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JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

1 October 2020

Derek Willshee, CEO
Fourstar Resources, LLC
5813 Kings Canyon Drive
Bakersfield, CA 93306

CERTIFIED MAIL
7019 2970 0001 5202 4016

NOTICE OF APPLICABILITY

CENTRAL VALLEY WATER BOARD VALLEY REGIONAL WATER QUALITY CONTROL BOARD, ORDER NUMBER R5-2017-0036, WASTE DISCHARGE REQUIREMENTS FOR OIL FIELD DISCHARGES TO LAND, GENERAL ORDER THREE, FOURSTAR RESOURCES, LLC, MITCHEL AND THETA LEASES, MCDONALD ANTICLINE OIL FIELD, KERN COUNTY

On 6 February 2020, the Central Valley Regional Water Quality Control Board (Central Valley Water Board), received a document titled, *State of California, Regional Water Quality Control Board, Application/ Report of Waste Discharge, General Information for Waste Discharge Requirements or NPDES Permit for Fourstar Resources, LLC, Mitchel and Theta Leases* (NOI). The NOI requests coverage under Waste Discharge Requirements for Oil Field Discharges to Land, General Order Three, Order No. R5 2017-0036 (General Order Three). Central Valley Water Board staff's review of the NOI is in the enclosed memorandum. Fourstar Resources, LLC (Fourstar) operates the Theta and Mitchel (also known as the M&B) Leases in the McDonald Anticline Oil Field (Leases or Facility). The Leases utilize three unlined surface impoundments (ponds) for the disposal of oil field produced water (produced water or discharge).

The discharge percolates from the ponds into Quaternary Alluvium and the Tulare Formation sediments in the McDonald Anticline Oil Field. The California Independent Petroleum Association (CIPA) has begun the process of applying for a Basin Plan Amendment (BPA) for a region that includes the Leases. A BPA can be obtained for an area if it does not have groundwater suitable for beneficial uses, as designated by the *Water Quality Control Plan for the Tulare Lake Basin, Third Edition, Revised May 2018* (Basin Plan). CIPA's proposal suggests that groundwater directly underlying the Leases is of high mineral quality and therefore unable to support beneficial uses. It also suggests that the hydrogeological conditions of the areas prevent the discharge from degrading the quality of usable groundwater. Based on this assessment, coverage under General Order Three appears to be appropriate for discharges to the ponds.

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

This letter serves as formal notice that General Order Three is applicable to discharges of produced water to the ponds (Notice of Applicability or NOA). General Order **Number R5-2017-0036-018** is hereby assigned to all produced water discharges into the following ponds:

Pond Name	Length (feet)	Width (feet)	Depth (feet)	Total Capacity with Two Feet of Freeboard (cubic feet)
Mitchel-1	66	32	8	12,672
Theta-1	70	28	8	11,760
Theta-2	70	40	8	16,800

As stated in California Water Code section 13263, all discharges of waste into waters of the state are privileges, not rights. General Order Three does not create a vested right for Fourstar to continue the discharge. Failure to prevent conditions that create or threaten to create pollution or nuisance or cause degradation of groundwater, will be sufficient reason to modify, revoke, or enforce the provisions of General Order Three, as well as prohibit further discharge.

In 2006, the Central Valley Water Board and the State Water Resources Control Board (State Water Board), and regional stakeholders began the joint effort to address nitrates and salinity problems in the region, and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. The CV-SALTS effort might effect changes to the Basin Plan that would necessitate the re-opening of General Order Three.

FACILITY SPECIFIC REQUIREMENTS

1. The required annual fee specified in the annual billing from the State Water Board shall be paid until coverage for the Leases under General Order Three is officially terminated. Fourstar shall notify the Central Valley Water Board in writing to request termination.
2. Monitoring and Reporting Program No. R5-2017-0036 (MRP) is incorporated into General Order Three. The requirements of MRP include regular facility monitoring, produced water sampling, and reporting. Fourstar should review the MRP and become familiar with the requirements therein.
3. Fourstar shall maintain exclusive control of the discharge and shall comply with all the requirements and timelines of General Order Three and the MRP.
4. Fourstar shall operate and maintain the ponds sufficiently to protect the integrity of containment and prevent overtopping and/ or structural failure. Discharges not

authorized by General Order Three and not described in the NOI should be reported to the Central Valley Water Board. The discharge of wastes other than those described in the NOI is prohibited. If the method of waste disposal changes, Fourstar shall submit a Report of Waste Discharge.

5. Under Discharge Specifications, Item B.2., General Order Three states, "The discharge flow shall not exceed actual maximum monthly average produced wastewater flow to the pond between 26 November 2004 and 26 November 2014. The discharge flow also shall not exceed the maximum design flow of the Facility's limiting unit as described by the technical data in the NOI." The NOI states that the maximum yearly average discharge to the Mitchel Lease pond was approximately 9,200 barrels and to the Theta Lease ponds was approximately 6,900 barrels (one barrel is equivalent to approximately 42 gallons).

Therefore, the maximum monthly average discharge into the ponds shall not exceed 770 barrels for the Mitchel pond and 575 barrels for the Theta ponds. Any increase in discharge volume that would exceed the monthly average flow constitutes an expansion of the Facility and would require an evaluation under the California Environmental Quality Act (CEQA). Additionally, the discharge to the ponds shall not exceed their design capacity with two feet of freeboard.

6. By **4 December 2020**, Fourstar shall submit a water balance capacity analysis demonstrating that the as-built hydraulic capacity of the facility is consistent with the flow limits while taking into account a total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. The water balance analysis needs to consider the following: 1) a required minimum of two feet freeboard in each pond at all times, 2) historical pan evaporation rates, and 3) projected long term percolations rates.
7. By **4 January 2021**, Fourstar shall, pursuant to Provision E.3 of General Order Three, submit written certification that acceptable flow meters have been installed at a location or locations to ensure the accurate measurement of all discharge flows. The certification shall be accompanied by: 1) a description of the flow metering devices installed, 2) a diagram showing their locations, and 3) evidence demonstrating that the devices were properly calibrated. An engineered alternative may be used if approved in writing by the Central Valley Water Board's Executive Officer.
8. Fourstar has not indicated whether the wells on the Leases have received any well stimulation treatment as defined by California Code of Regulations (CCR) title 14, section 1761.

By **4 December 2020**, Fourstar shall inform the Central Valley Water Board, in writing as to whether the ponds accept produced water from any wells which

have undergone a well stimulation treatment (e.g., hydraulic fracturing, acid fracturing, and acid matrix stimulation). If the ponds accept produced water from a well that has undergone a well stimulation treatment, then Fourstar shall comply with the compliance schedule provided in Provision E.8 of General Order Three.

9. Order No. 2014-0057-DWQ (NPDES General Permit CAS000001) specifies requirements for discharges of storm water associated with industrial activities. By **4 December 2020**, Fourstar shall provide information regarding stormwater on the Leases.
10. Fourstar needs to satisfy Provision 4 of General Order Three (Provision 4). According to the NOI, Fourstar is working with CIPA to obtain a Basin Plan Amendment. Fourstar shall, pursuant to Provision E.4.b of General Order Three, comply with the time schedule on pages 23 through 26 of General Order Three. This time schedule establishes a five year process, during which Fourstar must demonstrate that the natural background quality for the facility meets the Sources of Drinking Water Policy exception criteria and/or parallel exception criteria outlined in this General Order and thus the current beneficial uses, as designated in the Basin Plan are eligible for de-designation.

Tasks that Fourstar must complete include, but are not limited to the following:

1) On an ongoing basis, Fourstar must participate in the CV-SALTS Group to facilitate the Basin Plan Amendment (BPA) process under the Salt and Nutrient Management Plan; 2) by **2 February 2021**, Fourstar must submit an outline of the BPA work plan to the Central Valley Water Board for review; 3) by **3 August 2021**, Fourstar needs to submit a completed BPA Work Plan to the Central Valley Water Board for review; and 4) by **5 October 2023**, Fourstar must submit a final technical report to the Central Valley Water Board for review.

Fourstar may work with other pond operators to obtain a BPA covering the region of their respective ponds, irrespective of whether those operators are working with CIPA.

Fourstar should note that subsequent tasks require review of the proposed BPA by stakeholders, the public, the State Water Resources Control Board, and the Office of Administrative Law.

11. If Fourstar intends to apply for use of produced water for dust control, a proposed management plan, as described in Provision E.G of General Order Three must be submitted at least **90 days prior** to the anticipated discharges.
12. If Fourstar decides to reuse solids for road mix on the Leases, then Fourstar shall submit a solids management plan, as described in Provision E.7 of General Order Three. Fourstar must submit a solids management plan for review at least **180 days prior** to any solids reuse. The solids management plan must be approved by the Central Valley Water Board's Executive Officer.

Failure to comply with the requirements of General Order Three and the MRP could result in an enforcement action authorized by provisions of the California Water Code. A copy of [General Order Three](#) is included in the enclosure of this letter. A copy can also be found on the State Water Board's Website here (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2017-0036.pdf)

Fourstar shall comply with the Central Valley Water Board's Standard Provision and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions). A copy of the [Standard Provisions](#) is included with the enclosures of this letter. A copy can also be found online on the State Water Board's website here (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf)

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review this action in accordance with the California Water Code section 13320 and CCR, title 23, division 3, chapter 6, section 2050 and those that follow. The State Water Board must receive the petition by 5:00 PM, 30 days after the date of this NOA, except that if the thirtieth day following the date falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 PM on the next business day.

SUBMISSIONS

Documents associated with the Leases, including monitoring reports, investigation results, and other documents, that are less than 50 MB can be sent via electronic mail to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50 MB or larger can be mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706.

Fourstar shall submit electronic PDF copies of all work plans, reports, analytical results, and groundwater elevation data over the internet to the State Water Board Geographic Environmental Information Management System database (GeoTracker). When applicable, Fourstar shall submit analytical data in both PDF and EDF (electronic data files) of the discharge to GeoTracker. Electronic submittals shall comply with GeoTracker standards and procedures. Uploads to GeoTracker shall be completed on or prior to the due date. The GeoTracker site Global I.D. numbers associated with this NOA follow: **Theta Lease – L10002025097, Mitchel Lease – L10001224631.**

Please review the enclosed documents. If you have any questions regarding this matter, you may contact Rebecca. T. Asami at (559) 445-5548 or by email at: rebecca.asami@waterboards.ca.gov.

Original Signed by Clay L. Rodgers for
Patrick Pulupa,
Executive Officer

Enclosures: 1 October 2020 Memorandum
Administrative draft Monitoring and Reporting Program
General Order Three
1991 Standard Provisions

cc: Chris Jones, Acting District Deputy for the Inland District, CalGEM,
Bakersfield (without enclosures via email)