water



for beneficial use through decades of legally permitted precedence. The authority of the state to appropriate quantities of water for beneficial uses clearly presides:

- a. Chapter 1 Wyoming Surface Water Quality Standards, Section 1. Authority states "Nothing in this definition is intended to expand the scope of the Environmental Quality Act... nor do these regulations supersede or abrogate the authority of the state to appropriate quantities of water for beneficial uses."
- b. Chapter 2 Permit Regulations for Discharges to Wyoming Surface Waters, Section 1. General Provisions (a) Authority states "...Nothing in these regulations is intended to expand the scope of the Environmental Quality Act...nor do these regulations supersede or abrogate the authority of the state to appropriate quantities of water for beneficial uses"

Aethon appreciates the opportunity to provide its comments to the revised draft permit. Please contact me if you have questions regarding Aethon's comments.

Sincerely,

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cc: Tom Nelson, VP Operations Support