

California Regional Water Quality Control Board
San Francisco Bay Region
EXECUTIVE OFFICER'S REPORT
A Monthly Report to the Board and Public

August 2009

The next regular scheduled Board meeting is August 12, 2009.
See <http://www.waterboards.ca.gov/sanfranciscobay/> for latest details and agenda

Items in this Report (Author[s])

East Bay Municipal Utility District (EBMUD) (Robert Schlipf)	Page 1
Petroleum Refinery Mercury Studies (Richard Looker)	Page 2
Enforcement – Complaints and Settlements (Brian Thompson)	Page 3
Tyco Thermal Controls (David Barr)	Page 3
Treasure Island Cleanup (Ross Steenson)	Page 4
Risk Assessment Meeting with China Delegation (Elizabeth Allen)	Page 5
Napa River Restoration Project (Michael Napolitano)	Page 5
New Publication on Mercury in Tomales Bay (Carrie Austin)	Page 5
Geotracker update (Stephen Hill)	Page 6
In-house Training	Page 6

East Bay Municipal Utility District (EBMUD) (Robert Schlipf)

On July 22, 2009, the U.S. District Court, Northern District of California, entered a Stipulated Order between the U.S. EPA, the State Board, and this Board (plaintiffs) and EBMUD (defendant). The purpose of the Stipulated Order is to require EBMUD to develop measures that will address excess wet weather flows that result in discharges from its wet weather facilities. Such wet weather discharges are prohibited by EBMUD's NPDES permit, which this Board reissued in January 2009. This prohibition came about as a result of a State Board remand in 2007.

The primary cause of wet weather discharges from EBMUD's wet weather facilities is inflow and infiltration (I&I) of stormwater and groundwater into collection systems and private sewer laterals. The collection systems in EBMUD's service area are owned and operated by seven separate local agencies (satellites), whereas private sewer laterals are the responsibility of home owners. During severe wet weather events, EBMUD can experience a 10-fold increase in the volume of wastewater it must treat from satellite collection systems and private sewer laterals.

While the Stipulated Order only applies to EBMUD, it is recognized that to fully develop and implement solutions to the issues relating to wet weather flows will require participation of the satellites. For this reason, the Stipulated Order is only considered to be a partial remedy to address discharges from EBMUD's wet weather facilities. Specifically, the Stipulated Order requires EBMUD to conduct flow monitoring on the satellites' collection systems, adopt a regional private sewer lateral ordinance, implement an

incentive program to encourage replacement of leaky private laterals, and develop an asset management template for managing collection systems.

The next step in this process is to reissue the satellites' respective NPDES permits to reflect the State Board's 2007 remand and EBMUD's recently reissued permit. The main change would involve a new requirement for the satellites to not cause or contribute to discharges from EBMUD's wet weather facilities by operating and maintaining their collection systems to reduce I&I. We have been in close communication with the satellites and USEPA in preparing the draft permit, which was released for public comment on July 14, 2009. This draft is available at

http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/tentative_orders.shtml.

The comment deadline is currently scheduled to end August 17, but we anticipate extending it to give more time for us to work with USEPA and the satellites on our expectations for the satellites. We plan to bring this for Board consideration this fall.

Petroleum Refinery Mercury Studies (Richard Looker)

The Bay Area petroleum refineries have completed an evaluation of the amount of mercury cycling through their facilities during crude oil refining. The study was a complex, first-of-its-kind effort that yielded valuable insights into the amounts of mercury flowing through petroleum refineries as well as the likely fate of this mercury. Completion of this study fills a data gap identified in the San Francisco Bay Mercury TMDL, first adopted by the Board in 2004. At that time we had robust monthly monitoring data for wastewater, but incomplete information for other product and waste stream mercury concentrations. After considering literature data, it appeared that much more mercury was entering the petroleum refineries in crude oil than was leaving.

The study results provide an approximate mass balance of the amounts of mercury entering and leaving all five petroleum refineries combined. The results suggest that about 220 kg/year entered the refineries in crude oil during the study period, much less than we originally calculated based on the available literature values. A large majority of the input mercury leaves the facilities in solid waste which is sent for offsite disposal. In fact, data for the period 2000 through 2007 show that the refineries sent between 220 and 650 kilograms mercury per year to off-site waste disposal facilities. This large range is partially explained by the fact that refinery equipment cleaning may not occur every year so mercury may accumulate and not leave the facility in the same year it entered in crude oil. The less precise analytical and estimation methods for these off-site transfer data may also contribute to the large range.

In addition to the large amount of mercury leaving as solid waste, the following output pathways were quantified. Refined products account for about 26 kg/yr of the input mercury leaving. Measurement data suggest that about 20 kg/yr of mercury is emitted directly to the air in the form of process stack emissions and combustion of refinery fuel gas. Air deposition modeling results suggest that a relatively small percentage of this mercury would be deposited either directly to the Bay or in local watersheds, while the majority would likely be deposited downwind, 100s to 1000s of miles away, and is difficult

to model. Petroleum coke production accounts for another 3 kg/yr of the output mercury, and wastewater discharges account for about another 1 kg/yr.

The final report is available on the Water Board's website at:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaymercurytml.shtml.

Enforcement – Complaints and Settlements (Brian Thompson)

In the past month, the Assistant Executive Officers issued three administrative civil liability (ACL) complaints for unpermitted discharges of storm water from industrial facilities.

Copies of the complaints can be found on our web site:

http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

- An ACL with a proposed fine of \$88,700 was issued to Coast Crane Company, located in San Leandro (Alameda County).
- An ACL with a proposed fine of \$37,300 was issued to Garda, located in Oakland (Alameda County).
- An ACL with a proposed fine of \$26,250 was issued to Uni Tile & Marble, Inc., located in Hayward (Alameda County).

I have publicly noticed a Tentative Order setting Administrative Civil Liabilities for a case in which the Water Board's prosecution team and dischargers agreed to a settlement.

ConGlobal Industries, Inc. in Alameda (Alameda County) agreed to pay a fine of \$ 7,250 to the State's Cleanup and Abatement Account. I intend to sign the agreement and issue the ACL Order if no significant comments are received within the 30-day comment period. A copy of the Tentative Order can be found on our web site:

http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Tyco Thermal Controls (David Barr)

On July 22, Water Board staff hosted a community meeting in Redwood City to elicit public comments on a proposed cleanup plan for the Tyco Thermal Controls site, located in a commercial/industrial area of Redwood City near Highway 101 and Woodside Road.

Public interest in the site was minimal until a few months ago, when a charter school was proposed for an adjacent property. The Sequoia Union High School District has opposed the charter school proposal for various reasons, including the presence of contamination on the Tyco site. We learned recently that the charter school will open at a different location, and we expect the level of public interest to drop off accordingly.

In late June, we circulated a fact sheet describing the proposed cleanup plan. At the July 22 community meeting, David Barr provided a regulatory overview and Tyco's consultant summarized the proposed cleanup plan. The only members of the public to attend were landowners and tenants from the immediate vicinity, and they had no comments. We will

consider any comments following the end of the public comment period prior to acting on the proposed cleanup plan.

The Tyco site was used for a variety of manufacturing and assembly operations from 1955 until 2008. Soil and groundwater at the site are impacted by contaminants, mainly polychlorinated biphenyls (PCBs) and diesel in soil. The proposed cleanup plan calls for excavation of contaminated soil (concentrations exceeding the Water Board's Environmental Screening Levels), off-site disposal, and backfilling with clean soil. The excavation work would be confined to a strip of land at the rear of the property and would occur in summer 2010 or sooner.

Treasure Island Cleanup (Ross Steenson)

Last week the Navy finalized two records of decision (RODs) for the Treasure Island Naval Station. The RODs are for areas referred to as Site 30 (daycare center) and Site 31 (former south storage yard). These sites coincide with the location of a former trash dump. Although both sites have been leased to the Treasure Island Development Authority since 1997, the Navy retains responsibility for investigation and cleanup.

The sites are located near the center of the island, more than 1,000 feet from San Francisco Bay. Pollutants of concern (dioxins at Site 30; dioxins, benzo(a)pyrene, and lead at Site 31) only affect soil and are not a threat to groundwater or surface water quality.

The current and reasonably foreseeable future use of Site 30 is as an operating daycare center. The Navy's selected remedy for Site 30 addresses the potential impacts to soils beneath the building. The remedy includes engineering controls (maintenance of the existing protective concrete slab of the daycare center building) and institutional controls (periodic inspection, repairs, and reporting via a land use covenant). Should the future owner choose to remove the concrete slab, the covenant would require testing of the soil beneath the slab, remediation as necessary, and approval by the Department of Toxic Substances Control (DTSC).

The current and reasonably foreseeable future use of Site 31 is as an asphalt-paved schoolyard. The Navy's selected remedy for it addresses impacted soils via excavation and off-site disposal to achieve unrestricted use standards.

Within the next year, the Navy expects to develop RODs for two additional Treasure Island properties. Site 24 (a former dry cleaning facility) is currently undergoing a groundwater treatability study for chlorinated volatile organic compounds, and Site 27 (the Clipper Cove skeet range) is currently undergoing a feasibility study for near-shore sediments impacted by lead shot. Board staff continue to work with DTSC and the Navy to develop appropriate remedies for these and other Treasure Island properties for future transfer and reuse.

Risk Assessment Meeting with China Delegation (Elizabeth Allen)

Elizabeth Allen participated in a meeting with US EPA, DTSC, and members of the Chinese Research Academy of Environmental Sciences (which is equivalent to the US EPA Office of Research and Development) at the US EPA Region 9 office on July 2. The purpose of the meeting was to exchange information about approaches to site cleanup, restoration, and reuse. Elizabeth provided some insight into both US EPA and Cal EPA approaches to conducting human health risk assessments and the use of risk-based screening levels. The discussion centered on application of the risk assessment techniques to focus limited resources to devise a remedial strategy, using an actual case example of a contaminated property in downtown Beijing that is being redeveloped as a housing project.

Napa River Restoration Project (Michael Napolitano)

The Rutherford Napa River Restoration Project involves actions to enhance stream and riparian habitat conditions, and reduce fine sediment delivery rates within a 4.6-mile long reach of the Napa River located near Saint Helena, California. On July 14, there was a groundbreaking ceremony to celebrate the start of construction. The approach to channel restoration involves: a) levee setbacks; b) floodplain construction; c) installation of engineered log jams; d) riparian planting; and e) biotechnical bank stabilization. The project is expected to enhance habitat for several native fish and wildlife species including fall-run Chinook salmon, which have returned to the river in large numbers in recent years. More than thirty landowners with property along the river began working in partnership with local, state, and federal agencies beginning in 2002 to plan and execute this project.

The Water Boards have provided grant funding to support planning and construction of the project. In addition, the project is recognized as a key action in the Napa River Sediment TMDL and Habitat Enhancement Plan, which the Board will be considering in the near future. Bruce Wolfe attended the groundbreaking ceremony on behalf of the Board.

New Publication on Mercury in Tomales Bay (Carrie Austin)

Methylation and bioaccumulation of mercury are concerns for Tomales Bay, which is on the impaired water bodies (303d) list due to elevated mercury concentrations in fish and wild shellfish. Specifically, the Walker Creek intertidal delta of Tomales Bay is affected by releases of mercury contaminated sediments from the Gambonini mercury mine, which was operated in the 1960's and was remediated in 1998. This new publication provides a comprehensive review of changes in bathymetry, methylmercury production, and localized methylmercury bioaccumulation in the area, and examines how mercury-laden sediments in the Walker Creek delta are slowly undergoing burial by cleaner sediments. The paper relies on an extensive set of sediment and biota data collected by Board staff over the years, which is now readily available for other researchers to consider and build upon. The findings from the paper will be considered as we develop the Tomales Bay mercury TMDL. The primary author is Dr. Bryce E. Johnson, a recent graduate of U.C. Berkeley's Environmental Engineering program and former Board student intern, Board staff Dyan Whyte and Carrie Austin are coauthors along with former Board staff Priya Ganguli.

The article is available on-line, and will be published in *Science of the Total Environment*, Volume 407, Issue 18, the September 1, 2009, Pages 5056-5070. The title is "Mercury accumulation and attenuation at a rapidly forming delta with a point source of mining waste." The abstract is freely available at:

<http://www.sciencedirect.com/science/journal/00489697> .

Geotracker update (Stephen Hill)

In June, we completed a project to populate all "required fields" in Geotracker, the Water Boards' database for tracking site cleanup. Cleanup program managers identified more than 80 "required fields", information deemed necessary to understand basic site status and to track progress on the Water Boards' new performance measures. Over a multi-month period, staff in the Toxics Cleanup Division populated these "required fields" in Geotracker, focusing our efforts on the more than 600 active cleanup sites we oversee. Along the way, management provided guidance and training to all cleanup program staff. As a result of this effort, the public will have a clearer picture of what's happening at the sites we actively oversee and we will be better able to respond to executive or legislative inquiries. In addition, we are much better able to set targets for site-cleanup performance measures and track our progress in attaining these targets. To see for yourself, go to the Geotracker-public website, located at <https://geotracker.waterboards.ca.gov/>, and search for an active site near you.

In-house Training

We had no training in July and have none planned for August.