



March 8, 2023

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Submitted via email to:
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SUBJECT: Azteca Milling L.P., Tentative WDRs Comments

Dear Mr. Mushegan and Mr. Pyle:

Thank you for providing us the opportunity to comment on the Tentative Waste Discharge Requirements (**WDRs**) and Monitoring and Reporting Program (**MRP**) for the Azteca Milling L.P. facility (**Azteca Milling**) in Madera, California. Provost & Pritchard Consulting Group (**Provost & Pritchard**) and Wessler Engineering assisted us with these comments. We have reviewed the WDRs and MRP and are requesting that the following changes be considered:

COMMENTS ON WASTE DISCHARGE REQUIREMENTS (WDRs)

Comment 1. WDR Page 5-6 Item 23

Summary of items in WDR: Item states the following: *"The results show considerable variation in concentrations as shown in Table 2. As previously noted, high pH cooking water makes up 90 to 95 percent of the discharge. The other five to ten percent of the discharge is generated during the cleaning of the processing equipment. The variability in concentrations are likely the result of collecting grab samples of the effluent that don't represent the blended discharge. In order to collect a more representative sample of the Facility's discharge, samples should be collected using a composite sampler, preferably flow-based. **This Order includes Provision 1.5 requiring the installation of composite sampling devices to collect influent and effluent samples.**"*

Response and Comments: Provision 1.5 only requires installation of a composite sampler at EFF-01 for effluent, not influent (INF-01). The MRP also describes the sample type for INF-01 as "grab" rather than "24-hour composite". The word "influent" should be deleted from WDR Item 23 to be consistent with the intent of the WDR and MRP.

Comment 2. WDR Page 29-30. Provision I.5.

Summary of items in WDR: *Provision states the following: "By 27 October 2023, the Discharger shall submit confirmation that either a flow-proportioned or time-based composite sampling unit has been installed for effluent monitoring at Monitoring Location EFF-01 as defined in the MRP."*

Response and Comments: As requested in the MRP comments below, EFF-01 should be a representative location of wastewater pumped from the pond(s) to the LAAs, such as a sampling port on the pressurized line. This is consistent with WDR Attachment D – Azteca Madera Masa Plant Flow Schematic. This will provide the most accurate water quality data for the wastewater applied to the LAAs and loading rate calculations. When samples are collected from the large wastewater pond, they are effectively already composited samples representing multiple days of facility flow (i.e., more than 24-hours), so an additional composite sampler is unnecessary. In this case, a composite sampler would provide little-to-no additional value. It is requested that this provision be removed from the WDR and MRP and the sample method be re-specified to grab samples.

Comment 3. WDR Page 25. Item D. Effluent Limitation

Summary of items in WDR: *Item establishes an annual average Performance-Based Effluent Limitation of 1,900 mg/L Fixed Dissolved Solids (FDS) on the discharge wastewater and/or wastewater blended with irrigation water sent to the LAA.*

Response and Comments: Only six water quality samples were available from December 12, 2019 (one sample) through October 27, 2021 (five consecutive weeks of sampling) for development of the 2021 Initial Wastewater and Nutrient Management Plan and the tentative WDR and MRP. The FDS requirement is based on the maximum effluent FDS concentration from a single sample on October 06, 2021. The six samples do not provide monthly or seasonal variability of the data. Due to the lack of data, it is difficult to establish a representative concentration limit. Moreover, the influent FDS concentration from October 06, 2021 was 4,700 mg/L, much greater than the 1,900 mg/L limit in the tentative WDR. A concentration limit based on a small sample size and with influent concentrations 2.5x the effluent limit is problematic.

Concentration-based limits are problematic in general because they are entirely dependent on the amount of freshwater used. For example, water conservation efforts at the facility could increase the FDS concentration of the influent and effluent with no net increase or possibly even a net decrease in the pounds of salt applied to the LAA. A concentration-based limit could incentivize increased freshwater usage to meet the Performance-Based Effluent Limitation, which is not for the maximum benefit of the people of California, especially considering ongoing drought issues and new regulations limiting groundwater usage such as the Sustainable Groundwater Management Act (SGMA). Additionally, freshwater usage could decrease wastewater salinity concentrations but increase the mass of salt discharged to land as a result of additional freshwater salinity added to existing wastewater salinity.

Considering these factors, it is more technically appropriate to establish a Performance-Based Effluent Limitation on a mass basis rather than concentration. A mass basis better represents the actual magnitude of salt discharge to the LAA and better accounts for variation in facility freshwater usage. Mass loading levels is deemed by the CV-SALTS Basin Plan Amendments to be an acceptable Performance Based limit. For reference, using an effluent FDS concentration

of 1,900 mg/L and a total annual flow of 76.650 million gallons, the mass loading of salt would be 1.215 million pounds. Maintaining this mass loading level should achieve the requirements of the Alternative Salinity Permitting Approach to maintain existing salinity discharge levels while allowing flexibility for possible variations in effluent FDS concentrations.

At the very least, there should be a provision in the WDR/MRP allowing Azteca Milling to reevaluate this Performance-Based Effluent Limitation and the basis used to define it on an annual basis after a more robust water quality dataset is available.

Comment 4. WDR Page 25. Provision E.5

Summary of items in WDR: Provision states the following: *“As a means of ensuring compliance with Discharge Specification E.4, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the DO in the pond(s) is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If the DO in the pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Central Valley Water Board in accordance with Section B.1 of the SPRRs. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.”*

Response and Comments: After the corn preparation process known as nixtamalization, the discharged wastewater that is screened and held prior to land has a “cooked corn” odor that is not objectionable. The raw wastewater is discharged at a temperature of approximately 60°C as the pH is neutralized and is held to allow the temperature to cool prior to land application. To control odor production during storage, practice in other Azteca Milling facilities has shown that minimizing both agitation and detention time is key.

This DO limit is intended to prevent the wastewater from going anoxic/anaerobic and thereby minimize objectionable odor. In this case, the 1.0 mg/L limit will require significant amounts of aeration in the initial period of storage due to the temperature of the wastewater and the physical limit of the dissolved oxygen the water can physically support. Secondly, this level of aeration will result in agitation of the wastewater beyond normal levels. As such, the limit may in fact have the reverse consequence of generating more odor rather than its intent of limiting odor.

To address this situation, we would suggest a revised limit of 1.0 mg/L on wastewater held for more than 48 hours. Wastewater held in smaller volumes (and for less than 48 hours) during the cooling period would not be subject to a 1.0 mg/l limit, while storage of larger volumes of wastewater for more than 48 hours would. Compliance with the 48-hour hydraulic residence time (hrt) period could be demonstrated by land application records. Idle periods of more than 48 hours would require the 1.0 mg/L DO limit to be met in the basin. This would provide aeration to the basin that is at an ambient temperature and therefore limit the aeration and agitation. Overall, the intent of the permit for odor minimization would be met with this revised limit.

Comment 5. WDR Page 31. Provision I.10

Summary of items in WDR: *Provision states the following: “By 29 April 2024, the Discharger shall have completed construction of the effluent storage pond proposed in the November 2021 Tier 1 Pond Design Report and submit a Post-Construction Report that describes the pond construction details and certifies the effluent storage pond was constructed as proposed in the November 2021 Tier 1 Pond Design Report and per the Construction Quality Assurance Report.”*

Response and Comments: Note: It is requested that the Regional Board provide allowances to include the possibility of additional wastewater pretreatment in the WDRs. This will avoid a revised WDR soon after issuing this new permit. This schedule will allow more time for final decisions to be made on wastewater pretreatment, design criteria, incorporation of the new LAA-2, and to obtain plastic liner and construct the pond.

It is requested that this deadline and all associated deadlines (e.g., Pond Operation and Maintenance Plan) be changed to 29 April 2025. Additional wastewater pretreatment is being considered to further reduce potential objectionable odors and improve water quality. Given these factors and issues with global supply chains and labor, completing construction of the pond and a Post-Construction Report by April 29, 2024 is not feasible. Note that it will not be possible to manage all LAAs in accordance with an Updated Wastewater and Nutrient Management Plan until the storage pond is completed.

Comment 6. WDR, Minor Administrative Edits

- a. Cover Page: CIWQS Place ID is 2570057 (delete the extra “0”)
- b. Table of Contents: Page ii: Replace Attachment page numbers with A.1, B.1, C.1, and D.1
- c. Table of Contents: Page ii: Replace Information Sheet page number with IS.1
- d. Findings and Introduction No. 3, Page 1.: Edit the last sentence to read: LAA-2 is comprised of two Madera County APNs, 37.7-acre APN 029-290-011 and 189.0-acre APN 029-290-014.
- e. Findings and Introduction No. 4, Page 1.: Recommend being consistent with the APN numbering and changing the APN number in the second sentence to APN 029-280-054 from APN 029-280-054-000.
- f. Findings and Introduction No. 6. Page 2. Item 6.c. Attachment C – Aerial Photo of Facility and LAA-1 need to be indented and is missing the “c.”
- g. Findings and Introduction No. 75.4.a. Page 18. Appears to be a typo, edit the second sentence to read “The Facility’s process wastewater salinity concentrations exceed applicable water quality **objectives**....” Currently the sentence reads as: The Facility’s process wastewater salinity concentrations exceed applicable water quality objects....”

- h. Provisions No. I.7. Page 30. The APN numbers referenced in the second sentence are incorrect, please edit to read "...the adjacent 227 acres contained in APN Nos 029-**290**-011 and 029-**290**-014...."

COMMENTS ON MONITORING AND REPORTING PROGRAM (MRP)

Comment 7. Page 2, Table 1. Effluent Monitoring Locations

Summary of items in MRP: Table 1 states that the monitoring location for EFF-01 should be as follows: "Location where a representative sample of the effluent following screening and pH adjustment and prior to discharge to the LAAs/storage ponds."

Response and Comments: EFF-01 should be a representative location of wastewater pumped from the pond(s) to the LAAs, such as a sampling port on the pressurized line. This is consistent with WDR Attachment D – Azteca Madera Masa Plant Flow Schematic. This will provide the most accurate water quality data for the wastewater applied to the LAAs and loading rate calculations.

Comment 8. Page 3, Table 2. Influent Monitoring (INF-01)

Summary of items in MRP: Narrative before table states that "Effluent monitoring shall include at least the following:"

Response and Comments: Change the sentence to "**Influent** monitoring shall include at least the following:"

Comment 9. MRP Page 5, Section D.

Summary of items in MRP: The MRP states the following: "If the source water is from more than one source, the results shall be presented as a flow-weighted average of all sources."

Response and Comments: Azteca Milling proposes to collect source water quality samples and analyze them for the constituents in Table 5 of the MRP. However, it is proposed that the results from each well be presented in a tabular manner only rather than flow-weighted results. It is unclear what the utility of flow-weighted source water data will provide in the context of the WDR and MRP. The additional burden of those costs does not bear a reasonable relationship to the need for the information and any related benefits per California Water Code Section 13267 Section (b)(1). Moreover, the MRP does not require source water flow monitoring. Flow-weighted calculations are not possible without source water flow monitoring.

Comment 10. MRP Page 6, Section F.

Summary of items in MRP: *The MRP states the following: "The Discharger shall inspect LAA-1 and LAA-2 at least once daily prior to and during irrigation events. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in the Facility's logbook and included as part of the annual monitoring report."*

Response and Comments: To be consistent with multiple other MRPs for dischargers in Region 5, Azteca Milling proposes that a logbook be maintained and kept on site per the tentative MRP requirements, but not included in the annual monitoring report. A summary of the log is adequate to meet all regulatory requirements. It is requested that this language be changed to the following language that was adapted from another nearby facility's MRP:

"The Discharger shall inspect LAA-1 and LAA-2 at least once daily prior to and during irrigation events. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in the Facility's logbook. A summary of the notations made in the LAA log shall be provided in each quarterly report. The entire contents of the log do not need to be submitted."

Comment 11. MRP Pages 7-8, Section G., Table 8.

Summary of items in MRP: *The MRP includes several crop monitoring requirements such as seed cultivar, seeding rate, crop status, growth stage, health, crop destination (buyer), and crop removal analysis based on information from the 2021 Initial Wastewater and Nutrient Management Plan.*

Response and Comments: These items represent internal details of various farming items and record keeping important to the farmer. They are not needed for regulatory reporting or protection of water quality. The items listed below should be removed from the MRP:

- Seeding rate
- Crop status, growth stage, and health
- Crop destination (buyer)
- Crop Removal Analysis
 - Note that Crop Removal Analysis is included twice in Table 8, so the last row of Table 8 is adequate.

The following items will remain in the MRP and are adequate to meet the objective of regulatory monitoring:

- Crop type
- Date planted
- Crop harvest date
- Crop yield
- Crop removal analysis (moisture, nitrogen, potassium, phosphorus, ash)

Comment 12. MRP Page10, Section III. Reporting Requirements.

Summary of items in MRP: *The MRP states the following: "Laboratory analysis reports shall be included in the monitoring reports. All laboratory reports must also be retained for a minimum of three years."*

Response and Comments: To be consistent with other discharger's MRPs in Region 5, it is proposed that laboratory analysis reports are not included in the monitoring reports. All laboratory reports will be retained per a minimum of three years and available for CVRWQCB review, upon request. This will reduce the effort of completing the monitoring reports, reduce paper usage and/or file size of monitoring reports, and meet the regulatory requirements.

Comment 13. MRP Page10, Section III.A Quarterly Monitoring Reports

Summary of items in MRP: *The MRP states the following: "Quarterly monitoring reports shall be prepared and submitted to the Central Valley Water Board by the 1st day of the second month after the quarter (i.e., the 1st Quarter [January—March] quarterly report is due 1st May)."*

Response and Comments: To provide adequate time to receive laboratory results, review for quality assurance, address issues, compile all farming data, analyze all information, and develop and internally review quarterly monitoring reports, the proposed schedule for submittal of quarterly monitoring reports to the CVRWQCB is June 1 (Q1 report), September 1 (Q2 report), December 1 (Q3 report), and March 1 (Q4/annual report). In some cases, final laboratory results are not available until approximately two weeks prior to the quarterly report deadlines, which does not allow adequate time to compile, analyze, and prepare a quality monitoring report prior to submittal to the CVRWQCB. The additional time to develop quality monitoring reports benefits Azteca Milling, the CVRWQCB, and the public while maintaining a quarterly report cycle.

Comment 14. MRP Page10, Section III.B.8 Fourth Quarter Monitoring Reports

Summary of items in MRP: *The MRP requires that the following be submitted as a part of the Fourth Quarter Monitoring Reports: "A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program."*

Response and Comments: It is proposed that the calibration log be used and maintained, but not provided in the annual report in its entirety. If needed, a summary of notable items can be provided.

Comment 15. MRP Page 8-9, Table 9. Soil Monitoring.

Summary of items in MRP: *Table 9 requires soil monitoring of "Buffer pH."*

Response and Comments: Soil buffer pH analysis is designed to predict the need for calcium carbonate (lime) to increase soil pH in an acid soil. It does not provide a useful analysis on soils with a pH greater than 6.0. We propose removing the requirement to measure soil buffer pH since this is not an appropriate test for the alkaline soils of the LAA. Monitoring trends of soil pH is sufficient to ensure that the application of wastewater is not acidifying the soil. The effects of soil acidification would be the greatest in the surface soil layer, and the 0-to-0.5-foot sample will provide the best data to monitor soil pH and potential acidification. Moreover, comparing the background locations to the land application area sampling and analysis results will provide another method of determining any potential impact of wastewater application.

We appreciate the opportunity to provide input on the tentative WDRs and MRP. If you have any questions regarding our suggestions or wish to discuss them further, please contact Azteca Milling.

Sincerely,



Azteca Milling