



Missouri Department of Natural Resources
Water Protection Program - Engineering Section
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VIA ELECTRONIC MAIL ONLY

June 26, 2023

Re: Comments on Missouri Prime Beef Packers - Water Quality and Antidegradation Review - Permit No. MO-0113204

Dear Water Protection Program:

Great Rivers Environmental Law Center submits these comments on behalf of the Missouri Coalition for the Environment (“MCE”) and the Sierra Club Missouri Chapter (collectively “Commenters”) regarding the Missouri Department of Natural Resources’ (“DNR” or the “Department”) Water Quality and Antidegradation Review For the Protection of Water Quality and Determination of Effluent Limits for Discharge to Pomme de Terre River by Missouri Prime Beef Packers (the “Review”).

MCE is a nonprofit, non-partisan environmental advocacy organization that has been working statewide to protect clean air, clean water, healthy food, and access to green space for Missourians for nearly 54 years. MCE represents over 800 members across the state of Missouri.

The Sierra Club Missouri Chapter seeks to amplify the power of its 29,500 members and supporters to defend all citizens’ right to a healthy world. Sierra Club’s purpose is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth’s ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

Both MCE and Sierra Club Missouri Chapter have been contacted by residents in the vicinity of the Missouri Prime Beef Packers meat processing facility (the “Facility”) who use the Pomme de Terre River for recreational purposes and are concerned about the potential effects of the proposed discharge on water quality in the area. Commenters respectfully request that the Department take into account the following areas of concern before approving the new discharge:

I. Effluent Limits

Commenters have various concerns about the effluent limits proposed in the Antidegradation Review. First, the Facility has a history of violations that brings into question Missouri Prime Beef Packers’ (the “Company”) ability to meet the proposed limits. The Review also does not confirm the frequency of proposed effluent monitoring and reporting nor contain assurances that monitoring will occur for all contaminants of concern. Additionally, it is extremely unclear whether the experimental iLeaf technology will be sufficient to meet the proposed limits, and whether the microorganisms used in the process will be present in the discharge. Lastly, Commenters are concerned with the modeling used to create the effluent limits, as the dataset(s) and methods used by the Department to produce the Antidegradation Review and by Cochran Engineering as part of the discharge application were not provided in the Review posted for public comment. It is therefore difficult for the public to assess the protective ability of the proposed effluent limits for each contaminant of concern, especially in light of the limited public data on water quality (*see infra* Section C).

A. Violation History

Missouri Prime Beef Packers has a troubling record of water permit violations that brings into question the Facility’s ability to abide by the effluent limits set out in the Review. Although the Review mentions that the Facility “has been cited for wastewater running off the site and for issues with the land application equipment,”¹ this is a significant understatement. Prior to the Company’s arrival in 2021, the Facility itself had a long history of noncompliance, with eight letters of warning and 10 notices of violation (“NOV”) issued to the Facility between 2012 and 2019. Missouri Prime Beef Packers began operating at the Facility in 2021 and continued this pattern. Since June of 2021, there has been one letter of warning and four NOVs issued to the Facility. Currently, there remain two outstanding NOVs that have not been officially resolved with a return to compliance.

¹ Missouri Department of Natural Resources, *Water Quality and Antidegradation Review For the Protection of Water Quality and Determination of Effluent Limits for Discharge to the Pomme de Terre River by Missouri Prime Beef Packers* (May 2023).

The Facility's history of failing to submit timely Discharge Monitoring Reports ("DMRs") is particularly concerning here. How can the Department evaluate the effectiveness of the iLeaf technology and the ability of the Facility to meet the effluent limits when the Company has consistently refused to submit timely DMRs? This is not a hypothetical concern, as the Company has failed to submit DMRs as recently as the first quarter of 2023. The Review states that influent monitoring is required for total phosphorus and total nitrogen and that weekly effluent monitoring is required for *E. coli* and is recommended for other parameters, highlighting the importance of these monitoring requirements in light of the uncertainty surrounding the use of iLeaf technology.² However, the Review does not spell out these monitoring requirements and does not include reporting requirements. Commenters understand that these requirements are likely to be included in any permit renewal, but stress that all pollutants of concern should have monitoring requirements and that they should be as stringent as possible under the law, especially considering the Company's prior monitoring and reporting violations and the proposed use of untested technology at the Facility. The lack of discussion in the Review regarding a contingency plan addressing all the discharged contaminants is concerning, as only contingency measures to treat *E. Coli* and fecal coliform using chlorine are mentioned. Commenters are concerned about the possibility that iLeaf technology proves inadequate and urge the Department to address contingency planning for all contaminants of concern in advance of any approval.

The consistency of these monitoring and reporting violations, various operation and maintenance violations at the Facility, as well as the Company's failure to timely submit a permit renewal application demonstrate that the Company has and will continue to flagrantly violate the law as long as there are no significant consequences. Facilities with this type of disregard for the law are not the type of facilities where the Department should be permitting additional discharges and allowing the use of untested technology to meet effluent standards. Commenters request that the Department, at the very least, ensure that the Facility is in compliance with its existing obligations before allowing an additional discharge.

B. iLeaf Technology

Commenters are extremely concerned about the Facility's use of iLeaf, an experimental technology, in order to meet proposed effluent limits. The Review states that iLeaf is in use at one other facility in Arkansas, but does not name the facility or provide information on the length of time iLeaf has been in use there. Internet searches for information regarding the company iLeaf Technologies and this water treatment system turned up no further details beyond what is contained in the Department's Review, demonstrating the difficulty of obtaining information about this technology for the general public. The information on this technology provided in the Review raises its own concerns.

² *Id.* at 5.

As a baseline matter, the Review does not make it clear whether the unnamed microorganisms introduced in the holding lagoons will be present in the discharge into the Pomme de Terre River. If these microorganisms will be present in the discharge, this would be extremely problematic, as the proprietary nature of the technology makes it impossible for the public to understand and investigate any potential effects on water quality or human health. Additionally, the microorganisms would likely constitute a “water contaminant” under § 644.016(24), RSMo, and the discharge of such a contaminant into Waters of the State would therefore violate § 644.051(1), RSMo. Because there is so little information available on the nature of the microorganisms used in the iLeaf process, it is hard for Commenters to pinpoint their potential effects. However, Commenters are concerned that the presence of these microorganisms in the discharge could have negative effects on wildlife as well as potential effects on the River’s Whole Body Contact designated use.

The Commenters are concerned about the lack of information given on the iLeaf technology’s ability to meet the proposed effluent limits. The Alternatives Analysis Comparison table in the Review appears to provide some information, but does not specify if the values in the table are meant to reflect the predicted capability of iLeaf as a treatment system.³ If this table does provide that type of information, then it only addresses iLeaf’s capabilities on BOD₅, TSS, Ammonia as N, *E. coli*, and Total Phosphorus. This would leave iLeaf’s ability to treat several contaminants of concern unquantified in the Review. Additionally, the iLeaf values reported for BOD₅, TSS, and Ammonia as N in the Alternative Analysis table are too high to confidently say that the monthly average effluent limits would be met. While the predicted treatment level for these contaminants may adequately address the daily maximum effluent limits, the Review does not provide detailed enough information to know if effluent levels would be low enough to achieve the lower monthly average limits. Commenters request further verification of iLeaf’s theoretical ability to meet the effluent limits be obtained by the Department and shared with the public. This request includes iLeaf’s capabilities regarding total nitrogen, fecal coliform, oil and grease, and total residual chlorine.

Additionally, Commenters are concerned about the ability of the Facility to meet its Total Residual Chlorine (TRC) effluent limits in the event of iLeaf technology failure. The Company told DNR that they would like to maintain the ability to treat their effluent with chlorine in the event iLeaf cannot adequately treat *E. Coli* and fecal coliform. The calculated TRC effluent limits are 20.57 µg/L for the daily maximum and 10.25 µg/L for the monthly average limit. The Review makes it clear that monitoring and reporting are particularly important here considering the untested nature of the iLeaf technology.⁴ However, the Review then goes on to state that there

³ *Id.* at 12.

⁴ *Id.* at 5.

is no practicable way to monitor for TRC at a level that meets the calculated effluent limits, thereby justifying the use of the < 130 µg/L figure contained in Table 3.1 to determine compliance. This is problematic for two reasons: 1) the Department cannot say with confidence if the iLeaf technology will be effective and 2) in the event of iLeaf failure to treat *E. Coli* and fecal coliform, the Department is left with a situation where it cannot confidently verify the TRC levels in the effluent are not degrading the river and negatively impacting designated uses. This situation makes it even more critical that the effectiveness of iLeaf as a technology is thoroughly examined and that appropriate monitoring, reporting, and contingency plans are in place should it be used. Overall, Commenters request that the Department require the use of the best available technology in this situation considering the experimental nature of iLeaf technology as well as the recreational uses of the receiving stream.

C. Water Quality Data

Commenters are concerned that the water quality data used in the modeling on which the effluent limits are based is not representative of the actual water quality conditions today. No water quality data was submitted with the antidegradation report, and it appears that the most recent data used in the Department's dissolved oxygen modeling is from 2020.⁵ Commenters do not have confirmation of the time periods of the datasets used to construct the effluent limits for the other nine effluent limits, as this information was not specified in the Antidegradation Review.

While the use of older water quality data is not necessarily problematic, it is definitely problematic here. There have clearly been changes in the ecology of the River in recent years, as the Pomme de Terre was de-listed for *E coli* in 2020 but proposed for re-listing in the Department's most recent 303(d) list. This would seem to indicate that there was some water quality testing done on the River between 2020 and the proposed re-listing in 2022, but it is not readily apparent that this was used in the modeling to construct or evaluate the effluent limits.

Considering the fact that the Pomme de Terre River is potentially impaired for *E coli* and the Pomme de Terre Lake is already listed as impaired for chlorophyll-a, it is especially important to understand current water quality conditions before allowing an additional discharge. Additionally, the Whole Body Contact designated use as well as the presence of one of 138 state designated fish spawning habitats reinforce the need to model limits based on current data. Commenters request that the Department either conduct new testing or require the Company to conduct new testing that can be used to ensure that the effluent limits in the permit will actually be protective of the River's designated uses.

⁵ This is based on the Dissolved Oxygen Dataset sent to Commenters by the Department.

II. TMDL Issues

Commenters are concerned that authorizing a discharge containing nitrogen and phosphorus into the Pomme de Terre Lake watershed will violate the law. As the Review points out, the Facility will discharge nitrogen and phosphorus into the Pomme de Terre Lake watershed, which is currently listed as impaired for chlorophyll-a (an indicator of increased nitrogen and phosphorus in the waterbody) but does not yet have a TMDL.⁶ Pomme de Terre Lake is also listed in the Department's proposed 303(d) list, which has not yet been approved by EPA. Under the Federal Clean Water Act, it is illegal to authorize new discharges into an impaired water after it is listed but before a TMDL is developed.⁷ The Department should follow the law and either wait until a TMDL is developed before authorizing an additional discharge to the watershed or deny the discharge request altogether.

Additionally, the Pomme de Terre River is on the Department's latest proposed 303(d) list for *E. coli*. Although this list has yet to be approved by EPA, there could still be issues with authorizing a new discharge into an impaired water before the development of a TMDL. Depending on the timing of the approvals (EPA's approval of the 303(d) list and DNR's approval of the new discharge), the Department could run into the same problem identified above. The best way to avoid these issues would be for the Department to deny the Company's request for a new discharge.

III. Consideration of Alternatives

The consideration of alternatives to discharge contained in the Review does not adequately evaluate other alternatives, such as acquiring additional land for land application. Commenters understand that the Facility is currently at its maximum capacity in terms of land application and has had trouble meeting permit requirements for land application in the past. However, simply the fact that the Facility has struggled in the past does not mean that land application should not be considered as an alternative to discharge here. It appears that the Facility currently has 109 acres available for land application and would only need an additional four acres available for land application in order to avoid discharging. There is no analysis in the Review of how much it would cost to acquire the additional land for land application or if there is an opportunity to apply at other sites in the vicinity. Considering the fact that the discharge will degrade the water quality of the River, that the River is currently used for recreational purposes by the public, and the presence of important fish habitat downstream from the proposed discharge, it is not clear to Commenters that environmental degradation was taken into account

⁶ *Id.* at 8.

⁷ See *Friends of Pinto Creek v. EPA*, 504 F.3d 1007, 1012 (9th Cir. 2007) (vacating permit that authorized copper discharge into already impaired waterway in the absence of a TMDL); see also *Alabama Dep't of Envir. Mgmt v. Alabama Rivers Alliance*, 14 So. 3d 853 (Ala. Civ. App. 2007) (vacating a permit under similar facts but under Alabama law).

in a cost benefit analysis. Furthermore, it is unclear from the Review and the materials submitted by the Company what the exact cost of expanded land application would be and why it is not a feasible alternative to discharge. Lastly, it is unclear from the Review why the Company cannot simply reduce operational capacity in order to comply with current permit obligations. The Department should at least evaluate this alternative, especially considering the potentially substantial environmental impacts of the discharge as well as the Department's responsibility to protect water quality from degradation under the Missouri Clean Water Law. The Department should do a more rigorous analysis here, and if it is truly impracticable for the Facility to find an alternative to discharge, then the Department should explain this to the public at a public hearing.

IV. Public Hearing

Commenters request a public hearing pursuant to § 644.026, RSMo and 10 CSR 20-6.020(4)(A)(1). There has been significant interest from the public regarding the proposed discharge, and all of the organizations working on these comments have received multiple inquiries on the subject. Additionally, there has been local news coverage of the proposed discharge, which is an indicator of local interest in the issue.⁸ The above comments contain "significant technical merit" under 10 CSR 20-6.020(4)(A)(1) because they are directly related to concerns under the Missouri Clean Water Law, raise doubts about whether the Company will be able to meet the proposed effluent limits, and question whether permitting the discharge will comply with existing water quality designations. Under CSR 20-6.020(4)(A)(1), "[i]nstances of doubt shall be resolved in favor of holding the hearing." These comments clearly satisfy the Department's criteria for holding a public hearing, and the Department should do so here.

Thank you for your consideration of these comments.

Sincerely,

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⁸ See e.g. Carissa Codel, "Treated wastewater could be released into Pomme de Terre River, residents given time to voice opinion," [ozarksfirst.com](https://www.ozarksfirst.com) (May 30, 2023); Elizabeth VanMetre, "Pleasant Hope residents concerned as Missouri Prime Beef Packers seeks new waste disposal method," [KY3](https://www.ky3.com) (June 13, 2023).

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