

Central Valley Regional Water Quality Control Board
5/6 February 2015 Board Meeting

Response to Comments
for the
Original Sixteen to One Mine, Inc.
Sixteen to One Mine
Tentative Waste Discharge Requirements

The following are Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit) for the Original Sixteen to One Mine, Inc., Sixteen to One Mine, Sierra County.

The tentative NPDES Permit was issued for a 30-day public comment period on 2 October 2014 and comments were due 3 November 2014.

The Central Valley Water Board received comments regarding the tentative NPDES Permit by the due date from the following interested party:

- Original Sixteen to One Mine, Inc., Michael M. Miller, President

The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses. The commenter also submitted attachments that have been accepted into the record and are listed below after the comments and responses.

ORIGINAL SIXTEEN TO ONE MINE, INC. COMMENTS

Original Sixteen to One Mine, Inc., Comment No. 1.

Mr. Miller, President of Original Sixteen to One Mine, Inc., states that the tentative NPDES Permit under section VI.A.k requires the discharger notify the Central Valley Water Board by phone and in writing in the event they will be unable to comply for any reason with the effluent or receiving water limitations. Mr. Miller contends that Original Sixteen to One Mine, Inc. will be unable to comply with the waste discharge requirements contained in the proposed NPDES Permit.

Response: Central Valley Water Board staff concurs, based on monitoring results, that the discharge will violate the waste discharge requirements contained in the proposed NPDES Permit, including the arsenic effluent limitations that are based on United States Environmental Protection Agency's Primary Maximum Contaminant Level for protection of human health. California Water Code section 13385 requires the Regional Water Boards to impose mandatory minimum penalties (MMPs) upon dischargers that violate certain effluent limitations. But the Water Code also allows

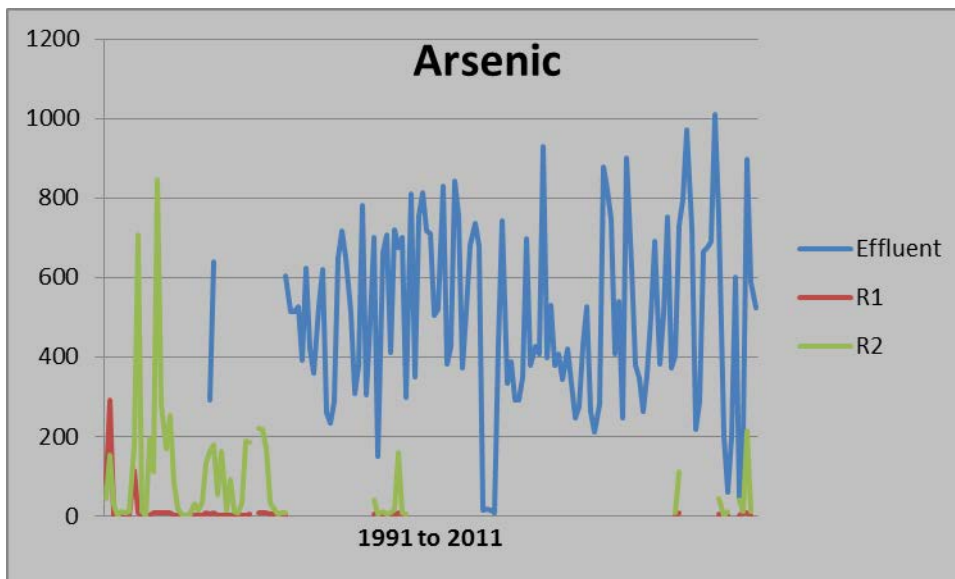
the discharge to be exempt from MMPs where the discharge is in compliance with either a cease and desist order or a time schedule order if the discharger specifies the new control measures necessary to comply with the effluent limitations, and the new control measures cannot be designed, installed, and put into operation with 30 calendar days.

In meetings on 11 August, 21 October (via conference call), and 18 December 2014, Central Valley Water Board staff informed Mr. Miller that in order to comply with the proposed effluent limitations in the proposed NPDES Permit, a mitigation program must be put in place and that Mr. Miller would need to submit to the Board a detailed project description, the time period needed to design, bid, and construct the project, and the expected date the treated discharge will comply with the final effluent limitations. Mr. Miller committed to staff to submit the necessary documents by 31 January 2015.

Original Sixteen to One Mine, Inc., Comment No. 2.

Mr. Miller states that the Original Sixteen to One Mine, Inc. property is a well-established highly mineralized geological zone that has been in existence as such for about 125 million years. The site was transformed during the past million years by volcanoes, water and physical changes in the surface environment, and that it has been modestly transformed by mankind since 1848. Mr. Miller contends that there are no deleterious effects to Tahoe National Forest, the waters of the state of California, plants, fish, aquatic insects, and animals including humans from the mine discharge, and that the arsenic concentration within the mine discharge has demonstrated no negative or harmful impact on the beneficial uses of the receiving waters identified in the Porter-Cologne Act, subsequent regulations or historic beneficial uses.

Response: Central Valley Water Board staff concurs in part. Arsenic and other metals and minerals are native to the local geological formations but mining activities disturbed native soils/rocks and exposed large amounts of surface area to contact with naturally occurring water. Rain water flows into the mine's subsurface contacting the disturbed soil/rock and causing arsenic and other metals and minerals to be released into the water at higher concentrations than undisturbed soils. As illustrated in the graph below, monitoring data from 1991 to 2011 shows that the water (effluent) discharged from the mine portal to Kanaka Creek contains significantly higher arsenic concentrations than samples from Kanaka Creek upstream of the mine (R1). Additionally, samples obtained from Kanaka Creek downstream of the mine portal (R2) are higher than upstream concentrations, indicating that the mine portal discharge affects Kanaka Creek and thus demonstrates the potential to negatively impact the beneficial uses of Kanaka Creek.



Moreover, the receiving water, Kanaka Creek, has been listed as an impaired water body pursuant to Clean Water Act section 303(d) because of arsenic. A Total Maximum Daily Load (TMDL) for arsenic is scheduled for completion in January 2020. Based on these findings, Central Valley Water Board staff does not concur that arsenic does not negatively affect Kanaka Creek.

Original Sixteen to One Mine, Inc., Comment No. 3.

Mr. Miller states that the tentative Permit does not identify a person or department to contact in the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation contained in this Order. Mr. Miller contends that Central Valley Water Board staff did not identify who can waive the requirement for written confirmation of the Facility's inability to comply.

Response: Central Valley Water Board Staff concurs. Lucio Orellana is the Compliance and Enforcement case manager for the site. Mr. Orellana can be contacted at (916) 464-4660 or at Lucio.Orellana@waterboards.ca.gov

Original Sixteen to One Mine, Inc., Attached Documentation.

The below documents were attached to Mr. Miller's comment letter and are provided below for reference purposes. Central Valley Water Board staff has no additional comments.

1. Excerpt from Water Quality Standards Handbook – Chapter 3 Water Quality Criteria.
2. Mr. Miller's 28 July 2014 Comment Letter on the Administrative Draft NPDES Permit.
3. Notice regarding U.S. EPA and U.S. Army Corps of Engineers publishing, in the Federal Register, a proposed rule to clarify the jurisdiction of the Clean Water Act.
4. Definitions excerpted from the California Water Code.
5. Excerpts from several technical articles.
6. Notice regarding U.S. District Court for the Eastern District decision on authority of the U.S. EPA to regulate stormwater under the Clean Water Act.
7. Notice regarding Central Valley Water Board adoption of waste discharge requirements for irrigated agricultural lands in Eastern San Joaquin River Watershed.
8. Notice regarding the statewide Industrial General Storm Water Permit.
9. Excerpt from Title I – Research and Related Programs of the Clean Water Act.
10. Excerpt from Title II – Grants for Construction of Treatment Works of the Clean Water Act.
11. Definitions from U.S. Code Title 33.
12. Mr. Miller's 18 May 2010 Letter to Dr. Goldman.
13. Sixteen to One Mine Summary of Water Issues.
14. Conditions in Sierra County and the Sixteen to One Mine.
15. Water analysis 2010.
16. Mr. Miller's 14 April 2009 Letter to Board staff in the Above Ground Storage Tanks unit.
17. Exhibit A, Re: Facility id #5A452023001 [Original Sixteen to One Mine, Inc.].
18. 3 January 2009 Article from Sacramento Bee "Kern inmates forced to use tainted water".
19. Technical paper, *Source and behavior of arsenic in natural waters*, by Pauline I. Smedley and David G. Kinniburgh, published in the British Geological Survey, Wallingford, Oxon, United Kingdom.
20. Quote from John Muir.
21. Mr. Miller's 10 December 2009 to Assemblyman Dan Logue
22. Article: *Toxicologist Edward Calabrese finds that what does not kill you can make you stronger*.
23. Synopsis of Mr. Miller's 3 May 2012 speech at Sierra Fund conference in Nevada City.
24. Profile of Michael M. Miller.
25. Mr. Miller's 8 March 2011 Letter to Central Valley Water Board regarding threat and complexity rating of Sixteen to One Mine discharge to Kanaka Creek.
26. Notice regarding the Notice of Public Hearing for the proposed NPDES Permit.
27. Excerpt regarding Arsenic-Sulfide Mineral Relations.
28. Excerpt from the technical paper by Pauline I. Smedley and David G. Kinniburgh (see attachment 19)