California Regional Water Quality Control Board
San Francisco Bay Region

EXECUTIVE OFFICER'S REPORT

A Monthly Report to the Board and Public

July 2004

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Court Upholds Water Board's 2000 NPDES Permit for Tesoro Refinery (Yuri Won)

On remand from the Court of Appeal for the First Appellate District, on June 28, 2004, the San Francisco Superior Court issued a decision upholding the Board's 2000 NPDES Permit for Tesoro Refining and Marketing Company's Golden Eagle Refinery relating to its interim dioxin limit.

By way of background, in June 2000, the Board amended the Refinery's (then owned by Tosco Corporation) permit to include an interim, performance-based dioxin limit, with a final limit to be based on a TMDL, or, in the absence of one, no net loading. That action was petitioned to the State Board, which upheld the interim dioxin limit. Communities for a Better Environment (CBE) and San Francisco Baykeeper then brought a challenge in court based on three grounds: 1) the Board failed to include a water quality-based effluent limit (WQBEL) for dioxin; 2) the permit's interim dioxin limit violated the Clean Water Act's (CWA) "antibacksliding" requirements; and 3) the 10-year compliance schedule for dioxin was unauthorized and impermissibly long. In July 2002, the San Francisco Superior Court sided with CBE and Baykeeper on the first issue, but did not reach the second and third issues. In June 2003, in a published opinion, the Court of Appeal, First Appellate District, reversed the Superior Court and ruled that the Board appropriately established a valid WQBEL for dioxin and remanded the second and third issues back to the Superior Court.

The Superior Court's recent decision on remand holds that the permit's compliance schedule for dioxin is legally adequate and rejects CBE's and Baykeeper's claim that the interim dioxin limit violates the CWA's antibacksliding rule, which prohibits permits from being reissued with limits that are less stringent than comparable limits in the previous permit, subject to certain exceptions.

The tentative deadline for CBE and Baykeeper to appeal the decision is August 27, 2004. If there is no appeal, the legal wranglings over the Refinery's 2000 permit will finally come to a conclusion. (As a sidenote, CBE's lawsuit with similar, if not identical, issues over the Board's 2002 Chevron NPDES permit is still pending in the San Francisco Superior Court.)

Our thanks to Deputy Attorney Generals Clifford Lee and Gavin McCabe for ably litigating this case on behalf of the Board.

Raw Sewage Discharged into San Ramon Creek (Greg Walker)
Early the evening of May 22, 2004, over 40,000 gallons of raw sewage were discharged from the Contra Costa County Sanitary District's pumping station on Mangos Drive in San Ramon into city streets and then into San Ramon Creek. The cause of the overflow is still under investigation; however, it is clear that the station's gates and alarms did not function properly. In addition, many residents and neighbors of the station complained that they were not successful in notifying the District of the problem. The first responder on the scene was the Mayor of San Ramon. He was called when the residents could not complete their calls to the District. The overflow continued for about an hour until stopped and cleanup continued into the next day.

The District has recently submitted a requested technical report to document the cause and corrective actions related to this event. After review of the report, Board staff will recommend appropriate enforcement action.

Basin Plan Triennial Review (Steve Moore)
As required by the federal Clean Water Act, we have again initiated the triennial review process for the Basin Plan. The purpose of the triennial review is to examine and update the focus of Water Board planning efforts for the next three-year period, excluding TMDL developments underway. This process allows for corrections of water quality standards and associated implementation programs based on updated science, attainability considerations, and/or enhanced protection of aquatic resources. The last update of the Basin Planning workplan occurred in April 2001, culminating in an amendment in January 2004 that is expected to be approved by the State Water Board this month. The triennial review process will result in an amendment to the "Continuing Planning" section at the end of Chapter 4 of the Basin Plan, describing proposed allocation of available Basin Planning staff resources for the next three years (i.e., workplan).

The triennial review process begins with staff proposing a list of topics and issues to be considered. That list is circulated for public review and comment, and a public workshop is held to solicit input and discussion. The oral and written comments received are considered in the formulation of the proposed three-year workplan. This draft workplan is public noticed and then brought before the Water Board for approval after a 45-day public comment period, as with all Basin Plan amendments.

The public workshop on the Basin Plan Triennial Review was held June 8, with about 25 attendees from various public agencies and organizations. A detailed meeting summary is at the top of the Basin Plan page of the Water Board's website (www.swrcb.ca.gov/rwqcb2/basinplan.htm) under "Triennial Review." Written comments on the proposed list of topics and issues were due June 18, and we received 17 comment letters. The many planning issues described at the workshop can be grouped into three general topic areas: (1) Evaluation of the need for site-specific objectives for toxic pollutants; (2) Stream protection and management; and (3) Updates of regulatory programs. We anticipate bringing a proposed Basin Plan amendment that incorporates the triennial review workplan to the Board toward the end of this calendar year.

Further Changes in Tank Cleanup Oversight in Santa Clara County (Chuck Headlee)
In late June, the Governor signed emergency legislation that allows the Santa Clara Valley Water District to continue its oversight of leaking underground fuel storage tank cleanups for another year. You may recall that last month we reported to you that the planned transfer of this program from the District to the County of Santa Clara's Department of Environmental Health on July 1, 2004, was in jeopardy because the County was not ready to assume oversight responsibilities by that date. We also told you that Assemblyman Dutra had sponsored emergency legislation, AB 430, to extend the sunset date of last year's emergency legislation on oversight responsibility for one more year to June 30, 2005. Fortunately, AB 430 was adopted and signed by the Governor in late June. This allows the District to continue its oversight activities for another year. We are working closely with the State

Board, the District, and the County to provide technical and regulatory support during this transition period between the District and the County. We will update you on the situation in future reports.

Hookston Station Groundwater Cleanup (George Leyva)
While the dischargers have made significant progress with tasks in the site cleanup order you adopted last year for this Pleasant Hill groundwater pollution site, we are concerned about progress on the site's risk assessment, particularly with respect to the vapor intrusion pathway. The dischargers have now completed eight of the ten tasks in the order, including a risk assessment workplan and report. The risk assessment report concludes that pollutant-screening levels are exceeded for some exposure pathways (notably private wells and vapor intrusion into residences) but does not provide a more detailed analysis. Staff conditionally approved the risk assessment report because it complied with the order and the risk assessment workplan. However, because of the now known exceedances, the approval conditions require the dischargers to perform a more detailed risk assessment and obtain additional field data on the vapor intrusion pathway. At this point, we are unsure of the discharger's compliance with all of the additional conditions. To assure that we receive an adequate risk assessment, we intend to prepare an amendment to the 2003 order for your consideration at the September Board meeting.

Travis Air Force Base Remediation Review (Sarah Raker)
On June 9, Board staff attended a site tour of the ongoing Environmental Restoration Program being conducted at Travis Air Force Base in Solano County. Board staff were joined by representatives from U.S. Environmental Protection Agency, Department of Toxic Substance Control, and community members on Travis' Restoration Advisory Board. The purpose of the tour was to provide interested parties a first-hand view of the various soil, sediment, surface water, and groundwater sites that are being addressed under the Program. Travis was placed on the National Priority (Superfund) List in 1989 and has completed cleanup of several on-site areas to date. Unlike most other Department of Defense sites in the Region, Travis is an active base and home of the 60th Air Mobility Wing. Its resources include numerous aircraft and support facilities located on more than 6,000 acres of land. The tour included visits to one of three active groundwater treatment plants at Travis, some newly constructed vernal pools built to mitigate wetland impacts, treated groundwater and storm water discharge to Union Creek, a state-of-the-art landfill for non-hazardous soil disposal, and a former battery shop where contaminated groundwater is being treated with several innovative technologies including phytoremediation. A highlight of the tour included a look at a specially equipped Russian TU-154 jet observation plane from the Yuri Gagarin Cosmonauts Training Center that was visiting Travis to launch Russia's first Open Skies Treaty flyover in the United States.

Closing Another Mare Island Landfill – Steps 1 and 2 (Alec Naugle and Gary Riley)
An historic landfill for the former Mare Island Naval Shipyard in Vallejo is finally being closed after operating from the late 1940s to 1989. As with most landfills built in that period, wetlands and mud flats were simply diked off and filled. Wastes disposed in the landfill included garbage, spent sandblast abrasives, scrap metal, wood, paint, paint thinner, lead-acid batteries, waste water treatment sludge, solvents, and asbestos-containing materials. Immediately adjacent to the landfill were three ponds that were constructed to hold spent motor oils mainly from ship and submarine engines. Over thirty years, 4.5 million gallons of spent oil were disposed in the ponds. No engineered liners or other containment barriers were used then to prevent migration of pollutants, as would be now required under current regulations.

Step 1 of the closure process involves isolating the landfill and ponds using a slurry wall, which is a trench dug to 25 feet deep. The trench will extend 7,200 feet around the landfill perimeter and will be filled with a combination of bentonite clay, water, and soil to form a low-permeability slurry. Eventually the water will be squeezed out of the slurry under its own weight, and will form a barrier to keep polluted water beneath the landfill from flowing outward. This design is much like constructing a huge bathtub around the landfill to keep the groundwater in place.

Step 2 of the closure process includes construction of a second trench, parallel to the slurry wall. This second trench will be located on the inside of the slurry wall and will be filled with gravel and slotted pipes so that polluted groundwater from beneath the landfill can be siphoned off. This extraction trench system will reduce the hydraulic pressure within the "bathtub" to ensure that polluted water cannot escape to the outside.

Approval of this stepwise approach was given in late May and trenching began in early June. The last step in the closure process will probably come next year and will include capping the landfill with an engineered cover. The final land use for the closed landfill is still being negotiated.

Discharges from Groundwater Cleanups (Farhad Azimzadeh)
We regulate the discharge of extracted groundwater from fuel and solvent cleanup sites mostly through two NPDES general permits. As of June 30, we had 97 facilities authorized to discharge under the fuel general permit, 90 facilities authorized under the solvent general permit, and three facilities authorized under individual permits. Most of these sites are located in the South Bay.

Some of the staff accomplishments for the two general permits during the past fiscal year include:

- ✓ processed 48 letters to authorize or reauthorize discharges and modify or rescind existing authorization letters, as tabulated below,
- ✓ inspected 30 facilities,
- ✓ reviewed about 419 self monitoring reports, and
- ✓ issued four mandatory minimum penalty complaints.

Authorization Letters by Type

General Permit	Reissue	New	Modify	Rescind	Total
Fuel Cleanup	0	11	14	3	28
Solvent Cleanup	0	4	13	3	20
Total	0	15	27	6	48

A reissued solvent permit will be considered at this Board meeting. After Board action, staff will prepare updated authorization letters for dischargers who have submitted complete applications for coverage under the reissued permits. We expect this process to take about two months. During this interim period, current dischargers will be subject to the requirements of the new general permit.

"State of the Art" Groundwater Cleanup Conference (Sarah Raker and Alec Naugle)
On May 24-27, several Board staff attended the Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds held in Monterey.

Christine Todd Whitman, former U.S. Environmental Protection Agency (EPA) Administrator, was the keynote speaker. Ms. Whitman discussed her views on EPA's voluntary "Clear Skies" initiative, which focuses on cultivating profit incentives for environmental benefit such as promoting Energy Star appliances, reducing carbon monoxide emissions, and using alternative fuel cars. Other plenary speakers discussed the need for alternative energy sources such as wind, solar, and hydrogen, and advances in treating groundwater and wastewater pollutants using bioremediation, which involves growing bacteria and microbes that metabolize pollutants into less toxic by-products.

Stephen Hill participated on a panel of experts that were asked to define success in remediation. Stephen noted that our definition has evolved over time and now includes substance (e.g., protect human and ecological receptors) as well as process (e.g., provide stakeholders a role at key points). Most of the panelists cited the difficulty of meeting regulatory cleanup targets and the need for interim milestones (e.g., immediate threats abated). Other panelists represented the U.S. Department of Energy, research academia, and consulting firms.

The technical presentations reflected a noticeable shift toward addressing groundwater pollution where it resides in the ground, as opposed to pumping it to the surface and treating it above ground. Typically, such pollution is addressed in the ground by using chemical or biological agents to intercept, contain, and degrade pollutants. In many cases, the chemical agents are injected into the ground through wells or are poured into trenches that are dug across the direction of groundwater flow to intercept and treat pollutants as they flow by.

Some examples of these and other innovative technologies presented at the Conference included:

- Iron-based materials such as granulated iron filings, iron powder, iron/water/oil emulsions, and green rust to degrade solvents and control dissolved metals like chromium, arsenic, and radionuclides
- Edible vegetable oils such as soybean oil, ground-up shells, and hydrogen to enhance biodegradation of solvents and hydrocarbons
- Compost to control pH and metals
- Phytoremediation and pollutant uptake by trees to map shallow groundwater pollutant plumes
- Characterizing and preventing solvent vapor intrusion into buildings from underlying groundwater pollutant plumes
- Uptake of pesticides (common) and industrial solvents (not common) in fruits and vegetables
- TNT-eating bacteria soaked onto grass seeds to cleanup contaminated soil
- Solvent-eating bacteria injected into the subsurface to cleanup polluted groundwater
- Surfactants to enhance the decomposition of hydrocarbons in soil

Although some of these technologies will undoubtedly prove too difficult or too costly to implement, several are expected to provide significant water quality benefits and cost-savings. Many of these technologies have already been implemented in our Region. The in-ground technologies offer cost savings because less waste is produced, and they require less energy since they rely on "passive" groundwater flow to move the pollutants through the chemical/biological treatment zone. As a result, we expect to see further refinements and more widespread deployment of these passive, in-ground technologies.

DoD Perchlorate Workshop (Laurent Meillier and Keith Roberson)
Board staff attended a two-day perchlorate workshop in San Diego at the end of June. The workshop was organized jointly by the State Board and the Department of Defense (DoD). The purpose of the workshop was to formalize a prioritization protocol where federal facilities are ranked statewide based on the severity of perchlorate pollution. In the summer of 2003, the State Board requested that a source evaluation report be prepared for all military facilities. So far, responses to these requests have been facility-specific. Perchlorate is a primary oxidizer used for solid rocket fuel in tactical and strategic missiles and rockets. It is also placed in fuses, detonators, highway flares and fireworks. This pollutant is highly soluble and forms large, persistent groundwater plumes. To address public health concerns in California, OEHHA adopted a final Public Health Goal of 6 parts-per-billion (ppb) for drinking water. However, the Department of Health Services (DHS) has yet to adopt a Maximum Contaminant Level (MCL) for drinking water. DHS is currently in the regulatory process to adopt a MCL for perchlorate

but no date has yet been set. DHS's Action Level (i.e., issue a public warning on the presence of perchlorate) is currently set at the 6 ppb Goal.

The meeting was divided into two sessions. On June 30, regulators from Cal/EPA agencies met at the San Diego Water Board office to prepare for the upcoming DoD meeting scheduled a day later. At this meeting, Cal/EPA agencies agreed to concur with a prioritization protocol addressing the prevalence of perchlorate, leaving other "new" (emerging) chemicals of concern to be discussed at a later date. The joint meeting July 1 was attended by about 100 DoD and regulatory members. Shannon Cunniff (Office of the Secretary of Defense) opened up the discussion panel by announcing that DoD had formed several task forces to address emerging chemicals, and would respond to the perchlorate threat as soon as the USEPA issued a legally enforceable MCL. Kevin Mayer from USEPA provided an update on the current effort by his agency to lower detection limits and decrease the frequency of false positives and that finalizing a USEPA MCL for perchlorate was still about 5 years away. While the significance of perchlorate impacts in the Bay Area is limited, about 30 sites are being investigated statewide, some with major impacts on drinking water supplies (e.g., the Olin flare plant impacts on Morgan Hill in southern Santa Clara County). The workshop included a synergistic review of the site prioritization protocol and joint meetings by Water Board regions between DoD and Board staff to discuss prioritization and provide constructive insights.

Future proposed actions include:

- Refining the prioritization protocol and applying the protocol to DoD sites; addressing source evaluation reporting for other emergent chemicals as requested in the State Board's July 2003 request; and folding in the findings from the upcoming deployment of the Munitions Response Program into the site prioritization approach.
- Implementing the application of newer analytical methods with lower detection limits that enable the differentiation of background (atmospheric deposition, mineralogic origin) from anthropogenic (man-made) sources. Lowering detection limits would also provide a usable database in case the USEPA MCL is set lower than the State's Public Health Goal.
- Issuing orders to various DoD facilities where there is a lack of compliance.

We will keep the Board apprised as these issues develop and affect our Region.

In-house Training

Our June training was on our interactions with the State Board. Our next training in August is on environmental data quality. Recent brown-bag topics include a July 7 session on the leaching of contaminants from soil to groundwater.

Outreach and Presentations

On June 9, Vic Pal and Rico Duazo spoke at Mission College in Santa Clara at a seminar for consultants and facility managers managing storm water facilities on their responsibilities and liabilities. The chief purpose of the seminar was to assist industrial storm water permittees in completing their annual report, a requirement of the general industrial storm water permit. The annual reports for industrial facilities were due in our office July 1.

On June 21, I spoke at the Contra Costa Environmental Alliance on the evolution of water quality regulation and the challenge of implementing TMDLs.

On June 29, Shin-Roei Lee gave a presentation in Berkeley to PEMA (Professional Environmental Marketing Association) on storm water permitting post-TMDL.