



## Lahontan Regional Water Quality Control Board



# EXECUTIVE OFFICER'S REPORT

February 2012

## NORTH BASIN

**1. Approval of Cleanup and Abatement Account Funding for the Tahoe Meadows Domestic Well Remedial Investigation Project – Brian Grey**

Tetrachloroethylene (PCE), a common dry cleaning solvent, was detected in private domestic wells within the Tahoe Meadows subdivision on Labor Day weekend of 2007 following a resident's complaint of a solvent taste in their drinking water. Water Board staff has performed semi-annual groundwater monitoring of select domestic wells within the Tahoe Meadows subdivision following the initial complaint.

The groundwater monitoring results show six domestic wells consistently have PCE concentrations above the primary maximum contaminant level (MCL) of 5 micrograms per liter ( $\mu\text{g}/\text{L}$ ). Additionally, methyl tertiary-butyl ether (MTBE) concentrations have been reported above the 13  $\mu\text{g}/\text{L}$  MCL in three of the domestic wells already impacted by PCE.

Currently, there is no identified responsible party for the MTBE or PCE contamination after an up-gradient investigation did not indicate significant groundwater contamination around former dry cleaner locations. Cleanup and Abatement Account money that has been used for the semi-

annual sampling of the domestic wells expired this last fiscal year.

I submitted a request to the Cleanup and Abatement Account to fund a subsurface investigation of the extent of contamination in the Tahoe Meadows subdivision. The investigation will include the advancement of borings and collection of hydrogeologic and water quality data to aid Water Board staff in identifying potential responsible parties. The request was approved in January 2012 for the amount of \$97,431.

In the coming months, staff will be working with State Water Board staff on bid solicitation, contractor selection, and contract preparation so that the proposed investigatory work can begin by the fall of 2012. Staff will also be distributing an informational letter to the existing interested parties list by the end of January 2012, and presenting an informational item at the Tahoe Meadows annual homeowner's association meeting in summer 2012.

**2. Tentative Waste Discharge Requirements for the USFS South Shore Fuel Reduction and Healthy Forest Restoration Project – George Cella**

Lahontan Water Board staff has posted Tentative Waste Discharge Requirements and Monitoring and Reporting Program

(Tentative WDR) and draft environmental documentation for the USFS Lake Tahoe Management Unit (LTBMU) South Shore Fuel Reduction and Healthy Forest Restoration Project (Project). The Lahontan Water Board is the Lead Agency under the California Environmental Quality Act for the Project. The draft environmental documentation consists of a mitigated negative declaration which relies on a combination of the LTBMU's Final Environmental Impact Statement and Record of Decision for the Project along with required mitigation and monitoring in the Tentative WDR. Public comments on the Tentative WDR and draft environmental documentation are due to the Water Board by February 27, 2012. The Lahontan Water Board anticipates considering the Tentative WDR and environmental documentation at its April 11-12, 2012 board meeting.

**3. Southern Nevada Public Lands Management Act (SNPLMA) Round 12 Science Proposal Update for the Tahoe Basin** *Hannah Schembri*

The United States Forest Service Pacific Southwest Research Station (PSW) administers the competitive Tahoe Science Program with funding provided by the Bureau of Land Management under the Southern Nevada Public Lands Management Act (SNPLMA). For Round 12, PSW received 41 proposals for research supporting the Lake Tahoe Restoration Act and the Lake Tahoe Environmental Improvement Program. The 41 proposals are competing for a total of \$3.75 million available.

The Tahoe Science Consortium, in consultation with staff and executives from Tahoe basin agencies, developed the Round 12 science themes and subthemes that guide development of research proposals. Four overarching themes are organized around the Lake Tahoe Environmental Improvement Program Focus areas: 1) Forest Health, 2) Watershed,

Water Quality, and Habitat Restoration, 3) Air Quality, and 4) Integrating Science. Each science theme area includes subthemes that address key management issues and areas where research is needed in the Tahoe Basin.

The process to review the 41 proposals (coordinated and conducted by Tahoe Science Consortium) began with an administrative review in late November 2011, followed by an independent technical peer review through December 2011 that determined which proposals advanced to eight Tahoe basin agencies for review. Eight Tahoe basin agencies review and rank the science proposals for relevancy: California Tahoe Conservancy, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Lahontan Water Board, USFS Lake Tahoe Basin Management Unit, Nevada Division of Environmental Protection, Tahoe Regional Planning Agency, and the Nevada Division of State Lands. Based on technical and agency relevancy reviews, proposals are ranked for potential funding. The Tahoe Science Consortium, in concert with the eight agencies, is scheduled to select proposals for funding by early March 2012. For more information on this review process for the SNPLMA Science Program or Round 12 Science themes and subthemes, go to: [http://www.fs.fed.us/psw/partnerships/tahoe\\_science/](http://www.fs.fed.us/psw/partnerships/tahoe_science/).

## SOUTH BASIN

**4. Edwards Air Force Base, Operable Unit 6, NASA Dryden Flight Research Center – John Steude**

Operable Unit 6 at Edwards Air Force Base (EAFB) encompasses the National Aeronautics and Space Administration (NASA) Dryden Flight Research Center and is the first EAFB Operable Unit where a Record of Decision (ROD) stipulating a remedy for groundwater contamination has been in place for five years. The selected remedy is source treatment at groundwater contaminant hot spots using *in situ* chemical oxidation and bioremediation, and monitored natural attenuation for the remainder of the groundwater plume. Because contamination remains in the subsurface, a comprehensive review of the selected remedy is required every five years pursuant to the Comprehensive Environmental Response and Compensation Act (CERCLA).

During the remedy review completed at the end of 2011, it was determined by the California Department of Toxic Substances Control (DTSC), the U.S. Environmental Protection Agency (USEPA), Water Board staff, and the U.S. Air Force, that there are insufficient data to determine whether the groundwater plume is stable and not migrating, as stated in the ROD, and whether volatile organic compounds (VOCs), potentially originating from contaminated groundwater, are causing an unacceptable cancer risk to occupants of buildings located above or near contaminated groundwater. Additional sampling and analysis events for existing and possibly additional new monitoring wells will be required to generate the trend data needed to determine whether the plume is stable or migrating. A vapor

intrusion pathway evaluation will need to be conducted to fully determine whether the implemental remedy meets the ROD standard of protectiveness with respect to vapor intrusion. The indoor risk of exposure to vapor intrusion is uncertain until this vapor intrusion pathway evaluation is completed. Given the insufficient data with regard to the threat posed by the contaminated groundwater and the potential vapor intrusion issues, the USEPA has changed the Human Health Environmental Indicator determination for the site from "Current Human Exposures Controlled" to "Insufficient Data to Determine Human Exposure Control Status" until the identified data gaps are filled. Citing uncertainty regarding funding, the Air Force has set target dates to complete the vapor intrusion pathway evaluation in two years and complete the analysis of groundwater migration in five years.

Additionally, the Air Force disagrees with all three regulatory agencies on the interpretation of regulations and policies pertaining to risk assessment and risk management. One issue is whether the appropriate risk management action level for cancer is one in a million ( $1 \times 10^{-6}$ ), one in ten thousand ( $1 \times 10^{-4}$ ) or somewhere between these two levels. A second issue is whether California toxicity criteria, that are stricter than federal toxicity criteria, should be used in risk assessments and in establishing cleanup levels. Upon receipt of the Air Force Work Plans to complete the required studies, Water Board staff will provide comments on compliance with state requirements.

**5. *Molycorp Inc.), Cleanup and Abatement Order No. 6-97-66, Status of Wastewater Pipeline Removal* – Christy Hunter**

A Cleanup and Abatement Order (CAO) was issued to Molycorp, National Park Service (NPS), and U.S. Bureau of Land Management (BLM) in 1997 requiring investigation of the pipeline spills and cleanup of pipe scale and contaminated soils. Waste discharge ceased in 1998. The investigation showed that wastewater and pipe scale, containing elevated levels of barium, uranium, thorium and radium, were discharged to lands owned by the NPS and the BLM. Subsequent investigations revealed two historic pipeline release locations, not associated with the 1996 releases, that were added to the scope of remedial activities. With the exception of two very minor and localized areas of contamination, all of the surface spill-related material was removed by the fall of 2000; however, mining-related waste material remained in the buried pipeline and surrounding subsurface soil. During this time, then-owner Molycorp Inc., proposed to remediate all wastes associated with the pipeline including removal of the entire length of pipeline. The pipeline crossed public lands managed by the BLM, a portion of the Mojave National Preserve administered by the NPS, and Molycorp Minerals LLC (Molycorp) (new owner) property. BLM and the NPS, through their consultants, have provided oversight of these remediation activities, in concert with review from California Department of Public Health-Radiological Health Branch staff and Water Board staff.

In 2005, Molycorp Inc. was acquired by ChevronTexaco and in 2007 Chevron Mining Inc. (CMI) was created when the parent company (ChevronTexaco) merged its mining operations (the former

Pittsburg & Midway Coal Mining and Molycorp Inc.) into one unit. In 2009, Chevron Mining Inc., sold its ownership of the Mine to a newly created company, Molycorp Minerals LLC. However, CMI retained ownership and cleanup liability of the Ivanpah former evaporation ponds including the wastewater pipeline. In December 2009, CMI began implementation of an inter-agency-approved work plan to remove and remediate pipeline-related spills. (Pipeline removal for a short [500 feet] segment of pipeline actually occurred in the summer of 2008 to accommodate expansion of nearby Interstate Highway 15.)

On January 12, 2012, the last section of formerly-used wastewater pipeline was removed from a 15-mile corridor that leads from the Mountain Pass Mine to the former Ivanpah evaporation ponds. This two-year project resulted in the removal of 14.8 miles of wastewater pipeline and remediation of mining-related contaminated soil caused by releases of wastewater from the pipeline during pipeline maintenance activities in 1996. Wastewater contained both liquid waste and solids (as scale) derived from the mining operations. Final documentation of this removal/remediation project will be provided to Water Board staff. Once the remediation is confirmed, the CAO No 6-97-66 can be rescinded.

**6. *Molycorp Minerals LLC. Cleanup and Abatement Order No. 6-98-19, Status of Mountain Pass Mine and Mill Groundwater Investigation* – Christy Hunter**

A Cleanup and Abatement Order (CAO) was issued in 1998 to the then owner/operator (Molycorp Inc., a subsidiary of Unocal) of the Mountain Pass Mine and Mill, which required Molycorp Inc. to implement a groundwater

and soil investigation and response program after groundwater pollution was detected at the Mountain Pass Mine. The Mine and Mill generates wastes and rare earth element products that historically have been discharged into both lined and unlined waste piles, landfills, surface impoundments and tailings ponds. Delineation of pollution east (Wheaton Wash plume) and west of the property (Western Wash plume), onto U.S. Bureau of Land Management (BLM) property, has been partially completed. An interim extraction system is operating on mine property to extract polluted groundwater until the site investigation is complete and a groundwater remedy is determined. On June 13, 2011, BLM granted final approval for right-of-way access to Molycorp Minerals LLC; in September 2011, two wells were drilled downgradient of the mine in Wheaton Wash. Water samples from these wells indicate mining-related constituents are present in the shallow aquifer. Preliminary results indicates constituents are attenuating downgradient as compared to sample results from the nearest impacted upgradient well. The final report for this effort of investigation was submitted in December 2011, and is under review by Water Board staff. Staff with the BLM and National Park Service (NPS) will be providing us with comments on this document. It is expected that once our comments are addressed, Molycorp will proceed with developing a feasibility study to address a final cleanup remedy of the groundwater plume beneath mine property and off-site.

Molycorp also has provided documentation for the soil-cleanup progress that has occurred on Mine property from 2004 through 2005 with proposals for further site delineation for additional cleanup activities. Further soil contaminant delineation was proposed by

Molycorp in response to Water Board staff comments on their final soil investigation report. Molycorp proposes to complete additional soil surveys, soil sampling, and develop risk-based soil cleanup levels this year. It is expected that these cleanup levels will be developed and submitted for multi-agency review and approval to be completed by the end of this year. Final soil cleanup is proposed to be completed by the spring of 2013.

## **7. *Dairy Update - Ghasem Pour-ghasemi***

In August 2011, Water Board staff issued Cleanup and Abatement Orders (CAOs) to four dairies requiring them to provide bottled water for consumption and cooking to nearby residents whose drinking water wells are affected by dairy operations with nitrate and total dissolved solid (TDS) levels over the drinking water maximum contaminant levels.

Approximately 30 residents are receiving bottled water from these dairies. The Orders also required the dairies to conduct quarterly sampling of the nearby affected area and analyze groundwater samples for nitrate, TDS, general minerals, and bacteria.

At the request of these four dairies, Water Board staff met with these dairymen and Western United Dairymen's representative on December 21, 2011. The dairymen requested less frequent sampling and to reduce sampling for only nitrate and TDS. On January 19, 2012, all four CAOs were amended to require: 1) sampling for nitrate and TDS every nine-months, and 2) sampling for general minerals every 27 months. Amended CAOs require dairies to provide bottled water when nitrate as N concentration ranges from 6 mg/L to 8 mg/L depending on the standard of deviation from the previous nine-month sampling from a particular dairy. The tradeoff is that a

reduced sampling frequency is allowed and in return, some residents will obtain bottled water even though their well nitrate concentrations are currently within acceptable limits. This would prevent the affected residents from drinking water that might exceed the maximum contaminant level limits during the nine-month period until the next sampling event.

**8. Adelanto Wastewater Plant  
Groundwater Monitoring Well  
Installation – Jehiel Cass**

On December 29, 2011, Staff met with Adelanto City staff (Tom Thornton, City Engineer and John Sponslor, Water/Wastewater Manager) to discuss the following groundwater monitoring issues associated with the Adelanto Wastewater Treatment Plant.

**Excessive Turbidity** – After re-developing the six existing wells in September 2011, it was discovered that the wells produced excessive turbidity, indicating either well screen damage or improper screen size selection during construction. These wells will be redeveloped prior to the first quarter 2012 sampling. If excessive turbidity remains, the City will submit a plan for possible well replacement.

**New Well Installation** - In December 2011, the City of Adelanto installed six new groundwater monitoring wells for evaluating groundwater quality near wastewater disposal percolation ponds. Some well locations differed from that shown in the Workplan. A final well construction report will be submitted in the First Quarter 2012 Monitoring Report also describing the rationale for the final locations selected.

**Sampling and Analysis Plan** – The existing Sampling and Analysis Plan inadequately describes groundwater well

purging and sample collection procedures. A revised plan will be submitted in the First Quarter 2012 Monitoring Report.