

Central Valley Regional Water Quality Control Board
24/25 April 2025 Board Meeting

Response to Written Comments on
Tentative Waste Discharge Requirements for
Aerojet Rocketdyne, Inc. Groundwater Extraction and Treatment Systems, ARGET,
GET E/F, GET HA, GET J, GET KA, GET LA, GET LB, GET AB WHITE ROCK GET,
SAILOR BAR PARK GET, Golden State Water Wells And Low Threat Discharges
Sacramento County

At a public hearing scheduled for 24/25 April 2025, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of the tentative Order amending Waste Discharge Requirements (NPDES No. CA0083861) for the Aerojet Rocketdyne, Inc. (Discharger) for the Groundwater Extraction and Treatment Systems ARGET, GET EF, GET HA, GET J, GET KA, GET LA, GET LB, GET AB, White Rock GET, Sailor Bar Park Well, Golden State Water Wells and Low Threat Discharges (Facility). This document contains responses to written comments received from interested persons and parties in response to the tentative Order. Written comments from interested parties were required to be received by the Central Valley Water Board by 10 March 2025 in order to receive full consideration. Comments were received prior to the deadline from:

1. City of Sacramento (received 10 March 2025)

Written comments from the above interested parties are summarized below, followed by the response of Central Valley Water Board staff.

CITY OF SACRAMENTO COMMENTS

CITY OF SACRAMENTO COMMENT #1 – Technical Clarifications on Applicable Numeric Thresholds and Basis for Revised Effluent Limit

The City of Sacramento requests that the tentative Amending Order be revised to:

- (a) Describe the error in the previous permit's reference to the United States Environmental Protection Agency's (U.S. EPA) Integrated Risk Information System (IRIS) value as a basis for acetaldehyde effluent limits;
- (b) Incorporate the Regional Screening Levels from U.S. EPA's updated 1991 *Chemical Assessment Summary for Acetaldehyde* as numeric water quality objectives for acetaldehyde; and

- (c) Clearly explain the technical basis for the revised effluent limitation for acetaldehyde.

RESPONSE:

- (a) Central Valley Water Board staff partially concur. Central Valley Water Board staff clarify that Order R5-2020-0051-002 referenced a numeric threshold of 2.2 µg/L for acetaldehyde based on a U.S. EPA estimated incremental 1×10^{-6} cancer risk level for drinking water and effluent limitations for acetaldehyde were established based on this value. The value of 2.2 µg/L was a numeric interpretation of the *Central Valley Water Board's Water Quality Control Plan for the Sacramento and San Joaquin River Basins'* (Basin Plan) narrative chemical constituent objective, which states that "[w]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses." (Basin Plan, § 3.1.3.) The existing permit's interpretation of the chemical constituents objective is erroneous as the acetaldehyde cancer risk value is an inhalation unit risk value of 2.2×10^{-6} per µg/m³ and not a drinking water concentration cancer risk value. However, there are inhalation concentrations of 2.6 µg/L based on a carcinogenic target risk and 19 µg/L based on a non-cancer child hazard index for tap water exposure for acetaldehyde in U.S. EPA's *Chemical Assessment Summary for Acetaldehyde* (1988, 1991), published in U.S. EPA's Regional Screening Levels (RSL) for Resident Tap Water (2024). The tap water RSL concentrations were calculated using the inhalation reference of 2.2×10^{-6} per µg/m³. The tentative amending Order has been revised to include this clarification.
- (b) Central Valley Water Board staff concur with incorporating the RSLs into the discussion of the risk values associated with acetaldehyde, but staff do not concur with establishing the tap water inhalation concentrations of 2.6 µg/L and 19 µg/L as numeric water quality objectives for acetaldehyde. There is no numeric water quality objective for acetaldehyde. The tentative amending Order used a water odor threshold of 34 µg/L, established in 1983 in the article *Odor as an Aid to Chemical Safety: Odor Thresholds Compared with Threshold Limit Values and Volatilities for 214 Industrial Chemicals in Air and Water Dilution*, *Journal of Applied Toxicology* by John E. Amooore and Earl Hautala for acetaldehyde, to evaluate reasonable potential for the discharge to cause adverse impacts to downstream beneficial uses. Central Valley Water Board staff made revisions to the proposed amending Order to clarify that the water odor threshold of 34 µg/L and the inhalation concentrations of 2.6 µg/L and 19 µg/L

were used as screening levels to evaluate acetaldehyde concentrations in the receiving water and potential for exceedances of these values. Central Valley Water Board staff conducted a critical downstream analysis for acetaldehyde, using ambient upstream acetaldehyde data and critical flow conditions, and determined that the critical downstream concentration did not exceed the lowest 2.6 µg/L screening level. However, since acetaldehyde is otherwise found in the effluent of GET EF, best professional judgment was used to establish a performance-based effluent limitation to maintain a level of treatment that ensures the discharge does not adversely affect the beneficial uses of the receiving water. The tentative amending Order has been revised to include use of the risk values in the permit rationale and the critical downstream analysis for acetaldehyde.

- (c) Central Valley Water Board staff concur with revising the tentative amending Order to more clearly explain the technical basis for the revised performance-based annual average effluent limitation for acetaldehyde based on the information provided above. The proposed amending Order has been revised accordingly.

Revisions have been made to Finding 2 and Board Actions 3, 8, 12, 13, 14, and 15 of the tentative amending Order.

CITY OF SACRAMENTO COMMENT #2 – Amending Order, Board Action Item 3

The City requests that the following statement be removed from Board Action item 3 of the tentative amending Order and revise item 3 to accurately reflect the risk values: “There are no other scientifically defensible water quality standards or guidance levels currently available to establish a numeric interpretation of the chemical constituent’s narrative objective for acetaldehyde.” The City of Sacramento cites the basis for this request from the USEPA *Chemical Assessment Summary for Acetaldehyde* (1988, 1991) published in U.S. EPA’s Regional Screening Levels (RSL) for Resident Tap Water (2024).

RESPONSE:

Central Valley Water Board staff concur and have removed the statement from Board Action item 3 of the tentative amending Order. Board Action item 3 has been revised to accurately reflect the applicable risk values as shown in the response to Comment #1 above. Since acetaldehyde does not have an adopted water quality objective or maximum contaminant level, and is not a USEPA priority pollutant, Central Valley Water Board staff have discretion on evaluating reasonable potential to adversely impact

receiving water beneficial uses. Although the discharge to Buffalo Creek is not tap water, Central Valley Water Board staff considered these risk values as screening levels to ensure protection of the downstream municipal water supply beneficial use.

CITY OF SACRAMENTO COMMENT #3 – Critical Downstream Concentration Analysis

The City acknowledges they are in agreement that a performance-based effluent limit for acetaldehyde is appropriate to ensure that critical downstream concentrations within the American River continue to be protected. The comment letter states that this is based on the calculated critical downstream concentration showing reasonable potential to exceed the tap water RSL.

RESPONSE:

Central Valley Water Board staff clarify that the calculated critical downstream concentration did not exceed the lowest RSL, as described in more detail in the response to Comment #1b above.

STAFF REVISIONS – PROPOSED AMENDING ORDER

STAFF REVISION #1

Central Valley Water Board staff inadvertently missed that Attachment E Section X.B.7.a was applicable to the annual average effluent limitation established in the tentative amending Order for acetaldehyde. The revision to Attachment E Section X.B.7.a has been added to the tentative amending Order as Board Action item 6. Subsequent items have been renumbered accordingly.

6. **Attachment E – Monitoring and Reporting Program, Section X. REPORTING REQUIREMENTS.** Revise Section X.B.7.a text as shown below.
 - a. **Calendar Annual Average Limitations.** For constituents with effluent limitations specified as “calendar annual average” (electrical conductivity and acetaldehyde) the Discharger shall report the calendar annual average in the December SMR. The annual average shall be calculated as the average of the samples gathered for the calendar year.