

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**In the matter of Walker Mine Tailings
Cleanup and Abatement Order R5-2014-
XXXX and Walker Mine Cleanup and
Abatement Order R5-2014-YYYY**

**Supplemental Declaration of Jeffrey
Huggins**

I, Jeffrey Huggins, declare as follows:

1. This Supplemental Declaration follows my earlier Declaration in this matter (Prosecution Team Exhibit 3) and addresses issues raised by the Forest Service's 20 February 2014 Response (Response), Atlantic Richfield's (ARCO's) 21 February 2014 Prehearing Brief (ARCO Brief) and ARCO's Prehearing Motion No. 2.
2. Prosecution Team Exhibit 52, filed concurrently herewith, contains true and correct copies of photographs I took during my 6 June 2010 inspection of the Walker Mine and Tailings sites. These photographs are submitted in rebuttal to the Forest Service's statements that the Dolly Creek Diversion Channel has eliminated discharges of waste into Dolly Creek and Little Grizzly Creek (e.g., Forest Service's Response, at pp. 2, 14-15.). Photographs 1 through 5 show wind-borne dust storms arising from the Tailings in and near the Dolly Creek Diversion Channel. I have regularly observed similar dust storms during my site inspections, and, based on these observations (including the June 2010 photos and photos 26, 27, and 34 of my 6 June 2013 inspection report [PT Exh 46]), and on the water quality samples from the Channel outfall, I conclude that the Tailings contribute mining waste to the Dolly Creek Diversion Channel, which discharges into Little Grizzly Creek.
3. Photograph 6 from Prosecution Team Exhibit 52 shows water discharging from the Walker Tailings over the "USFS Dam" into Little Grizzly Creek. This photograph is submitted in rebuttal to the Forest Service's statements that the Dolly Creek Diversion Channel has eliminated discharges over the USFS Dam (WM-6) (e.g., Forest Service's Response, at p. 15.) During my site inspections, I occasionally observe water flowing in the old Dolly Creek channel across the Tailings and over the USFS Dam into Little Grizzly Creek. I obtained water samples just below the Dam (WM-6) in June 2012, November 2011, July 2011, and November 2010, June 2010, October 2009, and June 2009. This indicates that water was flowing over the USFS Dam at WM-6 on these sampling dates. Based on these observations, and on the water quality samples taken from the USFS Dam sampling location, I conclude that mining waste occasionally discharges from the USFS Dam into Little Grizzly Creek.
4. Furthermore, the USFS reports in Figure 5 of their 2013 Water Quality Monitoring Report (submitted as "2013-USFS Tailings Monitoring Report" in the "Walker Electronic Records Submitted by Reference" folder on the Prosecution Team's 20 January 2014 Submittal CD) the "for the Walker Mine Tailings that they obtained samples from R-2 (Dolly Creek

immediately below the Forest Service Dam) as listed here. These Forest Service samples indicate that water was flowing over the USFS Dam on these sampling dates.

- May/June 2013, Cu concentration of 53 ug/L
 - May/June, 2012 Cu concentration of 37 ug/L
 - July 2011, Cu concentration of 95 ug/L
 - May/June 2011, Cu concentration of 128 ug/L
 - Sept 2010, Cu concentration of 103 ug/L
5. Prosecution Team Exhibit 53, filed concurrently herewith, contains true and correct copies of photographs I personally obtained from the Paul L. Henchey Collection¹ and Eastman Originals Collection², Department of Special Collections, General Library, University of California, Davis, on 13 January 2014 (for the Henchey photographs) and on 21 January 2014 (for the Eastman Originals). These photographs are submitted in rebuttal to ARCO's assertions that the bulk of mining activities did not take place during the period when its predecessors, Anaconda Copper Company and International Smelting and Refining Company, were operating the site. Photographs 1, 2 and 3 show the Walker Mine complex, including the industrial structures in the area near the portal and the processing facilities. Photograph 3 shows a view of the tailings pond in the middle background, with the industrial complex in the middle foreground.
 6. Photographs 4, 5 and 6 from Prosecution Team Exhibit 53 show the area of the Walker Mine and Tailings in 1951, about a decade after the Mine shut down for the final time. These photographs are submitted in rebuttal to ARCO's assertions that there is no evidence of conditions at the site following the final shut down in 1941. These photographs show that most or all of the mining equipment had been removed from the site following the shut down, and that no significant mining activities had taken place after shut down. Based on my understanding of the site history (obtained through archive research) and my firsthand knowledge of the physical site conditions, the vast majority – essentially all – of the mining activities that have ever taken place on the Mine and Tailings took place during the period in which Anaconda and International operated the Mine concurrently with the Walker Mining Company, from about 1918 through 1941.
 7. Prosecution Team Exhibit 54, filed concurrently herewith, is a true and correct copy of the Central Valley Water Board's file copy of the 1999 Settlement Agreement in the matter CVRWQCB v. Cedar Point Properties, Inc. This copy was inadvertently omitted from the Prosecution Team's 20 January 2014 submittals. This Settlement Agreement is offered to rebut ARCO's arguments that the Central Valley Water Board has agreed to hold harmless the settling parties.
 8. Prosecution Team Exhibit 55, filed concurrently herewith, is a true and correct copy of an excerpt from the 30 November 1920 edition of the Salt Lake Mining Review. This edition is discussed in Dr. Fredric Quivik's Witness Statement (PT Exhibit 2), and is offered in rebuttal to ARCO's objections to Dr. Quivik's testimony (ARCO's Prehearing Motion No. 9) and to ARCO's allegations that Anaconda and International were never publicly

¹ <http://www.oac.cdlib.org/findaid/ark:/13030/kt12903596/admin/#controlaccess-1.2.4>

² <http://www.lib.ucdavis.edu/dept/specol/collections/photographs/index.php?collection=eastman>

acknowledged as operators at the Walker Mine facility. The article contains statements by J.R. Walker that the "Anaconda company is under contract with the Walker Copper people to operate the mine for the best interest of the Walker Copper and the management of the property has been entirely satisfactory to the Walker interests."

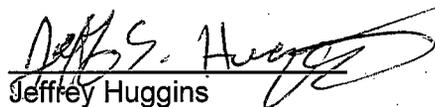
9. The record clearly shows that Anaconda and International managers directed the exploration and development work at the Walker Mine facility. Exploration and development work is part of mining, in that exploration and development provides the location to extract ore on a daily basis. The Walker Mine operated on a ton for ton development program, that is, "the amount of cross-cutting, drifting, raising, and preparation work to be carried out daily under ordinary operating conditions should be sufficient to find, develop, and prepare for mining, a ton of ore for every ton mined." (PT Exh 1, Item 78, at p. 2 [October 8, 1930, letter from Sales to Elton [directing activities of onsite geologists, engineers and ore samplers, and making personnel decisions]; see also PT Exh 1, Item 102 [March 5, 1937, letter from Sales to Elton discussing ton for ton (p. 1) and recommending more development work (p. 2) or the mining operation would end up running at less than mill capacity].) Thus, development work, along with mining, engineering, etc, created the conditions of pollution and nuisance that exist today.
10. Contrary to ARCO's assertions, Anaconda and International's development and exploration work is a pollution-causing activity. Development/exploration and mining/processing go hand-in-hand; they are not separate and distinct. Specifically, development and exploration are the initial stage for mining and processing, creating, among other things, raises and drifts in and to ore bodies. This generates mine waste, most of which is currently on the sites, and also creates the underground mine workings, which are conduits by which the acid mine drainage would reach the surface but for the mine seal. Reno Sales and other Anaconda and International employees directed and managed development work at the Walker Mine facility (see Jack Dugan's January 20, 1941 letter to Clyde E Weed [PT Exhibit 1, Item 260].).
11. ARCO's Exhibit 54, page 8 indicates that, in 1927, the mine operators removed 2,719 pounds (1.36 tons) of copper from the mine discharge with the "cementation" method. Page 7 of that Exhibit indicates that the operators milled 340,156 tons of ore for the year. Page 7 also indicates that the average grade of the tails, percent copper (tailings) was 0.1154% copper. So the Mine operators discharged approximately 393 tons of copper to the tailings in 1927, while recovering about 0.344% of what they discharged. This demonstrates that the Mine facility discharged enormous quantities of copper, and related waste, to the Tailings even under the best of circumstances.
12. ARCO's Exhibit 72 is the Walker Mining Company Annual Report for 1932. Mining and milling was suspended on February 28 for the remainder of that year, so copper precipitates (presumably from precipitating mine water) was a large part of the copper produced that year. 60 tons x 63% copper is 38 tons of copper recovered from the mine discharge. But the operators milled 34,741 tons and, using the 1927 average grade of the tails (percent copper (tailings) of 0.1154% copper), the operators discharged to the tailings 40 tons of copper. This demonstrates that the Mine facility discharged copper to the Tailings even in years when little mining took place.
13. Prosecution Team 56 shows photographs from Central Valley Water Board files showing the condition of Dolly Creek before installation of the mine seal. The photographs were

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taken in 1986 or earlier, and show blue-green color from discharge of acid mine drainage containing copper and other metals discharged from the Walker Mine portal. All of these photographs were disclosed to ARCO in response to ARCO's Public Records Act requests dated November 2013. The photographs are offered here to rebut ARCO's assertions that the mine seal has been ineffective.

14. Prior to coming to the Board in 2006, I worked for more than 15 years in the mining industry. My private sector mining experience includes permitting, design, construction, operations, and closure. I have worked at large scale gold and silver mines in Montana and Nevada and at some of the largest copper mines in South America. For the past 6 years at the Regional Board, my responsibilities have been almost all mining related.

I declare under penalty of perjury to the laws of the State of California that the foregoing is true and correct. Executed this 6th day of March, 2014, at Rancho Cordova, California.


Jeffrey Huggins