

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2016-0078

AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0104

FOR

DARLING INGREDIENTS INC., OSCAR HEARD,
AND VAL AND MARY AZEVEDO
DARLING INGREDIENTS INC. RENDERING PLANT, TURLOCK FACILITY
STANISLAUS COUNTY

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

1. On 4 October 2012, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order R5-2012-0104 that regulates waste disposal at the Darling Ingredients Inc. Rendering Plant, Turlock Facility in Stanislaus County.
2. Order R5-2012-0104 was issued to Darling Ingredients Inc., Oscar Heard, and Val and Mary Azevedo. Darling Ingredients, Inc. (hereafter "Discharger") owns and operates the rendering plant and land discharge areas referred to as the "Darling property", and is primarily responsible for compliance with the WDRs. Oscar Heard, and Val and Mary Azevedo (hereafter "Co-Dischargers") own farmland that are irrigated with treated wastewater generated by the Discharger. Oscar Heard owns the "Heard property" and Val and Mary Azevedo own the "Azevedo property."
3. The rendering plant receives animal mortalities and meat processing by-products that include fat, bone, and offal. Wastewater streams include condensate from the cooker, truck and plant cleaning wash water, boiler blowdown, reverse osmosis reject water, feather plant knockdown tower wastewater, and overflow from a Venturi system associated with the plant odor abatement system.
4. At the time of adoption of Order R5-2012-0104, the Discharger began operation of a new wastewater treatment system (WWTS) that was completed in late 2011. The WWTS consists of a paddle wheel skimmer dissolved air floatation (DAF) system as primary treatment to remove fats; biological treatment in aboveground tanks to reduce biochemical oxygen demand (BOD) and nitrogen concentrations; and a secondary DAF for clarification. Treated wastewater is discharged to unlined ponds for storage prior to being applied to land application areas (LAAs).
5. Finding 60 states, in part, "while recent effluent monitoring data show that the treatment system has the potential to be protective of groundwater, the Discharger needs to demonstrate the reliability of the system. If the treatment system is found not capable of producing effluent that meet the final effluent limitations, further treatment or control may be necessary. This Order requires that the Discharger evaluate the

optimal performance of the new wastewater treatment system and determine whether the final effluent limitations of this Order are feasible with the current treatment system.”

6. Finding 61 states, in part, “because the sustainability of the current high quality process water supply is uncertain and the optimal performance of the WWTS has not been evaluated, this Order may be reopened to consider revision of the effluent and/or groundwater limitations if the Discharger submits a new Report of Waste Discharge demonstrating that compliance with those limits is infeasible and that the proposed limits will ensure compliance with the Basin Plan.”
7. Order R5-2012-0104 set interim and final effluent limits on BOD, total nitrogen, fixed dissolved solids (FDS), and chloride. Effluent limits were set on the discharge from the secondary DAF to the effluent storage ponds to protect groundwater quality beneath the unlined ponds. The final effluent limits became effective 1 November 2014. The Order also required the Discharger to submit a *Treatment System Performance Evaluation Report*.
8. On 27 January 2014, the Discharger submitted the *Treatment System Performance Evaluation Report* pursuant to Order R5-2012-0104. The report evaluated whether the treatment plant is capable of complying with the WDR final effluent limits for total nitrogen, FDS, and chloride. The report cited treatment system upsets and states that compliance with the final effluent limits cannot be consistently achieved. The report proposed new effluent limits based on the conclusion that the discharge has not caused groundwater degradation and that increasing the effluent limits will not result in groundwater degradation.
9. On 27 January 2015, Central Valley Water Board staff issued a letter with comments on the evaluation report. The letter states that wastewater treatment plant upsets typically do not warrant relaxation of effluent limits but do require implementing appropriate treatment or control measures to prevent future upsets or impacts to groundwater. The letter further states that the unlined ponds are the primary threat to groundwater quality and lining the ponds would be considered an appropriate control measure such that that a total nitrogen effluent limit would likely not be required and that salinity limits could likely be relaxed as long as mass loading to the land application area would not increase.
10. The 27 January 2015 letter also summarized an 18 December 2014 meeting when staff and the Discharger discussed the proposed effluent limits and future process changes planned at the rendering plant. The process changes are anticipated to increase effluent salinity concentrations but reduce mass loading to the ponds. Staff and the Discharger agreed that lining the ponds would provide sufficient protection of groundwater quality such that the WDRs could be amended to relax the effluent limits.

11. In order to amend the WDRs, the Discharger was requested to submit an amended Report of Waste Discharge (RWD) that describes the planned process changes, characterizes the resulting wastewater quality, and provides planned construction details of lining the ponds with a Construction Quality Assurance Plan.
12. On 1 September 2015, the Discharger submitted a RWD to amend Order R5-2012-0104. The Discharger proposes to line effluent storage ponds 2, 3, 4, 5, 6A, and 6B with a 60 mil high density polyethylene (HDPE) liner. Ponds 1A and 1B are not proposed to be lined. The Discharger proposes to line Ponds 2, 3, 4, 5, 6A, and 6B over three phases.
13. The RWD requested that the interim effluent limits be extended until all the ponds have been installed. Upon completion of lining the ponds, the RWD proposed that no effluent limits for total nitrogen, BOD, FDS, and chloride be imposed on the discharge to the ponds and that loading limits are continued to be used to regulate the discharge to the LAAs.
14. On 18 December 2015, the Discharger submitted a Quality Assurance Plan for the pond liner project. The plan details construction, deployment, and integrity testing of the pond liner.

Proposed WDRs Amendment

15. This amending Order extends the time period for interim effluent limits on total nitrogen, BOD, FDS, and chloride, and establishes a time schedule to line the effluent storage ponds.
16. This amending Order removes effluent limits for total nitrogen, BOD, FDS, and chloride if the effluent storage ponds are lined by the date established in the time schedule. If the ponds are not lined by the compliance date, then final effluent limits for the discharge to the ponds become effective.

California Environment Quality Act

17. The action to amend WDRs Order R5-2012-0104 is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) because it involves no significant changes to the facility and is consistent with the existing Use Permit (Cal. Code Regs, tit. 14, § 15301).

Public Notice

18. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
19. The Central Valley Water Board, in a public meeting, heard, and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that, pursuant to sections 13263 and 13267 of the California Water Code, Order R5-2012-0104 is amended solely to make the changes described above. The Discharger and Co-Dischargers, 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 amended Order R5-2012-0104 as follows:

1. “*Darling International Inc.*” is replaced with “*Darling Ingredients Inc.*” to reflect changes pursuant to Change of Name and/or Ownership of Facilities Order R5-2015-0016 adopted by Central Valley Regional Water Quality Control Board on 6 February 2015.

2. Finding 19 is replaced with the following:

“The eight unlined ponds are no longer used for wastewater treatment. Treated wastewater is stored in the ponds and withdrawn from Pond 6A or Pond 6B for land application. The Discharger is proposing to line Ponds 2, 3, 4, 5, 6A, and 6B with a 60-mil high density polyethylene (HDPE) liner in stages by 1 October 2019. Ponds 1A and 1B will remain unlined and may be used for temporary storage of wastewater during emergency conditions.”

3. Antidegradation Analysis Finding 58, parts a, c, and d, are amended by removing statements regarding the need to evaluate the wastewater treatment system performance. Such statements were replaced with information regarding the proposed pond lining project. For example the following statement in Finding 58.d,

“Because the Discharger is still evaluating the treatment system performance this Order sets a performance based interim total nitrogen effluent limit of 45 mg/L based on current performance and a final effluent limit of 30 mg/L to protect groundwater quality beneath the unlined effluent storage ponds.”

was replaced with the following:

“The Discharger proposes to line the effluent storage ponds by 1 October 2019. While the ponds are unlined this Order sets a performance based interim total nitrogen effluent limit of 45 mg/L based on current performance. This Order sets a final effluent limit of 30 mg/L to protect groundwater quality beneath any ponds that are not lined by 1 October 2019.”

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 STANISLAUS COUNTY

4. Antidegradation Analysis Finding 58, parts a and c are amended by updating the performance based interim effluent limits for chloride and fixed dissolved solids (FDS), respectively, based on new information from the Discharger. The interim effluent limit for chloride was changed from 250 mg/L to 300 mg/L and FDS was changed from 700 mg/L to 900 mg/L.
5. Antidegradation Analysis Finding 59 is amended to include part h with the following:
“h. Lining effluent storage Ponds 2, 3, 4, 5, 6A, and 6B.”
6. Effluent Limitation C.1 is shall be replaced with the following:
“Effectively immediately through 30 September 2019, effluent from the secondary DAF to unlined ponds shall not exceed the following limits. Effluent discharged to lined effluent storage ponds is not required to meet these limits.”

Constituent	Units	Quarterly Average Limit¹	Annual Average Limit²
<i>BOD₅³</i>	<i>mg/L</i>	<i>100</i>	<i>--</i>
<i>Total Nitrogen</i>	<i>mg/L</i>	<i>45</i>	<i>--</i>
<i>FDS</i>	<i>mg/L</i>	<i>--</i>	<i>900</i>
<i>Chloride</i>	<i>mg/L</i>	<i>--</i>	<i>300</i>

¹ *Calculated as the average from all sampling results acquired each calendar quarter (i.e., January through March, etc.)*

² *Calculated as a flow-weighted average for the calendar year.*

³ *5-day biochemical oxygen demand at 20°C.*

7. Effluent Limitation C.2 shall be replaced with the following:

“Effective 1 October 2019, effluent from the secondary DAF discharged to unlined effluent storage ponds shall not exceed the following limits except under emergency conditions defined pursuant to the Provisions of this Order. Effluent discharged to lined effluent storage ponds is not required to meet these limits:

Constituent	Units	Quarterly Average Limit¹	Annual Average Limit²
<i>BOD₅³</i>	<i>mg/L</i>	<i>80</i>	<i>--</i>
<i>Total Nitrogen</i>	<i>mg/L</i>	<i>30</i>	<i>--</i>
<i>FDS</i>	<i>mg/L</i>	<i>--</i>	<i>700</i>
<i>Chloride</i>	<i>mg/L</i>	<i>--</i>	<i>200</i>

¹ *Calculated as the average from all sampling results acquired each calendar quarter (i.e., January through March, etc.)*

² *Calculated as a flow-weighted average for the calendar year.*

³ *5-day biochemical oxygen demand at 20°C.”*

8. Mass Loading Limitation D.1 is replaced with the following:

“The blend of treated wastewater, storm water, and supplemental irrigation water applied to the LAAs shall not exceed the following effluent and mass loading limits:

Constituent	Units	Daily Maximum	Irrigation Cycle Average	Annual Maximum
<i>BOD Mass Loading</i>	<i>lb/ac/day</i>	<i>300</i>	<i>100</i>	<i>--</i>
<i>Total Nitrogen Mass Loading</i>	<i>lb/ac/year</i>	<i>--</i>	<i>--</i>	<i>Crop Demand</i>

Compliance with the above requirements shall be determined as specified in the Monitoring and Reporting Program.”

9. Discharge Specification F.15 is added with the following:

“Every five years after completing a pond’s liner installation, the Discharger shall test the integrity of the pond liner and repair all significant leaks in accordance with an approved workplan pursuant to Provision I.1.d”

10. Provision I.1.d is replaced with the following:

“By 1 December 2019, the Discharger shall submit a Pond Liner Integrity Evaluation Workplan that specifies the means and methods that the Discharger proposes to use to evaluate all geosynthetic liner systems to comply with Discharge Specification F.15.”

11. Provision I.1.f is added with the following:

“At least 60 days after completing any phased improvement of lining pond, the Discharger shall submit a Pond Liner Installation Completion Report. The report shall document the lining of the ponds completed in accordance with the 18 December 2015 Construction Quality Assurance Plan and certify that the ponds are fully functional and ready to receive wastewater in compliance with the requirements of this Order. The report shall include final dimensions and liner specifications and document all construction observation, testing, and test results for the pond lining system showing that the lining system was leak-free at the time of completion.”

12. Provision I.1.f is added with the following:

“After 1 October 2019 and within 72 hours of discharging wastewater that exceeds the final effluent limits to an unlined pond (i.e. an emergency discharge), the Discharger shall submit an Emergency Response Report. The plan shall document the following:

- i. An explanation of what caused the emergency discharge,*
- ii. The duration or expected duration to complete the emergency discharge,*
- iii. The volume of wastewater discharged or expected to be discharged during the emergency duration,*
- iv. A one-sample characterization of the wastewater discharged to the unlined pond(s) for nitrogen, FDS, BOD, and pH,*
- v. The actions taken to stop the discharge and to transfer the wastewater either to the wastewater treatment system or the lined effluent storage ponds, and*
- vi. The actions that have or will be taken to prevent the reoccurrence of the emergency discharge condition.*

For every seven day period of emergency discharge, the Discharger shall submit an updated Emergency Response Report. After the first seven day period of emergency discharge, Central Valley Water Board staff may evaluate whether the emergency discharge is within compliance of the effluent limits.”

13. Monitoring and Reporting Program (MRP) R5-2012-0104 is amended to implement monitoring requirement changes resulting from the above amendments.

14. Order R5-2012-0104 and MRP R5-2012-0104 are amended based on current monitoring and reporting standards. For example, the last statement under Effluent Limitations in Order R5-2012-0104 describing how annual average limits are calculated is amended as shown below:

“Compliance with the annual average limits shall be determined as specified in the Monitoring and Reporting Program”

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 at:

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

or will be provided upon request.

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STANISLAUS COUNTY

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I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 14 October 2016.

-Original signed by-

PAMELA C. CREEDON, Executive Officer

RTM: 05/27/2016

Central Valley Regional Water Quality Control Board

21 October 2016

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**NOTICE OF ADOPTION
OF
AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0104
FOR
DARLING INGREDIENTS INC., OSCAR HEARD,
AND VAL AND MARY AZEVEDO
DARLING INGREDIENTS RENDERING PLANT
STANISLAUS COUNTY**

Order R5-2016-0077 was adopted by the Central Valley Regional Water Quality Control Board on 14 October 2016 for the Darling Ingredients Rendering Plant wastewater treatment system. The Order amends Waste Discharge Requirements (WDRs) Order R5-2012-0104.

Although the WDRs allow wastewater discharge to land, the discharge is a privilege not a right and may be revoked at any time. A copy of the Order must be maintained at the facility and must be accessible to anyone operating the wastewater system. Please note that the Provisions section of the WDRs requires submittal of certain technical reports by the dates provided in the Order. The required submittals include the items listed in the following table.

Required Reports	Due Date
Pond Liner Integrity Evaluation Workplan	1 December 2019
Pond Liner Installation Completion Report	At least 60 days after lining a pond
Emergency Response Report	After 1 October 2019 and within 72 hours of an emergency discharge
Engineered design and operational plan of sludge drying system ¹	Within 120 days of the period specified¹

¹ Prior to planned construction or use of any sludge drying and storage areas.

In addition to technical reports required by the WDRs, the WDRs include a Monitoring and Reporting Program (MRP), which specifies monitoring and reporting requirements for you to implement. Please

review the MRP closely so that you may establish appropriate sampling schedules and reporting protocols. The required monitoring report submittal dates are in the table below.

Required Monitoring Report	Due Date
Quarterly Monitoring Reports	1st day of second month following the quarterly period (the First Quarter Report is due by 1 May)
Semi-Annual Monitoring Reports	1st day of second month after the semiannual period (the January – June report is due by 1 August)

As a reminder, the monitoring reports must be submitted on time and complete. Monitoring reports must include all of the items described in the Reporting Section of the MRP. Monitoring reports must be accompanied by a completed Monitoring Report Transmittal Sheet (blank copy enclosed). When a quarterly report and semi-annual report are being submitted as one report, the report cover page and Monitoring Report Transmittal Sheet needs to indicate as such.

Report Submittals

All monitoring and technical reports should be converted to searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB should be emailed to: centralvalleysacramento@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:

Facility Name: Darling Ingredients Rendering Plant, Stanislaus County		
Program: Non-15 Compliance	Order: R5-2012-0104-01	CIWQS Place ID: 219116

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to:

Central Valley Regional Water Quality Control Board
ECM Mailroom
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

To conserve paper and reduce mailing costs, a paper copy of the Order has been sent only to the Discharger. Interested parties are advised that the full text of this Order is available at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/. Anyone without access to the Internet who needs a paper copy of the Order can obtain one by contacting Central Valley Water Board staff.

Now that the permit has been adopted, the Board's Compliance and Enforcement section will take over management of your case. Guy Childs is your point of contact for any questions about the Order. If

William R. McMurtry,
Oscar Heard, and
Val and Mary Azevedo
Darling Ingredients Rendering Plant

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21 October 2016

you find it necessary to make a change to your permitted operations, Guy will direct you to the appropriate Permitting staff. You may contact Guy at (916) 464-4648 or at gchilds@waterboards.ca.gov.

-Original signed by-

SCOTT ARMSTRONG, P.G., C.HG.
Senior Engineering Geologist
Waste Discharge to Land Permitting Unit

Enclosures : Amending Order R5-2016-0077
Amended WDRs Order R5-2012-0104-01
Revised MRP R5-2012-0104-REV1
Monitoring Report Submittal Transmittal Form

cc w/o enc: Patrick Pulupa, Office of Chief Counsel, State Water Board, Sacramento
Tim O'Brien, SWRCB, Sacramento
Wendy Wyels, CVRWQCB, Rancho Cordova
Bella Bedal, Stanislaus County Environmental Health Department, Modesto
Pat Behling, P.E., Pastor, Behling, & Wheeler, LLC, Round Rock, TX