

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD
27/28 APRIL 2023 BOARD MEETING

RESPONSE TO COMMENTS
FOR THE
HOMESTAKE MINING COMPANY OF CALIFORNIA
MCLAUGHLIN MINE

TENTATIVE WASTE DISCHARGE REQUIREMENTS

The following are Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements Order **R5-2023-XXXX** revising Orders R5-2013-0030/R5-2012-0010-01 for **the Homestake Mining Company of California** (Homestake or Discharger) **McLaughlin Mine** (Facility).

The tentative Title 27 Waste Discharge Requirements Order was issued for a 30-day public comment period **on 16 February 2023** with comments due by **17 March 2023**. The Central Valley Water Board received comments regarding the tentative Permit by the due date from the Homestake. We also received an e-mail from Catherine Koehler, McLaughlin Reserve Director, who expressed her personal support which has been included into the record but doesn't require a response.

The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses (WB Response).

DISCHARGER'S COMMENTS

Waste Discharge Requirements Order R5-2023-XXX

1. COMMENT:

- a. There is an issue with page numbering within the document (i.e., the next page after page 26 is page 22).

WB RESPONSE: Comment accepted; the numbering has been corrected.

- b. Some places in the Tentative WDRs (e.g., Finding 46, Finding 61) refer to the Updated Closure Plan for the TIF as a technical report rather than as an updated TIF Closure Plan (as in Facility Specification C.9 and CPCM Specification E.2. Time Schedule I.3 refers to it as an Amended Closure Plan)

WB RESPONSE: Staff will change all references to Updated TIF Closure Plan.

2. COMMENT: *Page V, acronyms:* "Million to" should read "Million tons".

WB RESPONSE: Comment accepted; the text has been corrected as proposed.

3. COMMENT:

Page 1, Finding 2: Four Yolo County APNs in Table 2 are repeated. The following numbers should be removed: 018-280-003, 018-310-001, 018-310-021, 018-310-023.

WB RESPONSE: Comment accepted; duplicate numbers have been removed.

4. COMMENT: Page 5, Finding 5.d: “1941 amsl” should read “1741 amsl”.

WB RESPONSE: Comment accepted; 1941 amsl has been changed to 1741 amsl.

5. COMMENT: Page 10, Finding 20, third sentence: “or” should be replaced with “of”.

WB RESPONSE: Comment accepted; text has been changed as proposed.

6. COMMENT: Page 13, Finding 35: “Eleven monitoring wells” should be changed to “twelve monitoring wells”. Well S-10 should be added to the mine pit area list with S-01 and S-02B.

WB RESPONSE: Comment accepted. Finding 35 language has been changed as proposed. Groundwater monitoring well S-10 has been added to the list of monitoring wells.

7. COMMENT: Page 13, Finding 37: “1450BS” should be added to the list.

WB RESPONSE: Comment accepted, 1450BS” has been added.

8. COMMENT: Page 16, Findings 56 and 57: Findings 56 and 57 describe the proposal and reasoning presented in the June 2021 ROWD to divert Duck Pond water into surface water drainages (i.e., so that the Duck Pond water is no longer reporting to the TIF pond). Finding 57 describes the Duck Pond water as non-contact water. Closure & Post-Closure Maintenance (CPCM) Specification E.2 mentions the proposal for the Duck Pond, but the WDRs do not state whether the approach is approved or if there is additional information required in the Amended TIF Closure Plan (or what additional information is required in the plan). Homestake is requesting clarification on whether the approach is approved and what additional information is required (if any) in the Amended Closure Plan.

WB RESPONSE:

Finding 56: For consistency, the word ‘amended’ has been changed to ‘revised’.

Finding 57: ‘therefore it may be diverted.’ Has been added to the last sentence.

Section E.2: The word 'Amended' was replaced by 'Revised'. 'The Duck Pond water may be diverted from the internal pond, however, this; has been added to the second sentence.

- 9. COMMENT: *Page 18, Finding 67, third sentence*:** A space should be added between "will" and "not".

WB RESPONSE: COMMENT accepted, a space has been added as specified in the comment.

- 10. COMMENT: *Page 19, Finding 68, third sentence*:** A space should be added between "these" and "WDRs".

WB RESPONSE: Comment accepted; the text has been changed as proposed. .

- 11. COMMENT: *Page 19, Finding 68, tenth sentence*:** A space should be added between "prevent" and "any".

WB RESPONSE: COMMENT accepted; a space has been added as specified in the comment.

- 12. COMMENT: *Page 21, Finding 77, eighth sentence*:** The word "compacted" is unreadable due to character spacing.

WB RESPONSE: Comment accepted; formatting issues have been addressed.

- 13. COMMENT: *Page 21, Finding 79, fifth sentence*:** The word "report" is unreadable due to character spacing.

WB RESPONSE: Comment accepted; formatting issues have been addressed.

- 14. COMMENT: *Page 22, Finding 84, third sentence*:** The word "gallon" is unreadable due to character spacing.

WB RESPONSE: Comment accepted; formatting issues have been addressed.

- 15. COMMENT: *Page 23, Requirement B.5, second sentence*:** A space should be added between "that" and "encroaches".

WB RESPONSE: Comment accepted; a space has been added as specified in the comment.

- 16. COMMENT: *Page 23, Requirement C.2*:** The requirement for precipitation and drainage control systems to accommodate the 1,000-year 24-hour storm is not consistent with Title 27 (e.g., Section 22490) or California engineering practice.

Industry standards for surface water control structures typically have design criteria commensurate with their failure risks. Typically, minor, surface water control features (diversion channels, drainage swales collection channels, etc.) are designed for the 50-yr to 100-yr 24-hr rainfall event (see <https://engineering.saccounty.gov/documents/section9-stormdrainagedesign.pdf> as an example). Critical control features, such as spillways or levees, that are meant to mitigate against dam failures are designed for events between the 1000-yr event and the probable maximum precipitation. Homestake is requesting the requirement be changed to “100-year 24-hour precipitation”.

WB RESPONSE: Comment accepted; the requirement has been changed to “100-year 24-hour precipitation”.

17. COMMENT: Page 24, Requirement C.6: The requirement does not state at which interval (i.e. daily, weekly, monthly, etc.) leachate records should be kept.

WB RESPONSE: Comment accepted; the language has been changed to add a ‘monthly’ interval for which leachate records should be kept.

18. COMMENT: Page 24, Requirement C.9: The Updated Closure Plan is required by December 31, 2024. Homestake requires one additional year to finalize details and is requesting a submittal deadline of December 31, 2025.

WB RESPONSE: Comment accepted; The Updated TIF Closure Plan compliance deadline has been changed to 31 December 2025.

19. COMMENT: Page 24, Requirement C.12: This specification should be removed as it requires inspection and maintenance of the interior TIF berms. Finding 13 indicates that the RWQCB concurred in a March 30, 2021, letter with a proposal to remove these berms.

WB RESPONSE: Comment accepted; requirement C.12 has been removed, and the following C section requirements renumbered.

20. COMMENT: Page 26, Requirement E.1 and Page 30, Table 3 - Time Schedule I.2: SCAP (Sample Collection and Analysis Plan) for the Evaporation Pond. CPCM Specification 1 and Time Schedule Item I.2 describe a SCAP for the Evaporation Ponds to ensure that discharge standards are met prior to diversion from South Pit and discharge to the stormwater system. This requirement seems redundant with the requirements of the Industrial General Stormwater Permit which would require testing of the water in the evaporation ponds prior to the water being discharged to the environment. Typically, this testing would be

described in the Stormwater Pollution Prevention Plan for the facility. Homestake proposes the following alternative language:

“Sampling of discharge from the evaporation ponds shall be performed in accordance with the General Industrial Stormwater Permit (Order 2014-0057-DWQ) to ensure that discharge standards have been met. The Discharger shall include stormwater results in the Annual Monitoring Reports (AMRs) described in Section D.2 of MRP Order R5-2023- XXXX.”

WB RESPONSE: Comment accepted; I.2 has been removed. The proposed text replaced the last sentence E.1.

Finding 39 has been changed to eliminate a reference to section I.2.

Finding 73: We replaced ‘This order requires submittal and approval of sampling strategy to ensure that the diverted water meets discharge standards (see Section I.2).’ with the proposed language as follows: ‘Sampling of discharge from the evaporation ponds shall be performed in accordance with the General Industrial Stormwater Permit (Order 2014-0057-DWQ) to ensure that discharge standards have been met.’

Finding 46: Reference to I.3 at the end of the paragraph has been changed to I.2.

Finding 59: Reference to section I.3 has been changed to I.2.

Finding 61: Reference to section I.3 has been changed to I.2.

Finding 91: Reference to section I.5 has been changed to I.4.

21. COMMENT: *Page 27, Requirement E.4:* “40 years” needs to be clarified.

WB RESPONSE: Requirement E.4 has been changed as follows:

The Discharger shall submit a Final Closure and Post-closure Plan including closure and post-closure cost estimates for the entire facility for 40 years within 60 days from approval of Updated TIF closure plan (See Section I.3). The 40-year postclosure period is used to in effect provide annual maintenance in perpetuity.

22. COMMENT: *Page 27, Requirement F.2:* In the ninth sentence, a space should be added between “Regional” and “Board”.

WB RESPONSE: Comment accepted; a space has been added as specified in the comment.

23. COMMENT: *Page 29, Requirement H.1.C:* The financial assurance report requirement is redundant with the same requirement that is listed in Requirement F.3 (Page 27).

WB RESPONSE: Comment rejected. No changes were made. Although already specified in F.3, it is also a reporting requirement.

24. COMMENT: Page 32, Attachment A, Figure 1: The circled site area is in the incorrect place and needs to be moved to the northeast as well as elongated to cover the actual site area.

WB RESPONSE: Comment accepted; we replaced the figure from ROWD with the one from the 2021/2022 Annual Monitoring Report.-

OTHER CHANGES

An acronym CWC for California Water Code has been added to the Glossary. California Water Code has been replaced by CWC throughout the Order.

'Tit. 27' changed to 'Cal. Code Regs., tit.' Throughout the Order.

Finding 89: 'California Code of Regulations' has been deleted.

Section E.2 has been modified to change an 'Amended' to 'Revised' Closure Plan.

Section E.4 has been modified to capitalize Closure Plan.

Section I.3 has been modified from Final Post-Closure Maintenance Plan to Final Closure and Post-closure Maintenance Plan.

Section F.1 has been modified to include references to Sections I.3 and I.4.

Drawing Reference captions were added below the figures in all Attachments.

Monitoring and Reporting Program R5-2023-XXXX

1. COMMENTS:

- a. Monitoring of bicarbonate, carbonate, and hydroxide alkalinity should be eliminated and instead, just monitor total alkalinity. The speciated alkalinity is determined by the amount of acid required to reduce the pH of the sample from the native pH of the water down to certain endpoints. The endpoint is around pH 10 for hydroxide, pH 8.3 for carbonate, and 4.3 for bicarbonate. Constituents other than carbonate, bicarbonate and hydroxide in the water can influence alkalinity (e.g., borate, silicate, and phosphate. Borate is relatively high at McLaughlin). Therefore, the results are not indicative of concentrations of the individual species. "Bicarbonate" is a complicated measurement using ion chromatography. All the water at McLaughlin is neutral or somewhat alkaline. There are no water quality objectives for these constituents, and they are more indicative of water "chemistry" than water "quality".
- b. There should be no Water Quality Protection Standards (WQPSs; called Maximum Likely Concentrations [MLCs] in the McLaughlin monitoring program) for total, bicarbonate, carbonate, or hydroxide alkalinity if these constituents remain in the monitoring program.

WB RESPONSE: Comments accepted; speciated alkalinity parameters have been removed.

- c. Similarly, sodium, potassium, calcium, magnesium, and chloride should be eliminated from the list of Constituents of Concern. These constituents are not indicative of a release at the mine (that would not be identified by a concomitant change in TDS and/or sulfate) and there are no water quality objectives for these constituents (that are not encompassed by the effects and objectives for TDS and sulfate).

WB RESPONSE: Comments accepted; the proposed parameters have been eliminated from the Monitoring and Reporting Program. Correspondingly, section D.2.c show below has been removed and sections D.2.d.-j. renumbered accordingly.

- c. An evaluation of Monitoring Parameters with regard to the cation/anion balance, and graphical presentation of same in a Stiff diagram, Piper graph or Schoeller plot.
- d. Section 7 of the MRP requires WQPSs/MLCs for COCs in surface water and groundwater but not seeps and springs. The current monitoring program only requires establishing WQPSs/MLCs for COCs in groundwater and seeps and springs. The reason there are no WQPSs/MLCs for surface water is that concentrations vary greatly in stream because of large ranges in flow, which results in statistically-based parameters (e.g., 95% upper confidence levels) that are not useful for detecting releases. Homestake requests that the requirement for WQPSs/MLCs is limited to groundwater and seeps and springs.

WB RESPONSE: Comment accepted; the requirement for MLC in surface water has been removed.

2. **COMMENT:** *Page 5, Section B.1.c:* Section contains a reference to Section 0, but there is no Section 0 in the MRP and the internal hyperlink directs to Section D.1.

WB RESPONSE: Comment accepted; the reference has been corrected.

3. **COMMENT:** *Page 6, Section B.1.c, Table 4:* Water levels are currently measured semiannually, but the MRP changes the frequency to quarterly. Homestake monitored groundwater levels during the operational period of the mine (1984 – 1996) and has a large dataset that verifies semi-annual monitoring (April and October) captures the highest and lowest seasonal water levels (Attachment A). The current monitoring frequency of semi-annually is sufficient to gather representative data. Sampling during the other two quarters will only likely provide data between the two extremes and not

provide any additional insight to the groundwater trends at the site. Therefore, Homestake is requesting that the monitoring frequency be kept as semi-annually.

WB RESPONSE: Comment rejected. Title 27 Section 20415(e)(15) requires measurement of groundwater elevation at least quarterly. No changes were made to the MRP.

- 4. COMMENT: Page 8, Section B.3.b:** Clarification is needed for the sampling frequency as the first paragraph conflicts with the sampling frequency listed in Table 7. Additionally, the surface water sampling locations at the site are remote and unmanned. The requirement to sample “at any point during the monitoring period” would require near continuous observation of the sampling locations, which would necessitate someone being stationed at the locations (which is not feasible). We recommend that samples should be collected once during the monitoring period (in April and October) and only if the sampling location has observable flow to avoid sampling stagnant water.

WB RESPONSE: Comment accepted; the requirement has been changed as proposed.

- 5. COMMENT: Page 12, Section B.5.a:** “TIF” should be changed to “TRS”.

WB RESPONSE: Comment accepted; the text has been changed as proposed.

- 6. COMMENT: Page 14, Section B.7.b and Page 15, Section B.7.f:** Section contains a reference to Section 0, but there is no Section 0 in the MRP. In the last paragraph in Section B.7.f, “Table 12” should be changed to “Table 14”.

WB RESPONSE: Comment accepted; the reference has been corrected.

- 7. COMMENT: Page 18, Section C.4:** The section requires that repairs after major storms must be completed within 30 days of the inspection. Commonly, conditions do not allow repairs to be made within 30 days. Some repairs require up to 6 months to complete. Homestake is requesting that the MRP make allowances for extended repair duration due to ground conditions, weather or contractor availability.

WB RESPONSE: Comment accepted; text has been amended to make allowances for extended repair interval.

- 8. COMMENT: Page 22, Sections D.4 and D.5:** Contains a reference to Section 0, but there is no Section 0 in the MRP.

WB RESPONSE: Comment accepted; the references have been corrected to point to sections C.3 and C.4, respectively.

OTHER CHANGES

Second Executive Office signature has been removed from page 25.

WDR Comment 20 triggered the following changes to:

6. Evaporation Ponds. a. Required Network

“As required by Order R5-2023-XXXX, the Discharger shall submit a *Sample Collection and Analyses Plan for Evaporation Ponds* prior to discharge of MIW to the future evaporation ponds. The partial SCAP shall include a map with sampling locations used to ensure that discharge standards are met prior to diversion from SP and discharge to the stormwater system. The approved sampling locations will be incorporated into this MRP.”

was replaced with:

“After the construction of evaporation ponds, the Discharger shall establish sampling points at discharge points to stormwater channels and incorporate these sampling points into this MRP program.”

6. Evaporation Ponds. b. Sample Collection and Analysis

“Evaporation flush liquids shall be collected in sampling points as specified above and analyzed for the monitoring parameters and sampling events proposed in the approved *Sample Collection and Analyses Plan for Evaporation Ponds*. The approved monitoring parameters and frequency of sampling events will be incorporated into this MRP.”

was replaced with

“Evaporation flush liquids shall be collected in sampling points as specified above and analyzed for the monitoring parameters specified in the facility’s facility’s General Industrial Stormwater Permit (Order 2014-0057-DWQ. The results of these analyses shall be reported annually as specified in D.2.a.”

C.2 Evaporation Pond Systems Monitoring

The last sentence

“The flow rate for leachate in each sump shall be recorded after each inspection and reported semi semiannually per **Section D.1**”

was replaced with

“The volume of pit MIW transferred to the evaporation ponds shall be recorded monthly and reported annually per **Section D.2.**”