

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2016-0901  
REQUIRING

PACTIV, LIMITED LIABILITY COMPANY  
PACTIV MOLDED PULP MILL  
TEHAMA COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2011-0036  
(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. CA0004821)

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

1. On 10 June 2011 the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2011-0036, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0004821, prescribing waste discharge requirements (WDR) for Pactiv, limited liability company (LLC) (hereinafter Discharger), at the Pactiv Molded Pulp Mill (hereinafter Facility) in Tehama County. On 16 November 2015 the Discharger submitted a report of waste discharge (ROWD) and other required forms as an application for issuance of new WDRs. The ROWD was deemed complete by the Central Valley Water Board on 23 December 2015. As part of this Order, interim total recoverable copper and zinc effluent limitations are implemented for two years, unless either the Discharger comes into compliance or the Central Valley Water Board issues new WDRs, whichever is sooner.
2. The Discharger is owner and operator of the Facility where paper food service products are manufactured using both recycled and virgin pulp. The Facility has a design flow rate of 2.7 million gallons per day and is located in Red Bluff, CA, Tehama County, adjacent to the Sacramento River, which is the receiving water body for the Facility's treated process wastewater.
3. Two onsite groundwater wells, both approximately 500 feet deep, are utilized for both process and domestic uses at the Facility. Process wastewater, from the production of recyclable paper food service products and boiler blowdown wastewater, is transported through a cascade aerator before entering two sump basins. Process wastewater is then discharged into one of two settling basins, which have a total holding volume of approximately 5.4 million gallons. Supernatant from the settling ponds flow by gravity into a 1.6 million gallon aeration basin and is subsequently dosed with a coagulant before entering a 75-foot diameter clarifier; sludge from the clarifier is returned to the active primary settling basins. Clarified process wastewater is combined with non-contact cooling and sealing water and is subsequently used for onsite landscape irrigation and/or discharged into the Sacramento River.

4. WDR Order R5-2011-0036 contains final effluent limitations<sup>1</sup> for total recoverable copper and zinc in section IV.A.1.a., which are shown below:

**Table 6. Final Effluent Limitations – Discharge Point No. 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	3.1	6.1	--	--
Zinc, Total Recoverable	µg/L	10	17	--	--

5. Effluent limitations specified in Order R5-2011-0036 for copper were new limitations based on implementation of site-specific objectives contained in the *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin, Fourth Edition, revised September 2009* (hereinafter Basin Plan), which were not prescribed in WDR Order R5-2004-0124, adopted by the Central Valley Water Board on 10 September 2004. Effluent limitations specified in WDR Order R5-2011-0036 for zinc were more stringent limits than those specified in WDR Order R5-2004-0124. The Central Valley Water Board established final effluent limitations for copper and zinc in Order R5-2011-0036 using the U.S. Environmental Protection Agency’s default metal translators, which may not reflect site specific conditions. The Discharger had requested additional time to comply with final copper and zinc effluent limitations in an infeasibility report submitted to the Central Valley Water Board on 31 March 2011.
6. The Central Valley Water Board determined that assimilative capacity for zinc was available near the discharge location in the Sacramento River, but additional information from the Discharger was required before the Central Valley Water Board could recommend a dilution credit, if any. The Central Valley Water Board then determined that an appropriate mixing zone would be difficult based upon the Red Bluff Wastewater Reclamation Plant’s mixing zone, which is approximately one river mile upstream of the Facility’s discharge location. The Discharger chose to determine metal translators for copper and zinc that would reflect site specific conditions.

<sup>1</sup> In this Order, “final effluent limitations” and “final copper and zinc effluent limitations” refer to limitations for copper and zinc imposed on the Discharger in WDR Order R5-2011-0036.

7. On 10 June 2011 the Central Valley Water Board adopted Time Schedule Order (TSO) R5-2011-0037, establishing a time schedule to complete tasks necessary to ensure compliance with the final copper and zinc effluent limitations by 1 May 2016. The following interim effluent limits were imposed:

Parameter	Units	Maximum Daily Effluent Limitations
Copper, Total Recoverable	µg/L	21
Zinc, Total Recoverable	µg/L	17

**Need for Time Schedule Extension and Legal Basis**

8. As required by TSO R5-2011-0037, on 11 June 2012, the Discharger submitted a pollution prevention plan (PPP) for copper and zinc pursuant to California Water Code (Water Code) section 13263.3(d)(1). In the PPP, the Discharger indicated that: (1) copper and zinc is naturally present in local groundwater, (2) copper could be sourced from material components within air compressor heat exchangers and extract water piping on paper-production machines, and (3) zinc sources were found in zinc anodes on a mold and die tank and water supply piping. The Discharger has prepared and has implemented, in a timely and proper manner, a PPP pursuant to Water Code section 13263.3(d)(1).
9. Since adoption of WDR Order R5-2011-0036, the Discharger has made efforts to reduce sources of copper and zinc at the Facility. Efforts have included: (1) replacement of extract water piping on paper-production machines, (2) replacement of copper-based heat exchangers with stainless steel-based heat exchangers in several air compressors, (3) elimination of zinc anodes in a mold and die tank, and (4) integration of operator training for both treatment/production systems to assist in eliminating any additional sources of copper and zinc.
10. In addition to the source control measures described in Finding 8, the Discharger has also altered several production and treatment components at the Facility in order to attempt to meet the final effluent limitations for copper and zinc. However, the Discharger is still unable to consistently comply with final copper and zinc effluent limitations.
11. On 31 August 2015 the Discharger submitted a request and justification for additional time to comply with final copper and zinc effluent limitations. The submittals included justification for a time schedule that results in complete compliance with final effluent limitations, which included: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of already implemented source control measures and/or

pollution minimization measures currently completed; (c) a proposal for conducting a metal translator study to enable the Central Valley Water Board to establish site-specific effluent limitations for copper and zinc; (d) a demonstration that the proposed schedule is as short as practicable.

### **Mandatory Minimum Penalties**

12. Water Code section 13385, subdivisions (h) and (i) provides a requirement that the Central Valley Water Board impose mandatory minimum penalties (MMPs) upon dischargers that violate certain effluent limitations. Water Code section 13385, subdivision (j)(3) exempts the waste discharge from MMPs “*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or 13308, if all the [specified] requirements are met...for the purposes of this subdivision, the time schedule may not exceed five years in length...*”.
13. Per the requirements of Water Code section 13385, subdivisions (j)(3)(A) through (D), the Central Valley Water Board finds that:
  - a. This Order provides actions that the Discharger should take in order to ensure future copper and zinc effluent violations do not occur, which would otherwise be subject to Water Code section 13385, subdivisions (h) and (i).
  - b. The Discharger is not able to consistently comply with one or more effluent limitations established in WDR Order R5-2011-0036 because the effluent limitations are new or more stringent regulatory requirements that became applicable to the waste discharge after the effective date of WDRs and after 1 July 2000. New or modified control measures are necessary in order to comply with effluent limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
  - c. This Order establishes a time schedule to bring the waste discharge into compliance with final effluent limitations that is as short as possible, taking into account technological, operational, and economic factors that affect design, development, and implementation of control measures that are necessary to comply with effluent limitations. The Discharger has requested three additional years to become compliant with final copper and zinc effluent limitations. However, the Central Valley Water Board has determined that two years is sufficient and as short as practicable to become compliant with final copper and zinc effluent limitations.
14. By statute, a TSO may provide protection from MMPs for no more than five years, except as provided in Water Code section 13385, subdivision (j)(3)(C)(ii).

15. On 10 June 2011, the Central Valley Water Board adopted TSO R5-2011-0037 to allow for protection from MMPs for maximum daily copper and zinc effluent limitation violations.
16. Water Code section 13385, subdivision (j)(3)(C)(ii)(II), authorizes the Central Valley Water Board to extend the time schedule for an additional five years beyond 10 June 2016 if the Discharger demonstrates that more time is necessary to comply with final effluent limitations following a public hearing and upon a showing that the Discharger is making diligent progress toward bringing the waste discharge into compliance with final effluent limitations. The Central Valley Water Board has determined that the Discharger made diligent progress to bring the waste discharge into compliance with the final copper and zinc effluent limitations contained in WDR Order R5-2011-0036, and has demonstrated that additional time is necessary.
17. Compliance with this Order exempts the Discharger from MMPs for violations of final copper and zinc effluent limitations.
18. In accordance with Water Code section 13385, subdivision (j)(3)(C), the total length of protection from MMPs for final copper and zinc effluent limitations does not exceed ten years. The initial five-year time schedule period, as allowed pursuant to Water Code section 13385, subdivision (j)(3)(C)(i), expires 10 June 2016. The extended time schedule period in this Order, from 11 June 2016 until 3 May 2018, is pursuant to Water Code section 13385, subdivision (j)(3)(C)(ii)(II).
19. This Order provides a time schedule for completing actions necessary to ensure compliance with final copper and zinc effluent limitations contained in WDR Order R5-2011-0036. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations, interim requirements, and dates for compliance with final effluent limitations.
20. This Order includes new performance-based interim copper and zinc effluent limitations. Interim copper and zinc effluent limitations consist of a maximum daily effluent limitation (MDEL) and an average monthly effluent limitation (AMEL) derived using sample data collected by the Discharger and analyzed by a laboratory that is accredited through the Environmental Laboratory Accreditation Program. In developing a performance-based interim AMEL and MDEL, where there are 10 data points or more and only once per month sampling is required, sampling and laboratory variability is accounted for by establishing interim effluent limitations based on normally distributed data, where 99.9 percent of the data points are within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986). If at least 80 percent of the data points are reported as non-detect values, or if there are less than 10 data points available, an interim AMEL is based on 3.11 times the maximum observed effluent concentration (MEC) when once per month sampling is required. Additionally, if either of these procedures produces an interim AMEL less than the MEC, an MEC is sometimes established as the interim AMEL. The interim MDEL can be calculated by multiplying the calculated AMEL with a multiplier from

Table 2 (which is the MDEL multiplier divided by the AMEL multiplier) in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). Using historical records, the coefficient of variation (COV) was calculated by dividing the sample variance by sample mean.

Extract water piping was replaced on paper-production machines in December 2013; therefore, the most representative effluent data was from January 2014 through December 2015. The following table summarizes statistical parameters used in calculating interim effluent limitations:

**Interim Effluent Limitation Calculation Summary**

Parameter	Units	# of Samples	Mean	Standard Deviation	COV	99.9%	MEC	Interim AMEL	Interim MDEL
Copper, Total Recoverable	µg/L	33	3.0	0.87	0.29	5.9	5.2	5.9	8.7
Zinc, Total Recoverable	µg/L	33	4.9	2.3	0.48	13	14	14	26

21. The Central Valley Water Board finds that the Discharger can maintain compliance with interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with final effluent limitations cannot be achieved. Discharge of constituents in excess concentrations of final effluent limitations, but in compliance with interim effluent limitations, can significantly degrade water quality and adversely affect beneficial uses of the receiving stream on a long-term basis. However, interim limitations establish an enforceable ceiling concentration until compliance with final effluent limitations can be achieved.
22. If an interim effluent limitation contained in this Order is exceeded, the Discharger is subject to MMPs for that particular exceedance as the waste discharge is not in compliance with a TSO pursuant to Water Code section 13385, subdivision (j)(3). The Central Valley Water Board finds that a violation of an interim AMEL subjects the Discharger to only one MMP for that monthly averaging period, for that constituent. In addition, a violation of an interim MDEL subjects the Discharger to one MMP for the day in which the sample was collected, for that constituent.

**Regulatory Considerations**

23. Beneficial uses are designated in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin, Fourth Edition, revised June 2015*, which establishes water quality objectives and contains implementation plans and policies for protecting waters of the river basins. Existing and potential beneficial uses of the Sacramento River, near the Discharger’s outfall, include: municipal and domestic supply; irrigation and stock watering; service supply; hydropower generation; water contact

recreation, including canoeing and rafting; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; and navigation. Existing beneficial uses for groundwater are: municipal and domestic water supply; agricultural supply; industrial service supply; and industrial process supply.

24. WDR Order R5-2011-0036 implements provisions of the SIP by requiring additional monitoring of the Facility's effluent for certain California Toxics Rule constituents that have reasonable potential to cause or contribute to an excursion above a water quality criterion or objective applicable to the receiving water.
25. Pursuant to 40 Code of Federal Regulations part 122.44(d)(1)(i), NPDES effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any state water quality standard, including any narrative criteria for water quality. Beneficial uses, together with any corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

26. The following, in part, is written in section 13300 of the Water Code:

Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

27. The following, in part, is written in section 13267 of the Water Code:

(a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.

(b) (1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

28. The Discharger owns and operates the industrial process wastewater treatment facility subject to this Order and WDR Order R5-2011-0036. Technical reports required by this Order are necessary to determine compliance with WDRs and with this Order. Actions and reports required by this Order are directly related to the Discharger's compliance with WDRs and do not require an expense that is not already required pursuant to WDRs. Any expenses directly related to this Order will not affect the Discharger's ability to continue business. The burden of these actions and reports bears a reasonable relationship to the need for the actions and reports.
29. Issuance of this Order is an enforcement action, by a regulatory agency, and is exempt from provisions of the California Environmental Quality Act, pursuant to title 14, California Code of Regulations, section 15321(a)(2).
30. In the event a selected alternative requires additional review under CEQA, the Discharger shall conduct any required review and obtain appropriate approval prior to initiating construction.
31. On 30 March 2016, Central Valley Water Board staff issued a notice of public hearing and provided a 30-day comment period for consideration of adopting a TSO under section 13300 of the Water Code to establish a time schedule for achieving compliance with waste discharge requirements. The notice stated that any member of the public may request an oral hearing before the Executive Officer, and if no hearing is requested, the Executive Officer's review of the administrative record, including any written comments received shall constitute the public hearing.
32. No comments were received. Pursuant to the Executive Officer's delegated authority in Resolution R5-2009-0114, the Executive Officer may issue or modify TSOs rather than hold a hearing before the Central Valley Water Board.

**IT IS HEREBY ORDERED THAT:**

1. TSO R5-2011-0037 is rescinded upon the effective date of this Order, except for enforcement purposes.
2. Pursuant to sections 13300 and 13267 of the Water Code, the Discharger shall comply with the following time schedule:

Task	Compliance Date
<b>Metal Translator Work Plan and Schedule:</b> The Discharger shall submit the final metal translator study work plan and schedule that describes a method(s) that will be used to achieve compliance with final copper and zinc effluent limitations.	Within 30 days of receiving comments from the National Oceanic and Atmospheric Administration on the May 2016 draft metal translator work plan
<b>Progress Reports:</b> Progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including a metal translator study, evaluation of implemented measures, and recommendations for additional measures, as necessary, to achieve full compliance by the final compliance date.	3 November 2016 3 May 2017 3 November 2017
<b>Full Compliance with Final Effluent Limitations</b>	3 May 2018

3. The following interim effluent limitations shall be effective immediately. The interim copper and zinc effluent limitations shall be effective until 3 May 2018, or when the Discharger is able to come into compliance, whichever is sooner.

**Interim Effluent Limitations**

Parameter	Units	Interim AMEL	Interim MDEL
Copper, Total Recoverable	µg/L	5.9	8.7
Zinc, Total Recoverable	µg/L	14	26

4. The Central Valley Water Board’s intent is to enforce on any violations that occur during the term of this Order. Any failure of the Central Valley Water Board to enforce any provision(s) of this Order shall in no way be deemed a waiver of any such provision, or in any way affect the validity of this Order. The Discharger will continue to be subject to the effluent limitations specified in WDR Order R5-2011-0036 or any future-issued WDR. Compliance with interim limitations should be demonstrated with sampling methods that employ an appropriate level of precision.

5. During the term of this Order, the Discharger shall operate and maintain, as efficiently as possible, all facilities and systems necessary to comply with all prohibitions, effluent limits, and requirements identified in WDR Order R5-2011-0036 and any future-issued WDRs.
6. For the compliance schedule in this Order, the Discharger shall submit to the Central Valley Water Board, on or before the compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with specific schedule dates and tasks. If noncompliance is reported, reasons for such noncompliance shall be stated and shall include an estimated date when the Discharger will become compliant. The Discharger shall notify the Central Valley Water Board, by letter, when compliance with the time schedule is restored.
7. If, for any reason, the Discharger is unable to perform any activity or submit any documentation in compliance with deadlines set forth in this Order, despite timely good faith efforts of the Discharger, due to circumstances beyond the control of the Discharger or its agents, employees, contractors, consultants and any other person acting on the Discharger's behalf, and which could not have been reasonably foreseen and prevented or minimized by exercise of due diligence by the Discharger, the Discharger shall notify the Executive Officer in writing within thirty (30) days of the date the Discharger first knew of an event or circumstance that caused or could cause a violation of this Order. The notice shall describe the reason(s) for the nonperformance and specifically refer to this Paragraph. The notice shall describe the anticipated length of time the delay may persist, the cause or causes of the delay, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated compliance date. The Discharger shall take all reasonable measures to avoid and minimize such delays. The determination as to whether the circumstances were beyond reasonable control of the Discharger and its agents will be made by the Executive Officer. Where the Executive Officer concurs that compliance was or is impossible, despite timely good faith efforts of the Discharger, due to circumstances beyond the Discharger's control that could not have been reasonably foreseen and prevented by exercise of reasonable diligence by the Discharger, a new final compliance deadline shall be established and this Order will be revised accordingly. Where the Executive Officer does not concur that compliance was or is impossible, the matter will be scheduled for a hearing before the Central Valley Water Board and no penalty imposed pursuant to Paragraph 9, below, unless the Regional Water Board upholds the Executive Officer's determination.

8. Any person signing a document submitted under this Order shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

9. In accordance with sections 6735, 7835, and 7835.1 of the Business and Professions Code, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professional(s) competent and proficient in fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology, shall be prepared by or under the direction of an appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of their seal.
10. If, in the opinion of the Executive Officer, the Discharger fails to comply with provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order, or with WDRs, may result in an assessment of administrative civil liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350, and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.
11. 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, section 2050 et seq. 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 will be provided upon request or may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

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Note that, even if reconsideration by the Central Valley Water Board is sought, filing a petition with the State Water Board within a 30 day period is necessary to preserve the petitioner's legal rights. If reconsideration of this Order is requested or a petition with the State Water Board is filed, be advised that compliance with this Order is required while the reconsideration request and/or petition is considered.

This Order is effective upon the date of signature.

***Original Signed By***

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PAMELA C. CREEDON, Executive Officer

**3 May 2016**

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Date