Lahontan Regional Water Quality Control Board

EXECUTIVE OFFICER'S REPORT

February 2010 – March 2010

NORTH BASIN

1. ***South Tahoe Public Utility District to Replace Emergency Retention Basin Liners, El Dorado County*** - *Rob Tucker*

   In November 2009 I reported that staff was working with the South Tahoe Public Utility District on enforcement issues related to replacing waste containment liners for two Emergency Retention Basins (ERBs) at the South Tahoe Public Utility District wastewater treatment facility (Facility). The Facility treats an average of four million gallons of wastewater per day and exports the treated wastewater out of the Lake Tahoe Basin to Alpine County for storage and reuse. The ERBs are located near the Facility, are required to be maintained to prevent spills, and are used if there is a disruption in the District's export line to Alpine County and for other limited purposes.

   In response to my prior order in this matter, the District indicated it was planning to replace the ERB liners in the fall of 2011. The District is aware of and concerned about the requirement to have the ERBs available to store treated wastewater; however, the use of the ERBs has decreased in recent years. While ERB usage is unpredictable, in 2004-2006 the ERBs were used 98 days, and in 2007-2009, the ERBs were used 13 days. This reduced use resulted from past projects to improve the reliability of other elements of the treatment and export system. Delaying ERB replacement to 2011 provides time for the District to accomplish other planned repairs, such as replacing an emergency generator at a pump station and upgrades on the wastewater treatment Facility head-works, prior to rebuilding the ERBs. I concur with the proposed schedule.

   The District provided a preliminary list of review, inspection and maintenance activities that it will conduct prior to working on the ERBs to help prevent the need to use the ERBs during the construction time frame. These involve a set of activities designed to minimize risk of an upset or storage emergency during the replacement period. Examples include comprehensive Facility inspections, tests on all back-up power generators, reviewing spare parts availability and staffing/equipment readiness, contingency planning, and rescheduling major or risky maintenance outside the construction window. Additionally, the ERBs consist of two ponds that can be operated independently; the District plans on only working on one pond at any time, during the fall season when inflows to the plant are typically lowest. One pond provides the District with about 20 million gallons of storage and there is one internal treatment pond that provides another three million gallons of storage. In an emergency requiring more than 23 million gallons of storage capacity, both ERBs

would be used (even if under construction) as needed to prevent uncontrolled discharge to the environment.

The District is planning to apply for funding for the project through the State Water Board's State Revolving Fund Loan program. The District will provide to the Lahontan Water Board plans and designs for the replacement of the ERBs in August of 2010, while the funding is being secured. Water Board staff plan to issue a time schedule order to the District in 2010 to require the replacement of the ERB liners along the timelines outlined above, to require the implementation of the types of spill prevention plans outlined above, and to specify the quality assurance monitoring requirements that must be met for the new ERB liners.

2. ***Status of California Department of Corrections and Rehabilitation Compliance with Cease and Desist Order, Lassen County*** - *Rob Tucker*

The Water Board adopted a Cease and Desist Order (CDO) for the California Department of Corrections and Rehabilitation (CDCR) wastewater treatment facility at the CDCR's Susanville prisons to compel compliance with Waste Discharge Requirements. The CDO required upgrading the wastewater treatment facility by December 31, 2009, to achieve and maintain compliance with WDRs. The CDCR has worked diligently to comply with the CDO and, as of December 31, 2009, all the large physical plant upgrades have been accomplished and have been put into use or are ready for use as needed.

The cost for all of the upgrades was about $24 million. All of the ponds at the facility are now lined with 60-mil high density polyethylene (HDPE) or clay soils to reduce infiltration to underlying ground water. The wastewater treatment facility upgrades include the following: 1) lining existing wastewater ponds 1 through 5 with 60-mil HDPE; 2) constructing a new primary treatment pond, two new wetland treatment ponds, and three new storage ponds (adding 480 acre-ft of recycled water storage); 3) converting two former primary ponds to a secondary aeration pond; 4) adding 250 acres of field crops for additional wastewater disposal at agronomic rates; and 5) adding new drainage features to capture and reapply irrigation runoff.

In addition, CDCR has complied with the California Department of Public Health (CDPH) requirements to submit an engineering report for the continued use of recycled water and CDPH has accepted their report. There are some remaining small items such as installing warning signs around the (secured) irrigation area to inform people that non-potable water is being used to irrigate crops, and troubleshooting the control system for the wastewater treatment plant.

CDCR has complied and staff proposes to recommend that the Water Board rescind the CDO in 2010.

3. ***Caltrans District 3, Lake Tahoe Trout Creek to Stateline Water Quality Improvement Projects, El Dorado County -*** *Bud Amorfini*

In my November/December 2009 Executive Officer's Report, I provided information regarding funding issues that had the potential to hinder Caltrans' implementation of storm water quality improvement projects along the Highway 50 corridor in South Lake Tahoe. Some of the funding issues were resolved and this report provides an update on the projects being developed for this road segment.

Trout Creek to Ski Run Blvd. - Caltrans has completed design plans and intends to list the project for bids by June 2010. The project will include a series of infiltration basins, bioswales, and two Delaware sand filters to reduce fine sediment particles in its discharges. An approximately 2,700-foot section of roadway in the Bijou area has very limited treatment options due to high groundwater, low gradient, and numerous utilities. To address the constraints in this area, Caltrans is collaborating with the City of South Lake Tahoe (City) to implement an innovative pump-and-treat system to treat runoff in this area by pumping it to infiltration systems on non-contiguous lands. Caltrans will be installing box culverts to facilitate installation of the City's system and is contributing approximately $4.7 million to the City for the capital cost of installing the system. Caltrans anticipates that utility relocation work needed for the project will begin this summer and have a two-year construction cycle. Water quality improvements, as well as sidewalks, bike lanes, and landscaping, will be constructed over a two to three-year period after the utility work is completed.

Ski Run Blvd. to Stateline Ave. - Discharges from this segment, except for a road segment extending approximately 1,000 feet east of Ski Run Blvd., currently receive treatment through infiltration basins previously constructed by the City. Caltrans' original design included adding sand trap pre-treatment to the segment of roadway already receiving treatment, which did not provide significant water quality benefits for the cost. Therefore, Caltrans proposed to eliminate the portion of the project that already receives treatment and will use the cost savings for the above-described Bijou pump-and-treat system. The portion of the roadway that does not currently receive treatment will be treated through the existing Wildwood Ave. basins, which were determined by Caltrans to have the capacity to accept the additional runoff. The revised project proposal is a more cost-effective approach and will provide greater water quality benefits than the project as previously proposed.

1,200 feet west of Ski Run Blvd. to Ski Run Blvd. - Caltrans identified several constraints to providing treatment on this segment (high ground water, low head, soil hydrocarbon contamination, utilities, etc.). However, staff considers this segment to be a high priority for treatment due to the proximity and hydraulic connection to the lake. We requested that Caltrans explore other innovative approaches to treat this runoff. Based on Caltrans' analysis, the only feasible option is to pump roadway runoff to one of the four existing infiltration basins located in the City's Wildwood Ave. basin. However, the Caltrans design team indicated that maintenance issues associated with a pumping-based system in this location are a concern, and this issue needs to be resolved before the project can be fully developed. Staff is continuing to work with Caltrans to resolve these issues and get a project implemented in this priority location.

4. ***Oxygen-Based In-Situ Remediation at the Former Al's Chevron, South Lake Tahoe*** - *Richard Booth*

Injecting oxygen into an aquifer contaminated with gasoline (known as in-situ chemical oxygenation or ISCO) is often effective in reducing the concentration of the gasoline components. ISCO is used in many groundwater cleanup activities within the Lahontan Region. Recently, Cleanup and Site Investigation (CSI) Unit staff, Chevron staff, and its consultants evaluated the current ISCO at the former

Al's Chevron and decided to alter the remediation regime.

Strong oxidants, such as hydrogen peroxide and ozone, chemically react with petroleum hydrocarbon molecules by breaking carbon bonds and creating new, smaller molecules. The carbon bonds are broken by an exchange of electrons between oxygen and the hydrocarbon in a process known as oxidation-reduction, or redox. Redox processes have been used in the treatment of industrial wastewater for years. Its use in groundwater is fairly recent, and it has been effective, but not at every site. The main limit to ISCO effectiveness in groundwater has been the difficulty in injecting the oxidant precisely where needed in the subsurface. The oxidant degrades a short distance (within a few feet) from the injection point. Also, strong oxidants pose a safety hazard for those handling the chemicals.

Even though oxidants degrade quickly, there is a benefit to their degradation. Oxygen is produced when ozone or hydrogen peroxide is degraded, and oxygen in groundwater enhances the growth of naturally-occurring bacteria that feed on petroleum hydrocarbons, thus reducing contamination. This process, called aerobic biodegradation, also destroys the contamination molecule in-situ and is effective at greater distances from the point of injection than the oxidant.

Chevron is responsible for the former Al's Chevron in South Lake Tahoe, a site with groundwater contaminated by gasoline. Chevron's consultants have been injecting ozone into the gasoline-contaminated aquifer for several years. Ozone has been effective in reducing some gasoline components (e.g., MTBE) by a factor of three and as much as two orders of magnitude for others (e.g., benzene). However, concentrations have not decreased significantly in the recent past. CSI Unit staff and the consultants believe the ozone is no longer effectively destroying a sufficient mass of hydrocarbon via the redox process because the original mass has decreased and the ozone is no longer reaching areas with significant concentrations of contamination. Aerobic biodegradation, while slower, is likely the predominant process at work in the aquifer. After discussions and a meeting with Chevron and its consultants, CSI Unit staff has approved replacing ozone with oxygen as the remediation method for the site to assure continued aerobic bioremediation without the expense and safety risk of the now ineffective ozone treatment. Such evaluations and discussions between Water Board staff and consultants are common and are critical to the success of site investigations and effective cleanups.

5. ***Underground Storage Tank Cleanup Program Task Force Report*** *– Chuck Curtis*

   Pursuant to State Water Resources Control Board (State Water Board) Resolution No. 2009-0042, a Task Force was created to "make recommendations to improve the Underground Storage Tank (UST) Cleanup regulatory program, including additional approaches to risk-based cleanup." The Task Force included staff from two Regional Water Boards, two UST local oversight programs, and representatives of UST owners and operators, including petroleum companies and consultants. Regulators comprised about ten percent of the Task Force membership. An environmental group was included in the Task Force, but it formally resigned prior to preparation of the Task Force report. The Task Force's final report and a minority report were submitted to the State Water Board in January 2010. Certain members of the

Task Force also submitted a letter commenting on the minority report.

The Task Force report recommended the following: (1) close low-threat sites, (2) halt the use of screening levels as closure criteria, (3) streamline the appeals and dispute resolution process, (4) revise Article 11 of the Health and Safety Code regarding the corrective process, (5) remove financial disincentives to site closure, and (6) improve technical abilities, transparency, and communication among all UST program stakeholders. The Task Force indicated the first three of these recommendations could be implemented immediately.

Below I discuss the first Task Force recommendation in some detail and compare these recommendations to decisions of the State Water Board on petitions of UST case closures. The Task Force defined low-threat sites that should be closed as those that meet all of the following criteria:

1. The site is not located in a managed groundwater recharge area, or impacted groundwater does not discharge to a surface water body. (To protect waters that are currently used for domestic and municipal use.)

2. The current and reasonably anticipated future land use (based on current or pending zoning, a current General Plan or pending amendments thereto, and/or currently pending development applications) is not residential. (To protect residents from intrusion of petroleum vapors into homes.)

3. The plume is not migrating and the closest water well (domestic, irrigation, or municipal) is more than 1,000 feet from the site. (Most petroleum plumes in groundwater are less than 1,000 feet long.)

4. The maximum concentrations in groundwater are less than:

    a. 10 parts per million (ppm) for total petroleum hydrocarbon gasoline range and for TPH diesel range.

    b. 1 ppm for each of the individual petroleum constituents.

    c. 0.5 ppm for each of the individual oxygenates.

    (Elimination of non-aqueous phase petroleum hydrocarbons (free-product) reduces potential for long contaminant plumes and reduces the time to achieve water quality objectives through natural attenuation.)

5. Benzene concentrations in soil are below 12 ppm to protect future construction workers from vapors.

6. The impacted groundwater is at a depth of 50 feet or less. (Drinking water well regulations require a 50-foot seal to reduce the potential for surface or shallow contamination from affecting the well.)

7. The release occurred more than five years ago.

The minority report of the Task Force was critical of the Task Force report's default closure criteria as not considering site-specific hydrogeologic conditions and the application of scientific and engineering principles.

The State Water Board has considered 16 UST closure petition cases, and these

cases have a number of themes regarding case closure. The themes are as follows:

I. Closures are site-specific based on facts related to site use and hydrogeologic conditions.

II. Closed sites tend to have ceased operations for at least two decades before closure.

III. Shallow, confined groundwater was involved as a result of confining clay layers. Other groundwaters that were potential or actual sources of drinking water were well below those confining layers.

IV. There was an absence of current or probable future beneficial uses of affected groundwater in proximity to the closed sites.

V. Site closure was determined not to be appropriate in several cases where active municipal water supply wells were in the proximity of and down-gradient from the UST site, even if the contamination appeared limited to the soil horizon only, due to the potential risk to public health should the soil contamination migrate to underlying groundwaters.

VI. Because State Water Board Resolution 92-49 does not require the requisite level of water quality to be met at the time of site closure, a site may be closed if the Basin Plan requirements will be met within a reasonable period of time. The determination as to what constitutes a "reasonable period of time" to achieve water quality objectives must be based on evaluation of all relevant factors. Considering those factors, the State Water Board concluded for the closure petitions it granted that a "reasonable period of time" could be anywhere from decades to hundreds of years.

In November 2001, Lahontan Water Board staff presented a workshop to the Lahontan Water Board on UST case closure. The staff report is available on the Lahontan Water Board website at: http://www.waterboards.ca.gov/lahontan/water_issues/programs/ust/docs/ustclose.pdf. For closing cases with contaminants left above the water quality objectives, that report identified the conditions under which Lahontan Water Board staff would consider case closure:

A. Proof that there is no current beneficial use of the water that is impaired by the UST release.

B. Demonstration that the plume has been stable with either an overall annual decrease in size or an annual decrease in contaminant concentration trend.

C. Calculations or modeling results that show when water quality standards are predicted to be met.

D. Verification that there are no anticipated uses of the impaired water within the time projected to meet water quality objectives.

Criteria that Lahontan Water Board staff will consider for closing cases are consistent with the themes of the closures in the State Water Board petitions. These criteria allow site-specific factors to be considered to protect human health and the environment. The recommendations in the Task Force report represent a more aggressive approach to closing UST cases, and one that does not necessarily consider site-specific factors that influence contaminant movement and threat to beneficial uses.

In commenting on the Task Force minority report, the Task Force majority also recommended the end of the decentralized implementation structure of the UST cleanup program. The UST program is implemented by Regional Water Boards, Local Oversight Programs, and Local Implementing Agencies. The Task Force majority argue that this structure produces inconsistent interpretation of the regulations, prevents assessment of the effectiveness of the individual agencies in implementing the program, and does not provide a system for assessing program needs and resource delivery to implementing agencies.

The State Water Board will be considering the Task Force report recommendations and will likely have one or more workshops on UST cleanup program improvement. Lahontan Water Board staff will be following these issues and will provide input as appropriate.

6. ***Clean Water Act Section 303(d) and 305(b) Assessment*** - *Judith Unsicker*

The State Water Board plans to release draft recommendations for a statewide Section 303(d)/305(b) "Integrated Report" in the spring of 2010. The report will be based on recommendations adopted by the Regional Water Boards in 2008 and 2009. Following the public participation process, the State Water Board will act on the report, including a 2010 Section 303(d) List of impaired surface water bodies. The list will be submitted to the U.S. Environmental Protection Agency (USEPA) for final approval.

The State Water Board has also begun the water quality assessment process that will result in a 2012 Section 303(d) List by soliciting information and data from the public. The solicitation letter is available online at:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml

This web page also includes a link allowing readers to subscribe to an electronic mailing list to receive information about the 2010 and 2012 assessment cycles. In addition to information and data submitted by the public, the 2012 assessment cycle will use data from the Surface Water Ambient Monitoring Program (SWAMP) database, discharger monitoring data, and other internal data from the Regional Water Boards. State Water Board staff will do the initial assessment and database entries for the 2012 cycle, in cooperation with Regional Water Board staff. Regional Water Board staff will be responsible for completing database entries, including recommendations for listing, delisting, and not listing, and for preparation of staff reports. The Regional Water Boards will be expected to act on recommendations to the State Water Board in 2011, so that the statewide assessment process can be completed by April 2012.

7. ***Lake Tahoe Climate Change Adaptation Strategy*** – *Douglas F. Smith*

The US Army Corps of Engineers met with Lake Tahoe agencies on February 14, 2010 to begin developing a policy framework and mitigation actions task list for global climate change (GCC) adaptation. About twenty individuals attended the meeting, representing many different Tahoe agencies, including the California Tahoe Conservancy, Sierra Nevada Alliance, US Forest Service, Nevada Division of Environmental Protection, Lahontan Water Board, Tahoe Regional Planning Agency, USEPA, Tahoe Metropolitan Planning Organization, Tahoe Environmental Research Center, and Tahoe Science Consortium.

Contractors for the Army Corps presented a work plan and described how the products are expected by late 2010/early 2011. The first task is to form a stakeholder working group to function as a sounding board and steering group for GCC adaptation policy. The following tasks involve developing a GCC adaptation strategy policy that each Lake Tahoe agency could either use or modify as appropriate, develop a GCC conceptual model to help agencies guide GCC-related decisions, synthesize specific GCC research, and create a living list of needs for adaptation and mitigation science and policies.

Water Board staff expect to actively participate on the working group and will update the Water Board as this project progresses.

8. ***Leviathan Mine Remedial Activities*** – *Chein Kao*

Remedial Investigation and Feasibility Study (RI/FS)

Under USEPA's Unilateral Administrative Order, Atlantic Richfield Company (ARCO) is conducting an RI/FS to evaluate cleanup alternatives for the Leviathan Mine site. Water Board staff previously commented on draft RI/FS documents, including a Focused Feasibility Study Work Plan, two Focused Remedial Investigation Work Plans, and a Program Work Plan (PWP). In a letter dated January 6, 2010, Water Board staff's comments on ARCO's PWP received strong endorsement from US Department of Interior, Fish and Wildlife Service.

Staff also received a Human Health Risk Assessment (HHRA) Work Plan for review. Staff submitted comments on the HHRA Work Plan to the USEPA on January 19, 2010. One issue that is significant in the HHRA Work Plan is the "reasonably anticipated future use" of the Leviathan Mine site. The HHRA Work Plan was based on an assumption of "continuing current use" to assess potential risks. This assumption was made without consulting the State, which is the property owner. This assumption will result in a land use restriction in perpetuity as part of the selected final remedy. Water Board staff commented that this reasonably anticipated future use is not appropriate for assessing human health risk at the site. Feasible remediation activities at the site could reduce potential human health risk, and the RI/FS should evaluate such remediation activities.

Leviathan Mine Monitoring Activities

Under USEPA's Administrative Abatement Action (AAA) order, the Water Board is required to monitor the condition of the Leviathan Mine site, which includes, among other things, monthly measurements of the flow rates and water quality of nearby streams. Water Board staff has been conducting this sampling program for the last ten years. Staff find there is sufficient data from the past ten years to fulfill the initial objectives of examining the variability of water quality during the winter when relatively little treatment activities occur. After discussions with USEPA project managers, staff requested reduction of sampling frequency during winter months. In a letter dated January 30, 2010, USEPA approved the request and modified the surface water monitoring program so that samples shall be taken the month prior to the start of treatment discharges through the month after the treatment discharges terminate.

9. ***Lahontan Water Board and USFS Lassen National Forest Circulated an Environmental Document for Public Comment for the USFS Lassen National Forest Eagle Lake Sewage Ponds Project*** *- George Cella*

   Water Board staff and the USFS Lassen National Forest (LNF) jointly submitted a National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) document (Environmental Assessment/Mitigated Negative Declaration) for public review for the LNF's sewage ponds project. The CEQA-required public comment period extended from December 28, 2009 through January 26, 2010. The document describes five alternatives proposed to address deteriorating sewage ponds which service the LNF's Eagle Lake Recreation Area, and forest thinning activities to increase crown base height and remove ladder fuels throughout the project site. Water Board staff worked with the LNF to ensure the draft environmental document included Best Management Practices, mitigation measures, a Revegetation Plan, and a Monitoring Plan to protect resources and restore any potential impacts which could occur during Project activities. Three comments, which requested consideration be given to two of the five proposed alternatives due to economic factors, were received. Water Board staff and the LNF are developing responses to these comments***.***

SOUTH BASIN

10. ***U.S. Air Force Accelerating Schedules to Have Remedies in Place by End of Fiscal Year 2012*** - *Tim Post*

    The Edwards Air Force Base (AFB) Office of Environmental Management has informed the Remedial Project Managers (RPMs) representing the Lahontan Water Board, Department of Toxic Substances Control, and U.S. Environmental Protection Agency that Air Force Headquarters plans to have all remedies in place for its Superfund cleanup sites by the end of (federal) Fiscal Year (FY) 2012 (September 30, 2012). This will entail streamlining and accelerating the already agreed-to schedules concerning site investigations and remedial actions for the various operable units and cleanup sites at Edwards AFB.

    Edwards AFB now has at least 10 Records of Decisions (RoDs) for cleanup actions planned for the various operable units (six have been signed previously). To develop a "realistic" schedule for Edwards AFB's Superfund Program, the various Air Force RPMs prepared a list of documents scheduled for submittal to the regulatory agencies for review and comment. However, from the document list and project schedule revision it became apparent that the 2012 deadline could not be met by Edwards AFB. (Even at an accelerated pace).

    Pending approval from Air Force Headquarters and the various regulatory agencies, the schedule now calls for two RoDs to be finalized in both FY10 and FY11 and three RoDs in both FY12 and FY13. This would result in Edwards AFB's last remedy to be in place by FY 2016. This is an extremely aggressive and optimistic schedule resulting in an enormous workload for Lahontan Water Board staff to meet the proposed schedule. Currently, the Department of Defense Funds approximately two positions for this effort.

11. ***Chevron Mining Inc. (formerly Molycorp Inc.) Cleanup and Abatement Order No. 6-97-66, Status of Wastewater Pipeline Removal*** - *Christy Hunter*

    In July and August 1996, approximately 230,000 gallons of wastewater and solid pipe scale were spilled in multiple locations along a 14-mile pipeline that extends from the Mountain Pass Mine and Mill facility to former evaporation ponds on Ivanpah Dry Lake Playa. The pipeline failed during pipeline maintenance operations. The pipeline crosses lands managed by the U.S. Bureau of Land Management (BLM), lands of the Mojave National Preserve administered by the National Park Service (NPS), and Molycorp Minerals LLC land. Chevron Mining Inc. retained ownership of the Ivanpah former evaporation ponds and the wastewater pipeline.

    In 1997, I issued a Cleanup and Abatement Order (CAO) to Molycorp, NPS, and BLM requiring investigation of the pipeline spills and cleanup of pipe scale and contaminated soils. Use of the pipeline to transport waste from the mill to the ponds 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 spills 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 remains in the buried pipeline and surrounding subsurface soil related to the pipeline spills. All of the waste material was proposed by then owner, Molycorp Inc., for remediation during removal of all 14 miles of pipeline. Chevron Mining Inc. is now currently overseeing the removal project.

During the summer of 2008, Chevron Mining removed about 500 feet of pipeline that extended under the Wheaton Wash Bridge and that was required prior to Interstate 15 construction activities. Mining waste-impacted soil was not detected during that event. Chevron resumed the second phase of pipeline removal work in December 1, 2009 starting south of the Wheaton Wash Bridge; the objective is to remove about five miles of pipeline on land owned by NPS. To date, about 4,400 feet of pipeline have been uncovered, removed, and stockpiled in bins awaiting characterization and disposal. The December pipeline removal action has revealed other possible pipeline spill locations. Additional field investigation is needed to determine if soil impacts are from either or both the pipeline wastewater, or mining processing waste discharged from the Mountain Pass Mine holding ponds during historical mining operations. BLM, and the NPS, through their consultants, are providing oversight of these remediation activities, in concert with review from California Department of Public Health-Radiological Health Branch staff and Water Board staff. The remaining phase of pipeline removal on BLM land and land owned by Molycorp Minerals LLC is planned for later this year.

12. ***NuWay Cleaners Site –*** *Omar Pacheco*

The City of Victorville applied for a grant under the USEPA Brownfields Program to investigate soil contamination at the former Nu Way Cleaners site. Under this Program, USEPA provides an Emergency Response Team for oversight of the investigation. Water Board staff met with Dan Shane of USEPA's Emergency Response Team, at the former NuWay Cleaners (site) located at 15595 8th Street, Victorville, in early January 2010. The following agencies were also present: the City of Victorville, Ecology and Environment, Inc. (EPA Removal Program Contractor), and ICF International (USEPA Brownfields Program Contractor).

The City of Victorville owns and is proposing to redevelop the property. The former dry cleaners has been identified by a site investigation as a source of elevated concentrations of tetrachloroethene (PCE) in soil beneath the site.

Based on preliminary data, PCE concentrations in soil gas and soil samples greatly exceed applicable human health-based screening criteria. Because concentrations are so high, there is strong potential for the groundwater beneath the site to have been impacted from the release. EPA estimates that groundwater is approximately 50 feet below the site. The previous site investigation did not define the lateral and vertical extent of the soil and groundwater contamination; nor did it assess the impact by vapor intrusion to human receptors located nearby.
The assessment proposed by USEPA is different from the previous assessment because it proposes to delineate the lateral and horizontal extent of the contamination in the soil to determine removal options and costs. The objective is to eliminate any danger to the public posed by the release. EPA and its contractors will be mobilizing the equipment in late January, 2010. The investigative phase has been proposed for four to five days and the cleanup for approximately three months. At the

conclusion of this investigation and cleanup, USEPA proposes to use these results to determine whether this site qualifies for listing on the National Priorities List. A report of the site investigation and actions taken to abate the release will be prepared by USEPA and provided to Water Board staff.

13. ***Antelope Valley Integrated Regional Water Management Plan*** - *Patrice Copeland*

    Beginning in May 2006, member agencies of the Antelope Valley Regional Water Management Group (RWMG) have met and developed an Integrated Regional Water Management Plan (IRWMP). Water Board staff attended a meeting of the Antelope Valley RWMG in January, 2010. During this meeting, member agency representatives gave updates on the status of several RWMG Projects. In recognition of the importance of recycled water for the future of the Antelope Valley and other concerns, RWMG members voted to form a new recycled water subcommittee. The purpose of this subcommittee will be to coordinate recycled water demands, to aid in determining short- and long-term needs, and to keep the main IRWMP membership informed about recycled water issues in the Antelope Valley. Salt Management Plan coordinators and the Water Supply Committee also gave brief reports. Dave Rizzo of the Antelope Valley-East Kern Water Agency reported that the long-term governance structure changes are on hold due to the current adjudication issues and the likelihood of an appointment of a watermaster for the region. Dr. John Izbicki and Dr. Tracy Nishikawa of the U.S. Geological Survey gave presentations on "In situ remediation of high-arsenic ground water," and "Antelope Valley ground water flow and subsidence model," respectively. The RWMG will meet quarterly throughout 2010.

14. ***City of Barstow Compliance with Enforcement Orders*** – *Ghasem Pourghasemi*

    The City of Barstow (City) continues to comply with the 13267 Investigative Orders for groundwater investigation, and installation of additional monitoring wells, a Cleanup and Abatement Order, and Cease and Desist Order to come into compliance with the Waste Discharge Requirements (WDRs) for the Barstow Wastewater Treatment Plant.

    Groundwater Investigation

    In order to delineate the nitrate plume in the groundwater and accurately establish nitrate background concentrations an Investigative Order was issued to the City in February, 2009. The Investigative Order requires the City to construct three new shallow monitoring wells along the Soapmine Road area by July 31, 2009; one nested shallow and intermediate monitoring well and another intermediate monitoring well on the south side of the Mojave River. The City encountered land access problems in the Soapmine Road area. In place of the three shallow monitoring wells on the Soapmine Road area, the City and the Water Board agreed to the installation of one shallow monitoring well on private property and three shallow monitoring wells within the City's right of way. Construction of all monitoring wells was completed by January 21, 2010.

    The Investigative Orders also require the City to prepare a Remedial Action Plan. The deadline for the final Remediation Action Plan has been formally extended from November 30, 2009 to June 1, 2010 to allow the City more time to complete a

pilot study of a groundwater cleanup pump and treat system.

Groundwater Pilot Test

The construction of equipment for a pilot test for a groundwater pump and treat system in the northern irrigation field area was completed in October, 2009. The system is treating the pumped groundwater using a biological process. The City will run the pilot program for three months. The system has been fully operational since early November, 2009 excluding the first week of December when the system was shut down for repair. To date the system has treated a total of 5.8 million gallons of groundwater. The average nitrate concentration at the inflow of the biological process system is 20.8 mg/L and at the effluent is 5.2 mg/L. The effluent has been discharged to percolation ponds at the City's wastewater treatment plant.

Plant Upgrade

The City completed upgrading the wastewater treatment plant in July 2009. Subsequently, the submitted monthly reports indicate that the wastewater treatment is performing as expected. Facility effluent contains nitrate and total nitrogen concentrations below 10 mg/L as N.

Soapmine Road Replacement Water

The City continues to conduct residential well sampling of the 40 drinking water wells in the Soapmine Road area, as required by the Cleanup and Abatement Order. Currently, the City is supplying 33 residences with uninterrupted replacement water service (bottled water) for residences where nitrate has been detected at concentrations at or exceeding 5 mg/L nitrate-as N. The analytical results for the fourth quarter of 2009 monitoring event show six private wells exceeded the maximum contaminant level (MCL) for nitrate-as N of 10 mg/L and a total of 16 private wells detected nitrate-as N concentrations exceeding 5 mg/L.

15. ***County Sanitation District No. 14 of Los Angeles County (District), Lancaster Water Reclamation Plant, Los Angeles County –*** *Mike Coony*

The Water Board adopted an Amended Cease and Desist Order (CDO) for the District in November 2007. A final compliance date of November 1, 2010 is included in the Amended CDO requiring the District to eliminate the effluent induced overflows from Piute Ponds to Rosamond Dry Lake. The District awarded two construction contracts for facilities needed to achieve final compliance, one for four lined storage reservoirs and the other for a tertiary treatment plant with nitrogen removal and a treatment capacity of 18 million gallons per day.

The treatment plant construction has incurred delays due to unforeseen sub-grade conditions and changes to electrical system layout. The contractor had difficulty achieving the required soil compaction in areas where lenses of silty sand were encountered causing construction schedule delays. For the electrical system layout, the District had to clarify and modify the facility plans to address issues identified during construction by the contractor. Construction of the storage reservoir is on schedule.

The District's February 1, 2010 construction schedule shows a project completion date of December 13, 2010, which is 43 days later than the CDO compliance date of November 1, 2010. The District is working with the contractor to recover time that was lost from the

construction delays. The District has yet to determine if it will request a time extension to achieve final CDO compliance.

The CDO also includes interim standards requiring the District to divert specific amounts of effluent that would otherwise be discharged into Piute Ponds. The District is in compliance with the diversion interim standards. A table showing the status of compliance is included at the end of this report.

16. ***County Sanitation District No. 20 of Los Angeles County (District), Palmdale Water Reclamation Plant, Los Angeles County –*** *Mike Coony / Linda Stone*

Cease and Desist Order

The Water Board adopted an Amended Cease and Desist Order (CDO) for the District in November, 2007. The Amended CDO requires the District to achieve final compliance with Waste Discharge Requirements by June 18, 2010 by halting discharges of nitrogen to groundwater that create a condition of pollution or that are in violation of Basin Plan water quality objectives.

To achieve compliance, the District is implementing a project that includes synthetic-lined storage reservoirs, and pump stations and force mains to move effluent from the treatment plant site to the storage reservoirs. The District completed construction of the storage reservoirs in October, 2009, and began delivering effluent to the reservoirs for winter storage in mid December, 2009. The reservoirs store effluent that would otherwise exceed the agronomic needs of the crops planted at the effluent management site.

The District is implementing a project for a new activated-sludge tertiary treatment plant (with nitrogen removal) at the existing treatment plant site. The project is under construction, and the District expects to complete construction of the plant by the CDO compliance date.

Cleanup and Abatement Order

The District is continuing work on achieving complete compliance with Cleanup and Abatement Order (CAO) No. R6V 2003-056 issued for discharges of nitrogen to groundwater. The CAO requires the District to delineate groundwater nitrate contamination, develop a remediation plan, implement a remedial action plan, and reduce the amount of nitrate reaching groundwater. The District recently submitted Containment and Remediation Plan Supplement No. 4, which included an updated mathematical modeling and analysis plan of cleanup alternatives. Based on the model, areas of groundwater with nitrate (as N) concentrations exceeding 10 mg/L are predicted to decrease and disappear in each alternative. Areas containing concentrations of nitrate (as N) exceeding 5 to 6 mg/L remain at the end of the 55-year simulation period, for all alternatives including the Aggressive Remediation Alternative. The concentrations and extent of nitrate in groundwater are predicted to decrease relatively slowly during the last 20 years of the simulated period for all four alternatives.

A table showing the status of compliance is included at the end of this report.

17. ***Pacific Gas and Electric Company, Hinkley Chromium In-Situ Cleanup Projects, San Bernardino County*** – *Chuck Curtis*

Under separate orders from the Water Board, Pacific Gas and Electric Company (PG&E) has been operating two in-situ cleanup projects that remove chromium from the groundwater in place. The two remediation systems, the Central Area and the Source Area in-situ reductive zones (IRZs) have been effective at reducing hexavalent and total chromium concentrations in groundwater.

In 2008, the Water Board adopted a General Permit for the Hinkley chromium cleanup project that allows various cleanup technologies to be implemented when they meet certain conditions. In April 2009, I approved a Notice of Applicability of the General Permit for a site-wide groundwater remediation project at the site. That project includes extracting contaminated groundwater from an area south of Santa Fe Road, dosing the water with reductant compounds such as ethanol or lactate, and reinjecting the water into an area of the chromium plume located between the Central and Source Area IRZs. The injected water/reductant mixture will form an IRZ that will reduce chromium concentrations in both the extracted/reinjected water and in the chromium plume into which the water/reductant mixture is injected. The project also includes injection of clean, non-contaminated water outside of the northwest area of the chromium plume to stop any further plume migration in that area.

PG&E has recently submitted a Notice of Intent for coverage under the General Permit for a project that would combine the Central and Source Area IRZ projects with the reinjection/in-situ portion of the site-wide groundwater remediation project. Combining the IRZ projects appears appropriate, as the project areas overlap. By combining the projects, certain monitoring in the interior of the plume may be reduced or eliminated. Water Board staff has asked PG&E for additional information on its monitoring proposal to ensure that it is adequate to validate there is no migration of chromium or remediation by-products to areas outside the project area. When Water Board staff's concerns are met, a draft Notice of Applicability will be posted on our webpage and sent to interested parties for a 30 day comment period. Unless comments received demonstrate that the project is not appropriate, I will sign a Notice of Applicability for the project.