Central Valley Regional Water Quality Control Board

21 November 2022

David Belt
Foster Poultry Farms
1333 Swan Street
P.O. Box 831
Livingston, CA 95334

NOTICE OF APPLICABILITY

WATER QUALITY ORDER 2020-0012-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMMERCIAL COMPOSTING OPERATIONS
FERTILIZER PLANT/MANURE STORAGE FACILITY
FOSTER POULTRY FARMS, LLC
MERCED COUNTY
GLOBAL ID L10005767894

Foster Poultry Farms (Foster Farms) was issued a *Notice of Applicability* (NOA), dated 14 November 2018, for enrollment under *State Water Resources Control Board Order WQ 2015-0121-DWQ General Waste Discharge Requirements for Composting Operations* for its composting operations at its manure storage yard and fertilizer plant located at 12997 West Highway 140, Livingston, CA, 95334. Subsequent to the issuance of the NOA, the State Water Resources Control Board adopted *General Waste Discharge Requirements for Commercial Composting Operations, Order WQ 2020-0012-DWQ* (General Order) amending Order WQ-2015-0121-DWQ.

A revised *Notice of Intent* was submitted on 6 October 2022 to apply for updated coverage under the revised General Order and to reflect the change in ownership from Foster Poultry Farms to Foster Poultry Farms, LLC. Previously, Foster Farms submitted the *Technical Report – Amendment to Notice of Intent to Comply, Foster Poultry Farms Manure Composting Operations (Manure Storage Facility), Phase 1 Area Design Package Submittal and Alternative Engineering Proposal for Phases 2 & 3*, dated 17 May 2022 (NOI Amendment) describing a phased approach for their Facility to achieve full compliance with the General Order. The Phase 1 portion of that submittal which included improvements to bring the western portion of the Facility into compliance and design plans for expanding and lining the stormwater basin was approved on 12 August 2022. Additionally, Condor Earth prepared and submitted a report titled *Technical Report – Work Plan for Engineered Alternatives, Phases 2 and 3, Foster Poultry Farms, LLC, Manure Storage Facility, General Order 2020-0012-DWQ* (Work Plan), dated 21 July 2022.

Foster Farms proposes to achieve compliance with the central portion (Phase 2) and eastern portion (Phase 3) of the Facility through engineered alternatives, as detailed in the Work Plan. Foster Farms states that the site improvements required by the General Order for the entire 120-acre Facility are not practicable and proposes to use engineering and administrative controls to achieve environmental protection equal to requirements of the General Order for Phases 2 and 3. This Work Plan proposes installing two new groundwater monitoring wells and analyzing for additional water quality monitoring parameters than those required by the General Order. The increased groundwater monitoring would demonstrate that the implementation of a variety of administrative controls, engineering controls, and site modifications provide groundwater quality protection equal to the standards prescribed in the General Order.

This NOA was developed after the review of the revised NOI, NOI Amendment, and Work Plan as described in the attached Staff Memorandum, which is a part of this NOA. Based on staff's review, the Facility and its proposed operations would meet the conditions of the revised General Order and is hereby covered under General Order **2020-0012-DWQ-R5F008** as a **Tier II** composting operation. Except for enforcement purposes, the previous enrollee number **2015-0121-DWQ-R5F013** is hereby rescinded. Foster Poultry Farms, LLC must comply with all Tier II requirements of the General Order.

Foster Farms shall submit the required annual fee (as specified in the annual billing issued by the State Water Resources Control Board) until the NOA is officially terminated. To fully comply with this NOA, please read the contents of the enclosed Staff Memorandum and all of the requirements of the General Order. Foster Farms is responsible for implementing all operations in a manner that complies with the General Order. Any noncompliance with this General Order constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under the General Order.

Conditions of the General Order include but are not limited to:

1. Submittal of a well installation report documenting the drilling, installation, and development of wells MW-9 and MW-10 by **1 June 2023.**

2. The immediate implementation of the administrative and engineering controls as described in the Work Plan for the Phase 2 and 3 areas.

3. Submittal of a *Groundwater Assessment Report*, as described in the Work Plan, by **1 June 2026.**

4. Prior to any facility expansion, a technical report with design information will have to be submitted at least 90 days prior to new construction of working surfaces, detention basins, berms, ditches, or any other water quality protection containment structure for approval by Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff.

2. A post-construction report must be submitted within 60 days of completing all construction activities associated with all applicable containment and monitoring structures, as required for compliance with this General Order and the *Monitoring and Reporting Program*.

3. A revised NOI is required to be submitted at least 90 days prior to:
   - adding a new feedstock, additive, or amendment;
   - changing material or construction specifications;
   - changing a monitoring program; or
   - changing an operation or activity not described in the approved NOI and technical report.

Attachment B of the General Order includes specific monitoring and reporting requirements that must be complied with, including routine monitoring and reporting to the Central Valley Water Board. The next *Annual Monitoring and Maintenance Report* as identified in the General Order must be submitted to the Central Valley Water Board no later than **1 April 2023** and annually by 1 April each year.

All reports and other correspondence must be converted to searchable Portable Document Format (PDF) and submitted electronically to our Geotracker database under Global ID L10005767894. Confirmation of Geotracker upload is to be emailed to: centralvalleyfresno@waterboards.ca.gov. To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Attention:	Title 27 Unit
Discharger Name:	Foster Poultry Farms, LLC
Facility Name:	Foster Farms Manure Storage Facility
County:	Merced County
CIWQS Place ID:	225132
Geotracker Global ID:	L10005767894

If you have any questions, please contact Daniel Benas at (559) 445-5500 or by email at Daniel.Benas@waterboards.ca.gov.

Original Signed by Scott J. Hatton for:
Patrick Pulupa
Executive Officer

Enclosures: Staff Memorandum

cc: CalRecycle WPCMDivision@CalRecycle.ca.gov
Esther Canal Esther.Canal@countyofmerced.com
David Belt David.Belt@fosterfarms.com
Randy Boyce Randy.Boyce@fosterfarms.com

Central Valley Regional Water Quality Control Board

TO: Kristen S. Gomes
Senior Water Resource Control Engineer
PE No. 79025

Scott J. Hatton
Supervising Water Resource Control Engineer

Clay L. Rodgers
Assistant Executive Officer

FROM: Daniel B. Benas
Water Resource Control Engineer

DATE: 21 November 2022

APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2020-0012-DWQ; FERTILIZER PLANT/ MANURE STORAGE FACILITY; FOSTER POULTRY FARMS, LLC; MERCED COUNTY; GLOBAL ID L10005767894

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Technical Report – Work Plan for Engineered Alternatives, Phases 2 and 3, Foster Poultry Farms, LLC, Manure Storage Facility, General Order 2020-0012-DWQ (Work Plan), dated 21 July 2022.

Foster Farms proposes to achieve compliance with the central portion (Phase 2) and eastern portion (Phase 3) of the Facility through engineered alternatives, as detailed in the Work Plan. Foster Farms states that the site improvements required by the General Order for the entire 120-acre Facility are not practicable and proposes to use engineering and administrative controls to achieve environmental protection equal to the requirements of the General Order for Phases 2 and 3. This Work Plan proposes installing two new groundwater monitoring wells and analyzing for additional water quality monitoring parameters than those required by the General Order. The increased groundwater monitoring would demonstrate that the implementation of a variety of administrative controls, engineering controls, and site modifications provide groundwater quality protection equal to the standards prescribed in the General Order.

This Work Plan includes general information about the Facility and enterprise-wide Best Practicable Treatment or Control (BPTC) measures; descriptions of local hydrogeologic conditions; summaries of previous meetings, documents, and findings; descriptions of the proposed engineered alternatives to achieve compliance with the General Order in the central and eastern portions of the Facility; increased monitoring to demonstrate the effectiveness of the engineered alternatives; and a time schedule for full compliance.

SITE DESCRIPTION & OPERATIONS

The Facility comprises of Assessor Parcel Numbers (APNs) 056-180-001 and 049-180-004 with a total operational footprint of approximately 120 acres. The operational footprint includes bulk manure storage areas, a composting yard, and a stormwater retention basin. The Facility slopes slightly to the southwest with a total relief of approximately 12 feet from the northeast corner to the bottom of the retention basin.

A 1,000-foot open space buffer is maintained around the Facility on the west, south, and east. Land use within one mile of the perimeter of the Facility includes agricultural and livestock (orchards, pasture, poultry farms), industrial (fertilizer plant), recreational (private duck pond), and a wildlife preserve (Grasslands Wildlife Management Area). The on-site water supply well (California State Well No. 7/11-36G) is located 120 feet west of the northwest corner of the perimeter road, which meets the General Order requirement of a 100-foot setback from any composting operations or storage areas.

The Facility receives, processes, and stores bulk quantities of poultry litter from Foster Farms poultry ranches. The litter consists of mixtures of poultry manure and bedding material (wood shavings or rice hulls). Litter is the primary feedstock for the compost operation, and the permitted operational capacity of the Facility is 500,000 cubic yards. Feedstock storage, final products, and composting operations are conducted on site. Manure from several ranch locations is consolidated at the Facility, and this

centralization of manure processing is a BPTC since it reduces the impacts from storage and handling at multiple locations.

Surficial geology at the Facility is mapped as the Modesto Formation on the California Geological Survey Geologic Map of San Francisco-San Jose Quadrangle. The Modesto Formation and pre- and post-Modesto geologic units are lithologically similar and are subdivided based on soil profile development and unconformities marked by buried soils. These represent separate alluvial episodes, recorded by fill terraces opening westward onto alluvial fans. The combined thickness of the Modesto and pre-Modesto sediments ranges up to 120 meters in the eastern Central Valley and thin going west to the Facility. The Facility is located in the distal alluvial fan facies of the Merced River dominated by fine-grained silts and sands, sometimes reworked by aeolian processes into ancient dunes, now covered in grassy vegetation. The underlying Turlock Lake Formation includes lacustrine deposits of clay and fine sediments. Of hydrogeological interest is the Corcoran Clay Member, which is an important regional aquitard. Depth to the top of the Corcoran Clay in this area is inferred to be approximately 150 feet on State maps. This is consistent with a “blue clay” from 185 to 248 feet bgs noted on a drillers log from the on-site supply well. Natural geologic materials in and underlying the location of the operations are sand, silt, and clay to a depth of approximately 40 to 45 feet. Within this section, accumulations of clay and hard cemented sand are noted at depths of 10 to 15 feet on borings from the 1990’s. These hard pans are interpreted as illuviated fines accumulated at the maximum depth of penetration of winter precipitation which coincides with the approximate historic top of the capillary fringe.

As described in the Work Plan, the conceptual hydrogeological model is a “sandbox” consisting of a homogeneous silty sand aquifer with an identifiable flat bottom on thick clay of the Turlock Lake Formation. Depth to groundwater averaged approximately 15 feet bgs in the early to mid-1990s, rose to within five feet of the surface in 1998, and has trended downward since then to its current average of approximately 30 feet bgs. Groundwater gradient is typically westward at an average slope of 0.001 ft/ft. Estimates of linear groundwater velocity based on measured porosity and hydraulic conductivity range from 1 to 135 feet per year (ft/year). Linear groundwater velocity estimated from calibrated groundwater flow modeling ranged from 10 to 225 ft/year depending on location. Both the gradient magnitude and direction have been locally and seasonally controlled by recharge from the Duck Pond in the east, recharge from irrigated fields in the north, and recharge from the floor of the retention basin, which will cease with the installation of a liner in the summer of 2023.

PHASE 1

The Phase 1 area is undergoing modifications to achieve full compliance with the General Order, including the expansion of the existing clay-lined stormwater detention basin, the installation of a basin liner, and improvements to the working surfaces and drainage. The Phase 1 area modifications including the basin liner installation will be completed by September 2023.

PHASE 2 AND 3 ENGINEERED ALTERNATIVES

Foster Farms proposes to modify the composting operations in the Phase 2 and Phase 3 areas, "by applying administrative and engineering controls to minimize potential for groundwater degradation." In order to reduce or eliminate water quality impacts in the Phase 2 and 3 areas, Foster Farms is proposing to only use these areas for dry season composting and material staging/storage. These areas would be scraped prior to the wet season (October through April) and any material stockpiles left in these areas will be covered to prevent contact with precipitation. Materials would only be received in the Phase 1 area during the wet season. A verification monitoring program, including the installation of two additional groundwater monitoring wells and a more robust analytical suite, would be implemented to demonstrate that these "administrative and engineering controls" provide equivalent protection than the prescriptive standards of the General Order.

Foster Farms has monitored groundwater beneath the Facility since 1991 under a site-specific *Monitoring and Reporting Program*, which was rescinded when they were enrolled under the General Order, and currently implements a groundwater monitoring protection program that is in accordance with the General Order. A statistical assessment of the groundwater beneath the Facility would be submitted once sufficient data are collected from the new wells in the Phase 2 and 3 areas. If this assessment indicates that groundwater degradation associated with the Phase 2 and 3 areas is occurring, Foster Farms would begin construction to achieve compliance with the prescriptive standards of the General Order. If groundwater degradation does not occur, then dry season operations and monitoring would continue in compliance with the General Order as an engineered alternative.

GROUNDWATER MONITORING

The current groundwater monitoring network includes six shallow monitoring wells (MW-2 and MW-4 through MW-8) with total depths ranging between 25 to 35 feet bgs and seven deeper monitoring wells (MW-2D, MW-4D, MW-5D, MW-6D, MW-7D, MW-8D, and EW-1) with total depths ranging between approximately 50 and 55 feet bgs. The deeper wells were installed for compliance with the General Order. All shallow wells except MW-6 are typically dry. The dry wells had been sampled for many years prior to going dry in 2013 (MW-2 and MW-8), 2014 (MW-7), and 2015 (MW-4 and MW 5).

Two new groundwater monitoring wells (MW-9 and MW-10) are proposed to expand the monitoring network for coverage in the Phase 2 and 3 areas. Existing monitoring wells are located on the periphery and downgradient of the Facility. MW-9 is proposed to be located in the southern portion of the Phase 2 and 3 areas at approximately 37.28463^{o} latitude and -120.70409^{o} longitude. MW-10 is proposed to be located in the northern portion of the Phase 2 and 3 areas at approximately 37.28661^{o} latitude and -120.70412^{o} longitude. The proposed well drilling, installation, and development procedures are further described in the Work Plan.

Samples collected from the existing monitoring well network are currently submitted for quarterly laboratory analysis of nitrate-N, total dissolved solids, EC, dissolved sodium, chloride, and total coliform. pH is analyzed in the field. The analytical

suite will be expanded to include total kjeldahl nitrogen (TKN), ammonia-N, and total nitrogen for all wells. New wells MW-9 and MW-10 would be analyzed for the same constituents as the existing well network, and these wells would also be analyzed for standard minerals to provide data for anion- cation balance. A *Sampling and Analysis Plan* was included as an attachment to the Work Plan. After collection of a minimum of ten discrete quarterly samples, statistically significant threshold concentrations would be developed for nitrate-N and EC for wells MW-9 and MW-10, and these proposed threshold concentrations would be submitted as part of a groundwater assessment report summarizing groundwater quality at the locations of the two new wells. This assessment report would be separate from the *Annual Monitoring and Maintenance Report*.

PROPOSED SCHEDULE

The proposed engineering and administrative controls for the Phase 2 and 3 areas would be implemented beginning in 2022. Expansion of the existing quarterly groundwater sample analytical suite to include ammonia-N, TKN, and total nitrogen would begin with the fourth quarter 2022 groundwater monitoring event. The well installation schedule is dependent on permit issuance and driller availability. Foster Farms anticipates that the final well installation report, including well development and survey information, would be submitted within five months of the issuance of this NOA.

MONITORING AND REPORTING

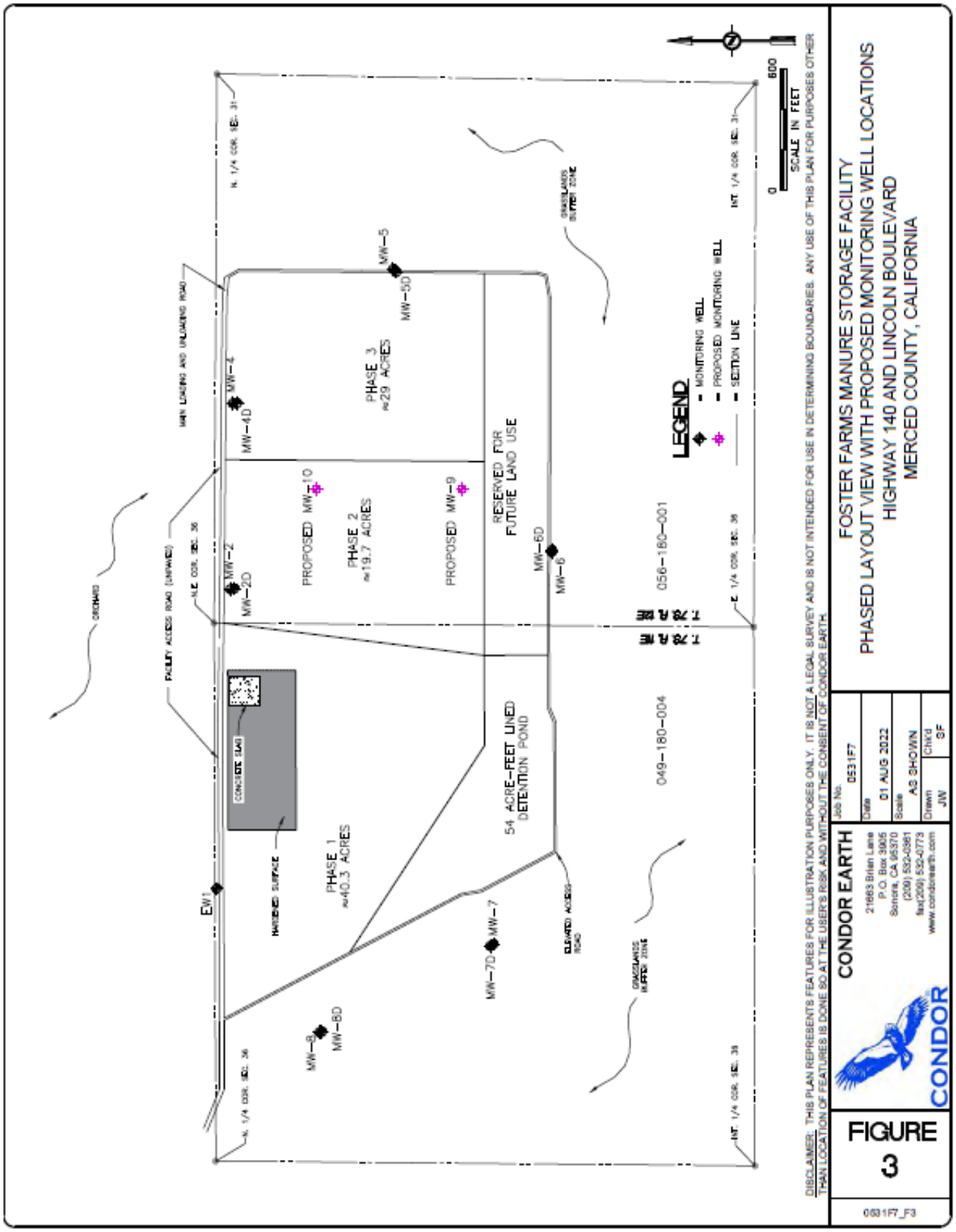
Foster Farms will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted technical documents and Attachment B of the General Order. The frequency of inspections would be sufficient to prevent discharges of feedstocks, compost (active, curing, or final product), or wastewater from creating, threatening to create, or contributing to conditions of contamination, pollution, or nuisance. Foster Farms would conduct a monitoring program as prescribed in the applicable portions of Attachment B of the General Order, with the inclusion of additional chemical parameters. Results of the monitoring will be reported annually in the *Annual Monitoring and Maintenance Report*, which will be submitted by 1 April of each year as long as the NOA is in effect.

SITE CLOSURE

At least 90 days prior to ceasing composting operations, Foster Farms will submit a *Site Closure Plan* for Central Valley Water Board approval.

RECOMMENDATION

Based on staff review of the NOI Amendment and Work Plan, it is anticipated that Foster Farms can meet the requirements of the General Order through the implementation of administrative and engineering controls in the Phase 2 and 3 areas. The NOA can be issued and stay in effect as long as Foster Farms implements all operations in a manner that complies with the requirements of the General Order.


LEGEND
MONITORING WELL
PROPOSED MONITORING WELL
SECTION LINE
SCALE IN FEET
0
600
N
PHASE 1
≈40.3 ACRES
PHASE 2
≈19.7 ACRES
PHASE 3
≈29 ACRES
54 ACRE-FEET LINED
DETENTION POND
RESERVED FOR
FUTURE LAND USE
PROPOSED MW-10
PROPOSED MW-9
MW-1
MW-2
MW-2D
MW-4
MW-4D
MW-5
MW-5D
MW-6
MW-6D
MW-7
MW-7D
MW-8
MW-8D
EW1
056-180-001
049-180-004
T. 7S R. 11E
T. 7S R. 12E
CONCRETE ROAD
MAIN LOADING AND UNLOADING ROAD
FACILITY ACCESS ROAD (UNPAVED)
ORCHARD
GRASSLANDS
N. 1/4 COR. SEC. 31
N. 1/4 COR. SEC. 36
E. 1/4 COR. SEC. 36
INT. 1/4 COR. SEC. 31
INT. 1/4 COR. SEC. 36
DISCLAIMER: THIS PLAN REPRESENTS FEATURES FOR ILLUSTRATION PURPOSES ONLY. IT IS NOT A LEGAL SURVEY AND IS NOT INTENDED FOR USE IN DETERMINING BOUNDARIES. ANY USE OF THIS PLAN FOR PURPOSES OTHER THAN LOCATION OF FEATURES IS DONE SO AT THE USER'S RISK AND WITHOUT THE CONSENT OF CONDOR EARTH.
CONDOR EARTH
21683 Brian Lane
P.O. Box 3905
Sonora, CA 95370
(209) 532-0381
fax(209) 532-0773
www.condorearth.com
Job No. 0531F7
Date 01 AUG 2022
Scale AS SHOWN
Drawn JW
Chkd SF
FOSTER FARMS MANURE STORAGE FACILITY
PHASED LAYOUT VIEW WITH PROPOSED MONITORING WELL LOCATIONS
HIGHWAY 140 AND LINCOLN BOULEVARD
MERCED COUNTY, CALIFORNIA
FIGURE
3
0531F7_F3
X:\Projects\0000_prj\0531 Foster Farms\0531F7 MSF GW Protection\WP\0531F7_CAD\GW\0531F7_F3.dwg 8-01-22 03:39:23 PM jwilson