

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MEETING OF July 16 - 17, 2014
Bishop**

ITEM: 5

SUBJECT: **RESCISSION OF WASTE DISCHARGE REQUIREMENTS
BOARD ORDER NO. 6-00-93 FOR AVOCET TUNGSTEN,
PINE CREEK OPERATIONS – MINING WASTE DISPOSAL
SITE, INYO COUNTY**

CHRONOLOGY:

October 19, 1971	Waste Discharge Requirements Adopted (Board Order No. 6-71-36)
November 9, 1989	Revised Waste Discharge Requirements Adopted (Board Order No. 6-89-202)
November 15, 2000	Revised Waste Discharge Requirements Adopted (Board Order No. 6-00-93)
July 20, 2004	Revised Monitoring and Reporting Program No. 00-93A Adopted (Board Order No. 6-00-93)

ISSUE: Should the Water Board rescind Waste Discharge Requirements issued to Avocet Tungsten, Inc., now Pine Creek Development LLC, for the Pine Creek Mine and Mill Operations? Rescission is appropriate because the approved Site Closure Plan has been fully implemented, including capping and closing in place the unlined mining waste management units and capping of the tailing piles. Therefore, the Facility no longer poses a threat to water quality.

DISCUSSION: The Facility operations consisted of hard-rock mining, crushing and grinding ore, flotation concentration, pressure leaching, molybdenum precipitation, solvent extraction, ammonium paratungstate crystallization, molybdenum crystallization, and sodium sulfate crystallization. Liquid mill waste, boiler blowdown, and raffinate concentrate were discharged to four unlined mining waste management units (ponds). All mining and processing operations ceased by May 2000, and the processing equipment was sold or scrapped. The mining waste management units have been closed in place, and the tailings piles have been capped in accordance with the accepted Site Closure Plan. During the post-closure monitoring period, analyses of surface water and groundwater samples in the vicinity and downstream of the Facility show no impacts to water quality from this closed Facility.

Water Board staff has solicited comments from the Discharger and interested parties.

RECOMMENDATION: Adoption of Order as proposed.

ENCLOSURE	ITEM	BATE NUMBER
1.	Proposed Board Order No. R6V-2014-proposed	05-03

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER NO. R6V-2014-(PROPOSED)
WDID NO. 6B142000001**

**RESCISSION OF WASTE DISCHARGE REQUIREMENTS
BOARD ORDER NO. 6-00-93
FOR**

**AVOCET TUNGSTEN, INC.
PINE CREEK OPERATIONS – MINING WASTE DISPOSAL FACILITIES**

Inyo County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. **Discharger**

Pine Creek Development owns the tungsten mine and processing facility at Pine Creek. The mine and processing facility were previously owned by Avocet Tungsten, Inc., to whom Board Order 6-00-93 was issued. The mine operations discharged mill waste to four unlined Tailings Ponds near Pine Creek, located west of Bishop along the eastern escarpment of the Sierra Nevada Mountains, between Mount Tom and Mount Morgan. For the purposes of this Water Board Order (Order), Pine Creek Development and the United States Forest Service (USFS), landowner, are collectively referred to as the "Discharger." Four unlined tailings ponds, known as mining waste units 1 through 4, are collectively referred to as the "mining waste management units." Additionally, Pine Creek Mine and Mill Operations are referred to as the "Facility."

2. **Facility Location**

The Facility is located 17 miles west of Bishop in Pine Creek Canyon, Inyo County, in the northeastern corner of Section 8, Township 7 South, Range 30 East, Mount Diablo Baseline & Meridian. The Facility is located within the Upper Owens Hydrologic Area (HA 603.2), and is shown on the Regional Site Location Map, Attachment "A," which is made part of this Order.

3. **Facility Description**

During operations, the Facility consisted of crushing and grinding ore, flotation concentration, pressure leaching, molybdenum precipitation, solvent extraction, and ammonium para-tungstate crystallization. Certain concentrates that were not amenable to the pressure leach went through a caustic digestion circuit and were blended with the other solution before the molybdenum precipitation.

Approximately one to two million gallons per day (mgd) of liquid mill waste was discharged to the mining waste management units. Also, approximately 2,500 gallons per day (gpd) of boiler blowdown was added to the mining waste discharge. The total dissolved solids (TDS) concentration of the mining waste discharge averaged about 7,000 milligrams per liter (mg/L) during times of full production.

A raffinate plant was available to make another product, sodium sulfate, by a process of evaporative crystallization. The raffinate plant operated primarily between 1974 and 1985. Liquid condensate was periodically discharged through the mining waste pipeline to the mining waste management units.

An air stripper was used to remove ammonia from the mill waste effluent. The effluent was discharged as a slurry to Mining Waste Unit 4. When the mill was not operating, waste flowed through the circuit and was discharged to Mining Waste Unit 1 and decanted downgradient through the four mining waste management units.

Excess water on mining waste management unit surfaces was disposed in several ways, including spraying it on the talus slopes adjacent to the ponds. Excess water was also discharged to a decant pond, which discharged decant water to three percolation ponds located in the Scheelite area of Pine Creek Canyon. The decant pond and three percolation ponds were unlined excavations in the canyon floor. Discharge to the decant pond and the percolation ponds occurred when the volume of decant water exceeded the safe operating containment volume of the mining waste management units. Liquid was routed through decant pipes, which had the capacity to discharge about 12,000 gallons per minute (17 mgd).

4. Order History

The Water Board previously adopted Waste Discharge Requirements (WDRs) for the Facility under Board Order No. 6-71-36, which was adopted on October 19, 1971, to regulate discharges of mill waste to the mining waste management units. The Water Board revised WDRs for the Facility with Board Order No. 6-89-202, which was adopted on November 9, 1989. The WDRs were revised again with Board Order No. 6-00-93, adopted on November 15, 2000, to ensure adequate closure and post-closure maintenance of the Facility. On July 20, 2004, the monitoring and reporting program (MRP) for Board Order No. 6-00-93, was revised with MRP No. 00-93A. A Cease and Desist Order (CDO) No. 6-00-21 issued to Avocet Tungsten was adopted on March 9, 2000, for failure to provide Financial Assurances to cover the cost of closure and post-closure activities, but it was rescinded November 27, 2000, after adequate Financial Assurances were provided.

Untreated mine drainage water (groundwater) was discharged into Morgan Creek, which is a tributary to Pine Creek upstream of the mining waste management units. The discharge of mine adit drainage water to Morgan Creek was regulated by a separate National Pollutant Discharge Elimination System (NPDES) permit; however the NPDES permit was rescinded on June 12, 2002 (Board Order No. R6V-2002-0042).

5. Reasons for Action

The Discharger has requested closure of the site with no further action, as concentrations of Constituents of Concern (COC) in the monitoring wells, surface water sampling locations, and springs (Carpenter and Scheelite) during the post-closure monitoring period (2000 – 2014) show no water quality impacts from previous mining activities. In addition, nearly all the monitoring wells have gone dry except well MW-1A, as well as Carpenter and Scheelite Springs.

The Discharger ceased mining operations on the Facility during May 2000, and completed closure activities in accordance with the accepted closure plan and as reported in *Closure Report for the Pine Creek Mine*, (SECOR, February 2, 2002). The Discharger completed reclamation in accordance with Reclamation Plan No. 91-4, September 19, 1991 (Stratcor), as directed by Provision I.A.6 of the Board Order.

On March 28, 2014, Water Board staff sampled locations upstream of the mine ("R-1" along Pine Creek) and downstream of the mine at the Rovanna Weir; these locations are shown on Attachment B, Facility Map, which is made part of this Order. Analyses of these samples confirmed that the mine and closed mining waste management units do not affect water quality downstream from the mine.

6. California Environmental Quality Act (CEQA)

This action is being taken by the Water Board to rescind WDRs issued pursuant to the California Water Code, and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with the California Code of Regulations (CCR), title 14, section 15321, subsection (a)(2).

7. Right to Petition

Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with California Water Code, section 13320, and CCR, title 23, sections 2050 and following. 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 may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality, or will be provided upon request.

8. Public Notification

The Water Board has notified the Discharger and interested agencies and persons of its intent to rescind WDRs for the Facility. The Water Board, in a public meeting, heard and considered all comments pertaining to the rescission of these WDRs.

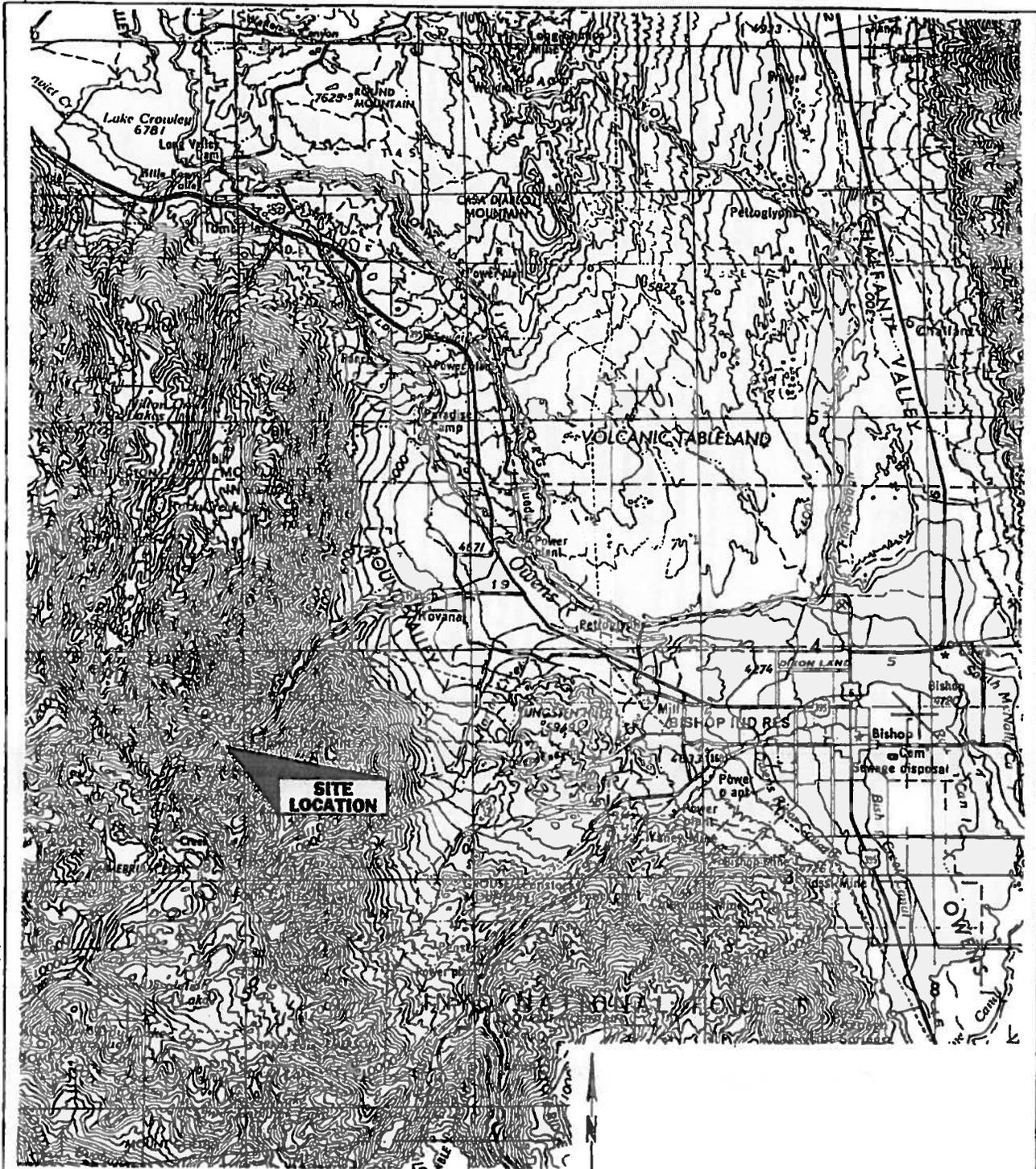
IT IS HEREBY ORDERED that Board Order No. 6-00-93 and MRP No. 00-93A be rescinded.

I, Patty Kouyoumdjian, Executive Officer, do hereby verify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on July 16, 2014.

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachment: A Regional Site Location Map
Attachment: B Facility Map

R6V/BoardOrders 2014/Pine Creek Mine Rescission/TENT.docx



SOURCE: USGS 1° X 2° TOPOGRAPHIC MAP
MARIPOSA, CALIFORNIA; NEVADA
(1957, PHOTOREVISED 1970)



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ATTACHMENT A
REGIONAL SITE LOCATION MAP

Attachment "B"

