Message

From: Dunn, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=3A95618CC07745F9A4B30B3F654CD05D-DUNN, JOHN]
Sent: 3/10/2020 3:35:50 PM
To: Madden, Venessa [Madden.Venessa@epa.gov]
Subject: FW: Comments for Meeting with Ameren on Thursday 3/12/2020
Attachments: Comments Responses Labadie Energy Center 316a notes.pdf

Any thoughts? --JD

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Tuesday, March 10, 2020 10:32 AM
To: Dunn, John <Dunn.John@epa.gov>; Curtis, Glenn <curtis.glenn@epa.gov>
Subject: RE: Comments for Meeting with Ameren on Thursday 3/12/2020

Thanks John.

Can EPA please review the last paragraph on page 10 of the responses? It starts with "We chose not to conduct..." and provide a response?

Thanks!

Pam Hackler

Pam Hackler, Environmental Scientist
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Water Protection Program; Industrial Wastewater Unit; NPDES Permitting
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We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

My normal office hours are from 7-3:30 M-F. Thanks!

From: Dunn, John <Dunn.John@epa.gov>
Sent: Monday, March 9, 2020 2:41 PM
To: Curtis, Glenn <curtis.glenn@epa.gov>
Cc: Hackler, Pam <pam.hackler@dnr.mo.gov>
Subject: FW: Comments for Meeting with Ameren on Thursday 3/12/2020

From: Dunn, John
Sent: Monday, March 09, 2020 2:41 PM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>
Subject: Comments for Meeting with Ameren on Thursday 3/12/2020

Introduction

The 316(a) variance process is not a change of state water quality standards and does not require EPA approval as with site specific changes to state Water Quality Standards (WQS). The 316(a) variance is a site-specific permit limit based on biological studies. The Clean Water Act states that the state "will require effluent limits more stringent than necessary to assure the projection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife…" With this in mind, the alternate limits, less stringent than state WQS, are primarily a biological decision on the part of the state, implemented through permit limits.

EPA agrees that the biological studies produced by Ameren collected a range of data suitable to provide the state with information needed to make scientifically based decisions.

Ameren has requested:

- A TDP of greater than 0.95 will be allowed under conditions when the river flow is less than 40,000 cubic feet per second or ambient river temperatures are greater than 87°F;
- A TDP of greater than 0.95 will be allowed in no more than 6 percent of the days in any calendar year; and
- On any day where the TDP is greater than 0.95, the mixing zone must be less than 40 percent of the volume of the river as calculated by the equations in the permit.

EPA has two basic comments:

Thermal Discharge Parameter (TDP)

The TDP measure is a modeled output to gauge compliance with state WQS which are based on degrees Fahrenheit. EPA supports the modeling approach and believe that model outputs are predictive of real-world conditions.

EPA believes that the conditions of the variance and permit limits/conditions should be expressed in calculated degrees F. The calculated temperatures could be based on the TDP calculations as explained in the permit Fact Sheet and the Permit itself. This keeps limits and the variance in the same terms as the underlying state WWS

While the modeled TSP calculations and fisheries analysis are well beyond the abilities of most people to understand, the bottom line should be in terms that are accessible to the lay public. The purpose of public notice of permits is to give the public access to the decision making of the permitting authority and a defense of those decision. The process should be as open as possible, with plain descriptions of outcomes and regulatory limits. Limits should be clear and enforceable.

Days as Units of Measure

The LEC is the largest powerplant in Region 7 and requests the most liberal limits of any powerplant in the region. Ameren has invested in complex and exacting modeling of heat within the Mixing Zone of the LEC discharge. EPA believes that monitoring should embody the precision contained in the underlying models.

Heat events occur every few years and appear to be more severe as time goes on. Heat events are driven by diurnal cycles where river temperatures fluctuate by about 1.5 degrees Fahrenheit on a daily basis. (See attached data from 2017). Capture of scientific and compliance data throughout these cycles is important.

Missouri's WQS for heat include a "Delta T" at the end of the MZ and a temperature Maximum at the end of the MZ. Missouri's WQS are defined in "time" and do not specify days as the unit of measure.

Heat output from the LEC is near steady state, so Delta T remains fairly stable. Maximum heat at the end of the MZ varies greatly during the diurnal cycle, so use of a Daily Average Temperature would underestimate the Maximum Temperature at the end of the MZ by about 0.75 degrees F. Again, MDNR WQS state that the Maximum should not be exceeded at any time.

In addition, basing the duration of the variance period on a percentage of days in the calendar year is imprecise and not the norm in other states or in existing MDNR permits. In Iowa and other states of the Upper Mississippi River, WQS allow for a Maximum "plus" temperature at the end of the MZ with a percentage of exceedence time (1% or 5%) allowed. MDNR's WQS are constructed in the same way. In those other states, exceedence times are measured in hours in permits.

MDNR has also measured hours of Maximum "plus" temperature in permits for AECI-New Madrid, Ameren-Rush Island, Ameren-Meramec, and Ameren-Sioux.

Conclusion

EPA maintains that the units of measure in the permit document should reflect the units in MDNRs WQS (degrees F) and terms of the 316(a) variance (degrees F, Maximum degrees F, Maximum plus degrees F, and percent time in hours) should be similar in structure to other Missouri powerplant permits.