CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD

EXECUTIVE OFFICER'S REPORT: *April 2017*

A Monthly Report to the Board and Public

NEXT MEETING: April 12, 2017 **WEBSITE:** http://www.waterboards.ca.gov/sanfranciscobay/

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U.S. EPA Approved Bay Beaches TMDL (Jan O'Hara)

On February 24, U.S. EPA approved the Total Maximum Daily Load (TMDL) for bacteria in San Francisco Bay beaches. This is the final step in the approval process; the TMDL received State Board approval on August 16 and Office of Administrative Law approval on December 13 of last year. The TMDL, which the Water Board adopted last April, protects recreational uses at several beaches, including Crissy Field, Aquatic Park, and Candlestick Point in San Francisco, and two beaches in the City of San Mateo.

In anticipation of final approval, implementing parties began meeting last June to share technical information and discuss various aspects of complying with the TMDL, including reporting requirements. Implementing parties appear to be on target to submit their first reports in late August.

Legacy Manufactured Gas Plant Waste in San Francisco (Ross Steenson)

In the 19th century, manufactured gas (or artificial gas) needed for street lighting, heating, and cooking, was produced from coal and coal-oil-petroleum mixtures (Figure 1). Like many urban areas at the time, San Francisco had its share of Manufactured Gas Plants (MGPs). MGPs produced a slurry coal tar waste that was typically buried or dumped near the plants. The most common type of contamination in MGP waste is a group of compounds known as polycyclic aromatic hydrocarbons (PAHs).

Figure 1. *Drawing of the retorts at the Great Gas Establishment Brick Lane, from The Monthly Magazine (1821), conceptualizes 19th century manufactured gas plant operations.*

In San Francisco, there are two marinas where sediment, near-shore soils, and groundwater are affected by PAHs from former MGP operations: SF Marina East Harbor (west of Fort Mason) and Pier 39 Marina. PG&E holds the liability for these former MGP operations and, under our direction, is working with the property owners (San Francisco Parks and Recreation Department and Port of San Francisco) to investigate and cleanup all impacted areas.

Meanwhile, the California Department of Toxic Substances Control (DTSC) is overseeing PG&E's investigation and cleanup of MGP residues at three former MGP facilities: Beach Street MGP near Pier 39, North Beach MGP near Fort Mason, and Fillmore Street MGP in the central Marina District (Figure 2). These MGPs were demolished in the first half of the twentieth century and subsequently redeveloped. The cleanup, which began in 2010, has been challenging because PG&E must negotiate access from individual property owners. Initially, the work focused on the operational footprints and, more recently, has included investigating groundwater to assess transport towards the Bay.

Figure 2. *Former MGP facilities in San Francisco's Marina District and North Beach*

To complicate matters, a 2014 lawsuit filed against PG&E by a local resident and the San Francisco Herring Association, included complaints regarding the adequacy of investigation and cleanup. The plaintiffs specifically challenged the evaluations of human health exposure contaminant transport and ecological impacts to sediments and the Bay. In 2016, as part of a court-mediated agreement, the plaintiffs and PG&E requested that DTSC and the Water Board provide feedback on technical reports submitted jointly by the parties, which expand the investigation areas beyond the former MGP facility footprints and marina sediment/near-shore areas. Because there are other potential sources of PAHs that may not be associated with MGP waste, we are insisting on a data-driven approach and accurate conceptual site models to assess contaminant sources, risks, and uncertainties. DTSC and Board staff are coordinating efforts with PG&E to plan a joint-agency public meeting on May 3 at Fort Mason to update the community on the status of investigation and cleanup. We will keep the Board informed of any significant findings regarding these on-going investigations.

Treasure Island Cleanup Continues (Myriam Zech)

Earlier this month I signed a Record of Decision (ROD) for Site 12 at Treasure Island (TI). This is the first of two RODs for Site 12, which is shown in Figure 3. It addresses the areas between the solid waste disposal areas (SWDAs) and excludes radiological contamination, both of which will be addressed in a separate ROD to be submitted by the Navy in 2019.

Encompassing 93 acres on the northwestern portion of Treasure Island, Site 12 has been the island's main residential area since 1968. After World War II and before 1968, Site 12 was primarily used for ammunition and fuel storage and waste incineration and disposal. The current ROD addresses the fuel storage areas and contamination from the SWDAs that was unknowingly spread throughout the site as the result of grading for residential development in 1968. The contaminants of concern addressed in this ROD include polychlorinated biphenyls, polycyclic aromatic hydrocarbons, dioxins, petroleum, and metals.

Figure 3. *Aerial photo taken by American Aerial Surveys on May 10, 2012.*

One fuel storage area of particular concern is the Gateview Area. This area is located nearshore and has elevated arsenic concentrations in groundwater that exceed our screening levels for aquatic habitat protection. The elevated arsenic concentrations appear to be related to the large mass of petroleum hydrocarbons that leaked from aboveground and underground storage tanks in the area. The mass has been slowly degrading for several decades. As petroleum degrades, it can cause changes in subsurface geochemical conditions that can cause arsenic to leach from the soil.

To address the arsenic problem, the remedy included in the ROD consists of removing the petroleum-affected soil in the Gateview Area, followed by in-situ soil mixing with the addition of chemical oxidants to re-adjust geochemical conditions. Groundwater will be monitored to demonstrate gradual reduction of arsenic concentrations. The Navy has already started excavating the petroleum-affected soil and recently discovered a previously undocumented underground storage tank. This confirms the source as being related to the Navy's historic fueling operations.

The Navy plans to complete the excavation and soil mixing this summer and propose a specific plan for monitoring and evaluating remedy effectiveness later this year. The Navy anticipates it could take up to ten years to complete. In the meantime, the site will be subject to on-going five-year reviews and contingencies until arsenic concentrations are demonstrated to be protective of aquatic life.

Prosperity Cleaners Update (Ralph Lambert)

The former Prosperity Cleaners site is located in the Marinwood Plaza shopping center in Marinwood, north of San Rafael in Marin County. Releases of tetrachloroethene (PCE) from past dry cleaning operations impacted soil, soil vapor, and groundwater. In 2014, the Board adopted a cleanup order for the site; the order sets a schedule for completing site investigation and cleanup. Last month, we updated you on regulatory actions and site activities since the status report presented to the Board at its February meeting. This month, we have additional updates regarding onsite soil excavation and offsite groundwater cleanup.

Onsite soil excavation: We previously reported that the discharger, Marinwood Plaza LLC, completed the onsite soil excavation under the former dry cleaner building in early February and backfilled the excavation by February 15. Contaminated soil was stockpiled onsite, adjacent to the building. The discharger submitted a completion report on March 7, 35 days after the February 1 submittal deadline. The report documents soil excavation and backfill but does not discuss the disposal of excavated soil or extracted groundwater. As of March 9, the discharger had removed the stockpiled soil, transporting and disposing of about 510 tons of soil at the Kettleman Hills landfill in Kings County. We also understand that the discharger is still seeking permits from the local sanitary sewer agency to dispose of about 6,000 gallons of groundwater that was pumped from the excavation, treated to remove PCE, and is currently stored onsite. On March 23, we issued a Notice of Violation for the late report and referred the matter to the Board's enforcement section.

Offsite groundwater cleanup: We previously reported that, on February 15, we conditionally approved the discharger's proposed cleanup plan for offsite groundwater contamination. Our approval letter set conditions for the proposed pilot test, which will determine the optimal design for the planned permeable reactive barriers. The conditional approval required the discharger to submit a pilot test workplan by March 24. We received the workplan on March 22 and are reviewing it.

Public outreach: We are continuing to keep interested parties – including offsite landowners, Marinwood community members, and the County supervisor's office – informed about site activities and reports. Likewise, we will continue to keep the Board informed.

Cleanup of Radiological Waste at Former Alameda Naval Air Station (Yemia Hashimoto)

On January 27, I signed a Record of Decision (ROD) for Operable Unit (OU)-2C at the former Alameda Naval Air Station (see Figure 5). The ROD presents the selected remedies for OU-2C drain lines located outside Buildings 5 and 400 that were potentially impacted with radiological material. Based on analytical data and risk assessment results, no remedial action is necessary for storm drain lines A, B, and G, with the exception of force main and gravity flow industrial waste lines (IWLs). For the 6300-foot long IWLs, the selected remedy for 5900 linear feet is institutional controls, and, for the remaining 400 linear feet, the selected remedy is excavation and disposal.

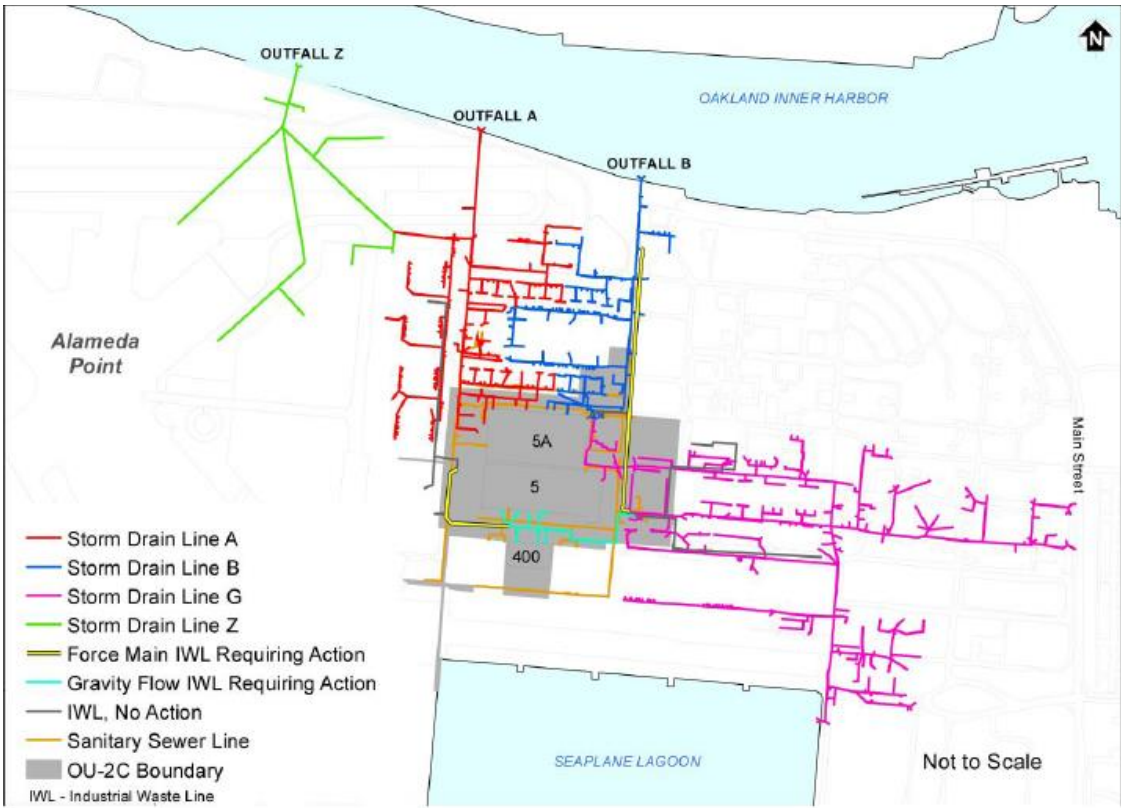

Figure 5. *Drain Lines and Outfalls Addressed in this ROD*

These lines were not addressed in the previous OU-2C ROD that was signed in 2014 because additional data was needed to support a final remedial action decision. Therefore, remedial actions for storm drain lines A, B, and G and IWLs were postponed and are addressed in this ROD.

Leona Heights Sulfur Mine Post-Remediation Update (Lindsay Whalin)

The mining of pyrite ore in the Oakland Hills, a few miles southeast of our State office building, created a legacy of contamination in Leona Creek. Piles of sulfurous mining waste (as seen in Figure 6 below) were abandoned when mining operations ceased around the late 1920s. Before 2015, when the Site was remediated, the mining waste produced sulfuric acid on contact with water, either from stormwater or the creek itself, which runs through the site. This acid leached metals into the creek water, resulting in some of the highest concentrations measured in surface water in our Region (e.g., mercury was 10,000 times above water quality standards).

In March 2015, in response to a Cleanup and Abatement Order amendment and Time Schedule Order adopted by the Board in the summer of 2013, the responsible parties completed remediation. The sulfurous mining waste was capped with a low permeability liner, similar to those used in landfills, thereby isolating the waste from contact with stormwater and the creek. Significant effort was also taken to stabilize the mining waste, as the site is located in an area prone to landslides.

In December 2015, sustained heavy rainfall contributed to sliding of the topsoil layer (the uppermost layer intended to support vegetation) on two of the constructed slopes. Mining waste was not exposed during the incident; however, topsoil discharged to Leona Creek. Water

Board staff responded by issuing a Notice of Violation requiring repairs. In the summer of 2016, the topsoil layer was repaired using an improved design. The recent photos below (Figures 7 and 9) demonstrate that vegetation is becoming established and the slopes appear relatively stable, despite the intense rain events we have experienced this wet season. We are requiring the responsible parties to evaluate the undercutting of the riprap at the base of the slope.

Figure 6. *View of one of the mining waste piles before remediation.*

Figure 7. *View after remediation. Note Leona Creek in the foreground.*

Initial monitoring results indicate that the quality of water in Leona Creek has significantly improved in response to remediation. Concentrations of metals in Leona Creek have decreased by orders of magnitude, and the pH of the creek during rain events has increased from as low as 1.5 to between 3.8 and 5.1 (see Figures 8 and 9). We will continue to monitor the site for stability and water quality trends. We are pleased with initial results, which show that arsenic, lead, and mercury concentrations have fallen below applicable water quality standards, and we expect that Leona Creek water quality will continue to improve.

Figure 8. *Leona Creek before remediation; color indicates iron oxidation (acid production).*

Figure 9. *Same view after remediation.*

In-house Training

There were no in-house trainings in March.

Enforcement Actions (Mary Boyd and Brian Thompson)

The following tables show recent enforcement actions. In addition, existing complaints and proposed settlements are available on our website at http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Proposed Settlements—Mandatory Minimum Penalty (NPDES) The following facilities have been noticed for public comment. If no significant comment is received by the deadline, the Executive Officer will sign an order implementing the settlement.		
Discharger	**County**	**Comment Deadline**
City of Calistoga, Dunaweal Wastewater Treatment Plant	Napa	April 17, 2017
Browning-Ferris Industries, Corinda Los Trancos Landfill	San Mateo	April 17, 2017

Final Actions On behalf of the Board, the Executive Officer approved the following.			
Discharger	**Violation(s)**	**Penalty Imposed**	**Supplemental Environmental Project**
MGP IX SAC II Properties, LLC, Mountain View	Late submittal of NPDES monitoring report	$3,000	
Advanced Surface Finishing, Inc.	Operating an industrial facility without a storm water discharge permit	$5,000	$1,000
Precision Technical Coating	Operating an industrial facility without a storm water discharge permit	$5,000	$2,500
Rutherford Grove Winery	Operating an industrial facility without a storm water discharge permit	$1,000	
Santay Granite	Operating an industrial facility without a storm water discharge permit	$1,000	

401 Water Quality Certification Applications Received (Keith Lichten)

The table below lists those applications received for Clean Water Act section 401 water quality certification from February 24 through March 24, 2017. A check mark in the right-hand column indicates a project with work that may be in BCDC jurisdiction.

Project Name	City/Location	County	May have BCDC Jurisdiction
Village Creek outfall repair - University Village at San Pablo Ave.	Albany	Alameda	
Hornblower Cruises - dock replacement	Berkeley		✓
Collier Canyon Rd. - culvert silt removal	Livermore		
Arroyo Mocho Creek – emergency bank stabilization	Livermore		
Zone 5, Line B - embankment restoration	Newark		✓
Oakland International Airport - emergency perimeter dike repair	Oakland		✓
Ohlone Road - emergency repair	Sunol		
MOTCO Pier 2 replacement	Concord	Contra Costa	✓
Emergency oil removal at Dow Chemical	Pittsburg (uninc.)		✓
1900 Stenmara Dr. (Pt. San Pablo Yacht Harbor) - emergency repair	Richmond		✓
135 Belvedere Ave. - pier construction	Belvedere	Marin	✓
100 Brighton Avenue – replacement of seawall	Bolinas		
15 Koch Rd. – pedestrian bridge to cross creek	Corte Madera		
1 Upper Rd. - emergency creek bank retaining wall repair	Ross		
12 Norwood – supplemental creek bank stabilization	Ross		
Miller Creek Bridge – bridge scour mitigation	San Rafael		
Walsh Creek culvert sediment removal	American Canyon	Napa	
Trower Ave. - storm drain improvements	Napa		
Napa Vineyards - berm maintenance	St. Helena		
PG&E's DFM 0405-01 – replace valve cluster	St. Helena		
South Ocean Beach - short term coastal erosion protection measures	San Francisco	San Francisco	
Entrada Way - emergency road repair #2	La Honda	San Mateo	
Giannini Bridge replacement (Butano Creek)	Uninc.		
Pilarcitos Canyon - emergency streambank erosion repair project #1	Uninc.		

Project Name	City/Location	County	May have BCDC Jurisdiction
Pilarcitos Canyon - emergency streambank erosion repair project #2	Uninc.		
MT2 Bridge over the Guadalupe River	San Jose	Santa Clara	
South Bay Salt Pond Restoration Project, Phase 2, refuge ponds	Uninc.		✓
3101 Jacksnipe Rd. - exterior levee repair	Suisun Marsh	Solano	✓
Sunrise Island - emergency levee repair	Suisun Marsh		✓