[TENTATIVE] CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2025-XXXX

AMENDING WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2019-0024

FOR
SHERWOOD HILLS, LLC; JAY LLC; STEIR BERTON TRUST; HOMEWOOD MOUNTAIN PARTNERS, LLC; FAMOSO HILLS RANCH, LLC; YUROSEK FARMS, LLC; AND E & B NATURAL RESOURCES MANAGEMENT CORPORATION

PRODUCED WASTEWATER RECLAMATION PROJECT
MCVAN AREA TREATMENT FACILITY
POSO CREEK OIL FIELD
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board or Board) finds that:

1. Waste Discharge Requirements Order No. R5-2019-0024 (WDRs) was adopted by the Central Valley Water Board on 5 April 2019. The WDRs regulate the discharge of oil field produced wastewater (produced wastewater or discharge) from the McVan Area Treatment Facility to cropland for irrigation, including crops for human consumption. Produced wastewater has the potential to be reused for the irrigation of approximately 4,400 acres of cropland. Cropland currently irrigated with produced wastewater consists of approximately 1,000 acres of citrus.

2. E&B Natural Resources Management Corporation (E&B) is an oil and natural gas exploration and production company that owns and operates the McVan Area Treatment Facility in the Poso Oil Field.

3. Sherwood Hills LLC (Sherwood) is the water management company that operates Sherwood's Reservoirs. Sherwood's Reservoirs receive produced wastewater from E&B. Sherwood's Reservoirs are connected to three irrigation wells used for blending operations.

4. Sherwood; Jay LLC; Steir Berton Trust; Homewood Mountain Partners, LLC; Famoso Hills Ranch LLC; and Yurosek Farms, LLC own the cropland that is irrigated with blended produced wastewater.

5. E&B; Sherwood; Jay LLC; Steir Berton Trust; Homewood Mountain Partners, LLC; Famoso Hills Ranch LLC; and Yurosek Farms, LLC (hereafter referred to as Discharger) are jointly responsible for compliance with the WDRs and this Order.

6. Central Valley Water Board staff (Staff) prepared this amending Order to be considered by the Board for adoption.

BACKGROUND

7. During the third quarter of 2021, Staff noted that the concentration of boron in the produced wastewater from the McVan Area Treatment Facility (e.g., Discharge 001) started to increase. Since then, the average annual concentration of boron at Discharge 001 for the 2021, 2022, and 2023 calendar years have increased as follows: 0.75, 1.3, and 1.65 milligrams per liter (mg/L), respectively. Effluent Limitation B.1 of the WDRs states that Discharge 001 shall not exceed a maximum annual average of 1.0 mg/L for boron during a calendar year. As a result, Staff issued Notice of Violation Letters on 10 March 2023 and 27 March 2024 for violations of Effluent Limitation B.1 of the WDRs for the 2022 and 2023 calendar years, respectively.

8. In response to the Notice of Violation Letters regarding the increasing concentration of boron at Discharge 001, the Discharger initiated an investigation to identify which part of the production area sourced the elevated boron concentrations. The Discharger concluded that there does not appear to be a specific source of high boron, and the increase appears to be occurring across the entire production area. Based on these conclusions, the Discharger developed a plan to initiate groundwater blending operations in Sherwood's Reservoir No. 1, which was expected to reduce the concentration of boron in Sherwood's Reservoirs. On 11 January 2023, the Discharger started blending groundwater in Reservoir No. 1. Reservoir No. 1 was selected for blending operations as it is the first location that produced wastewater is discharged to land. Since blending operations started in January 2023, the average annual concentration of boron in Reservoir No. 1 was 0.95 mg/L for the 2023 calendar year.

PROPOSED MODIFICATIONS TO THE FACILITY

9. On 14 February 2025 the Discharger submitted a Revised Report of Waste Discharge (RWD) that includes a proposal to blend produced wastewater and groundwater prior to being discharged to Sherwood's Reservoir No. 1. The RWD states that the pipeline between the McVan Area Treatment Facility and Sherwood's Reservoirs will be modified to allow the blending of produced wastewater and groundwater in the pipe. The RWD states that this modification will result in the discharge of blended produced wastewater having a boron concentration similar to the concentration identified in the WDRs.

10. The RWD also includes a technical assessment that examines the quality of produced wastewater from when the project was initiated to current. The RWD states that produced wastewater quality has remained consistent since the start of the project, with boron being the only constituent that has significantly increased, as it has more than doubled. The RWD states the proposed blending of produced wastewater with groundwater is anticipated to increase the quality of the discharge to at or below the water quality concentrations assessed in the antidegradation analysis. The RWD states that since the

discharge will be at or below the water quality assessed in the original antidegradation, a revised antidegradation is not needed.

11. Staff reviewed the RWD and finds that the proposed modification to the pipeline is appropriate. Based on the historical blending of produced wastewater and groundwater in Reservoir No. 1, and the technical justification provided in the RWD, Staff finds that the proposed modification will more than likely result in a reduction of boron that will meet the effluent limitations specified in this Order.

12. Due to the proposed modification of the pipeline, this Order proposes several amendments to the WDRs. These amendments are needed due to the following:

    - The proposed modification alters the facility operations, which need to be reflected in the WDRs;

    - Due to the increasing concentration of boron, blending operations will no longer be optional;

    - The Effluent Limitations in the WDRs are established for produced wastewater. Due to the change in the facility operations, these effluent limitations need to be revised for the discharge of blended produced wastewater to Sherwood's Reservoirs; and

    - Due to the proposed modifications, a new sampling location is needed to verify blending operations are effective in reducing the concentration of boron in the discharge to Sherwood's Reservoirs.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

13. The WDRs found that the project, if implemented in accordance with the WDRs and monitoring and reporting program, would not result in any significant adverse water resource impacts. With the proposed modification, the discharge is anticipated to be at or below the water quality concentrations and thus will not result in any change to the water quality not previously analyzed under the California Environmental Quality Act (CEQA). Therefore, there are no new impacts not previously analyzed and thus no further CEQA analysis is required in accordance with California Code of Regulations, Title 14, section 15162.

PUBLIC NOTICE

14. All of the above were considered in establishing the following conditions of discharge.

15. The Discharger and interested agencies and persons have been notified of the intent to amend the WDRs, and they have been provided an opportunity for a public hearing and an opportunity to submit their written comments and recommendations to the Central Valley Water Board.

16. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that pursuant to sections 13263 and 13267 of the Water Code, the WDRs are amended to include the changes listed below. E&B, Sherwood; Jay LLC, Steir Berton Trust, Homewood Mountain Partners, LLC, Famoso Hills Ranch LLC, Yurosek Farms, LLC, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

The Effluent Limitations section in the WDRs shall be revised, as follows, to reflect the discharge of blended produced wastewater to Sherwood's Reservoirs:

B.1 Produced wastewater from the McVan Area Treatment Facility (Discharge 001) shall not be discharged to Sherwood's Reservoirs at a flowrate that exceeds 8.4 million gallons per day.

B.2 The discharge to Sherwood's Reservoirs (Discharge 002) shall not exceed the following:

Constituent	Units	Daily Maximum [1]	Annual Average [2]
Electrical Conductivity	µmhos/cm [3]	-	1,000
Boron	mg/L [4]	1.2	1.0
Chloride	mg/L	-	200
Oil & Grease	mg/L	35	-

1. The **Daily Maximum** is the greatest concentration permitted for one day.
2. The **Annual Average** is the arithmetic mean of measurements made during a 12-month period.
3. µmhos/cm = micromhos per centimeter.
4. mg/L = milligrams per liter.

The following Discharge Specification shall be added to the WDRs:

C.8 Produced wastewater shall be blended prior to being discharged to Sherwood's Reservoirs to ensure compliance with Effluent Limitations B.2 of the WDRs. This requirement is effective starting 18-months from the signature date of this Order, or upon completion of the blending pipeline, whichever starts first.

The following Provision shall be added to the WDRs:

E.17 Discharge Specification C.8 can be modified if the Discharger provides sufficient data to support the proposed change. If monitoring data from Discharge 001 consistently shows no significant variation in magnitude of a constituent concentration or parameter after a statistically significant number of sampling events, the Discharger may request that Discharge Specification C.8 be rescinded by the Executive Officer. The proposal must include adequate technical justification using a statistically significant number of sampling events.

E.18 **Within 18-months from the signature date of this Order,** the blending pipeline proposed in the RWD shall be complete and blended produced wastewater shall be the only source of produced wastewater discharged to Sherwood's Reservoirs. Within 14 days of completing the blending pipeline, the Discharger shall submit a letter to the Central Valley Water Board that includes the following:

- Identifies the start date for discharging blended produced wastewater from the pipeline to Sherwood's Reservoir No. 1; and
- Statement acknowledging Discharge 002 is active and requires monitoring of the blended produced wastewater discharged to Sherwood's Reservoir No. 1.

In order to meet the effluent limits of this Order, the Discharger shall blend produced wastewater with conventional sources of water (i.e., groundwater), until the blending pipeline is complete.

The Produced Wastewater Monitoring section in Monitoring and Reporting Program Order No. R5-2019-0024 shall be revised, as follows:

Discharge 001 – Produced Wastewater
(McVan Area Treatment Facility)

The Discharger shall monitor the volume and quality of produced wastewater discharged from the McVan Area Treatment Facility (McVan Facility) to Sherwood's Reservoirs. Produced wastewater samples shall be collected downstream from the treatment system and prior to blending operations. Produced wastewater monitoring for Discharge 001 shall include at least the following:

Constituent/Parameter	Units	Sample Type	Frequency
Flow	MGD [1]	Metered [2]	Continuous

Constituent/Parameter	Units	Sample Type	Frequency
Electrical Conductivity	µmhos/cm	Meter	Continuous
Table I – Water Quality Monitoring	Varies	Grab	Quarterly
Table II – Oil Production and Process Chemicals and Additives [3]	Varies	Grab	Quarterly

[1] mgd = million gallons per day.

[2] Flow may be measured with an appropriate engineered alternative if approved in writing by the Executive Officer.

[3] The Discharger is responsible for identifying approved analytical methods for all constituents identified in Table II, as appropriate. For constituents that do not have an approved analytical method, the Discharger shall cite the source (e.g., name of the consultant or laboratory) and qualifications of the entity that made the determination that an analytical method is not available for specific constituents in Table II. Entities that are reviewing Table II to identify analytical methods shall have adequate knowledge related to laboratory analyses and be qualified to complete this review.

Discharge 002 – Blended Produced Wastewater
(Sherwood's Reservoir No. 1)

The Discharger shall monitor the volume and quality of blended produced wastewater discharged to Sherwood's Reservoir No. 1. Blended produced wastewater monitoring for Discharge 002 shall include at least the following:

Constituent/Parameter	Units	Sample Type	Frequency
Flow (Blending Water)	MGD [1]	Metered [2]	Continuous
Flow (Total)	MGD	Calculated	Continuous
Electrical Conductivity	µmhos/cm	Meter	Continuous
Table I – Water Quality Monitoring	Varies	Grab	Quarterly
Table II – Oil Production and Process Chemicals and Additives [3]	Varies	Grab	Quarterly

[1] mgd = million gallons per day.

[2] Flow may be measured with an appropriate engineered alternative if approved in writing by the Executive Officer.

[3] The Discharger is responsible for identifying approved analytical methods for all constituents identified in Table II, as appropriate. For constituents that do not have an approved analytical method, the Discharger shall cite the source (e.g., name of the consultant or laboratory) and qualifications of the entity that made the determination that an analytical method is not available for specific constituents in Table II. Entities that are reviewing Table II to identify analytical methods shall have adequate knowledge related to laboratory analyses and be qualified to complete this review.

Discharge 003 – Irrigation Water
(Sherwood's Reservoir No. 4)

The Discharger shall monitor the volume and quality of the discharge from Sherwood's Reservoirs to cropland for irrigation. The monitoring location for Discharge 003 shall consist of the pumping station adjacent to Reservoir No. 4 that transfers blended produced wastewater to cropland for irrigation. Monitoring at Discharge 003 shall include at least the following:

Constituent/Parameter	Units	Sample Type	Frequency
Influent Flow to Sherwood's Reservoirs[1]	MGD	Metered [2]	Continuous
Effluent Flow from Sherwood's Reservoirs[3]	MGD	Metered	Continuous
Table I – Water Quality Monitoring	Varies	Grab	Quarterly
Table II – Oil Production and Process Chemicals and Additives [4]	Varies	Grab	Quarterly

[1] If there are multiple discharges of water to Sherwood's Reservoirs (e.g., groundwater and/or surface water), the flowrate for each shall be recorded individually.

[2] Flow may be measured with an appropriate engineered alternative if approved in writing by the Executive Officer.

[3] If there are multiple outlets from Sherwood's Reservoirs, the flowrate for each shall be recorded individually.

[4] The Discharger is responsible for identifying approved analytical methods for all constituents identified in Table II, as appropriate. For constituents that do not have an approved analytical method, the Discharger shall cite the source (e.g., name of the consultant or laboratory) and qualifications of the entity that made the determination that

an analytical method is not available for specific constituents in Table II. Entities that are reviewing Table II to identify analytical methods shall have adequate knowledge related to laboratory analyses and be qualified to complete this review.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet.

(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

I, PATRICK PULUPA, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on, XX June 2025.

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PATRICK PULUPA, Executive Officer