

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Stephen Hill)
MEETING DATE: April 8, 2015

ITEM: 5

SUBJECT: **Case Prioritization and Management in the Cleanup Programs –**
Status Report

CHRONOLOGY: The Water Board has not previously considered this item.

DISCUSSION: The Board’s programs that address the cleanup of contaminated soil and groundwater command a significant portion of the Board’s resources. Even so, the number of contaminated sites exceeds our capacity to work on them all. Over time, we’ve developed tools and procedures to maximize the amount of cleanup we can obtain with our limited staff resources (see Appendix A). We prioritize our cleanup cases based on several criteria, notably a site’s threat to human health and water quality. We track our management of these cases in Geotracker, our cleanup program database, and through internal controls.

Our tools and procedures rely on the “polluter pays” principle. That principle works well for contaminated sites with financially-capable dischargers but not so well for orphan or under-funded sites, particularly in the Site Cleanup Program. New State legislation (SB 445) provides an opportunity to start fixing this problem, as explained in Appendix A. We will continue to update the Board in the future as we proceed with implementing this new law and funding source.

RECOMMEN-
DATION: This item is presented for informational purposes; no action is needed.

Appendix A: Status Report

APPENDIX A
STATUS REPORT

Program	Number of Sites:			% Closed
	Open	Closed	Total	
UST	396	1,656	2,052	81%
SCP	828	562	1,390	40%
DOD	378	727	1,105	66%
Total	1,602	2,945	4,547	65%

The cleanup programs are housed in the Board’s two groundwater divisions: the Toxics Cleanup Division and the Groundwater Protection and Waste Containment Division. The Toxics Cleanup Division oversees all the UST sites and most of the SCP sites. The Groundwater Protection and Waste Containment Division oversees all the DOD sites and a smaller number of SCP sites, mainly those associated with larger facilities like refineries and landfills.

Funding for the cleanup programs supports 35 staff positions at the Board and comes from a variety of sources: cost recovery (23.7 positions), UST Cleanup Fund (7.2 positions), and the State’s General Fund (3.1 positions), and federal funds (1.1 positions). “Cost recovery” positions are those that are funded by discharger oversight costs; it is a mainstay of SCP and DOD program funding.

Life of a Case

Cleanup cases go through a series of steps between their discovery and their closure. The table below illustrates the various steps. Different cases will have different “trajectories” depending on contamination severity and the discharger’s responsiveness and capability. For example, a lightly-contaminated site might only need to go through a subset of the steps before obtaining case closure; if the discharger is capable and motivated, this process might take less than a year. At the other end of the spectrum, a heavily-contaminated site will probably need to go through all the steps; if the discharger is impoverished and/or recalcitrant, this process may take a number of years.

Step	General Tasks
Source identification	Determine the source of the contamination based on site history information and focused investigation
Remedial investigation	Delineate the extent and magnitude of the contamination in soil and groundwater
Risk assessment	Determine the human and ecological risks of the contamination and perhaps derive site-specific cleanup levels
Interim cleanup actions	Perform focused cleanup to eliminate obvious threats and/or to remove the contamination source
Cleanup plan preparation	Evaluate cleanup options and select one (or a package of options) that promises to meet relevant cleanup standards
Cleanup plan implementation	Implement the selected cleanup option (or package of options); this may involve pilot tests to fine-tune the design
Post-cleanup risk management	If cleanup to unrestricted use is infeasible, implement post-cleanup risk management measures, such as vapor intrusion mitigation, and land use or water consumption prohibitions
Case closure	Demonstrate that all cleanup standards are met or that a site qualifies for low-threat closure

Regulatory Tools

The Board and its staff have a number of regulatory tools to accomplish site cleanup. The main ones are listed below. We typically use these tools on multiple occasions during the life of a case. The Board itself is most likely to get directly involved when staff brings a Water Code section 13304 order (cleanup and abatement order; also known as a site cleanup requirements order) to the Board for consideration. While we would like to have site cleanup requirements for all contaminated sites, because it is resource-intensive, we normally reserve this tool for sites with significant contamination, discharger recalcitrance, or other factors necessitating an enforceable order with clear requirements and deadlines. Site cleanup requirements are generally adopted during a site’s “middle age:” after initial investigation but before significant cleanup. Often there will need to be amendments or revisions to an original site cleanup order that reflect changed circumstances or to obtain Board concurrence with a proposed cleanup plan.

Tool	Use
Water Code section 13267 directive	Letter requiring a workplan or report, most commonly used to accomplish source identification or remedial investigation, although may be used for all steps at Brownfield sites with capable/motivated dischargers
Water Code section 13304 order (site cleanup requirements)	Order requiring site cleanup, most commonly used to accomplish interim cleanup, cleanup plan preparation and implementation, and post-cleanup risk management; may be Board-adopted or Executive Officer-issued
Notice of violation	Notice of significant non-compliance with prior directive or order, often a prelude to formal enforcement
Formal enforcement	Imposition of administrative civil liability or referral to the State’s Attorney General for court-imposed penalties or injunctions, usually done by referring the matter to the Board’s enforcement unit
“Comfort” letter	Letter to offsite landowner or onsite purchaser indicating that they will not be required to conduct cleanup provided certain conditions are met, such as providing reasonable access to the discharger
“Brownfield” tools	Prospective purchaser agreement or California Land Reuse and Revitalization Act agreement, providing certain legal immunities for buyer in return for buyer’s completion of necessary investigation and cleanup tasks
Direct cleanup using the funds from the State Water Board’s Cleanup and Abatement Account	In situations where there is no viable discharger to address a significant threat, Board staff direct investigation and cleanup by a Board contractor using State funds.

Prioritizing Cases

We prioritize our cleanup cases to make sure our limited staff resources are used effectively. In general, we try to focus on sites that pose a significant threat to human health or water quality. In that vein, we have historically focused more attention on cleanup cases located in heavily-used groundwater basins in our Region, such as the Santa Clara Valley. We have also prepared beneficial use evaluation reports for those groundwater basins with support from local groundwater management agencies. These reports compare existing/planned drinking water supply wells or well clusters with known threats. These reports cover San Francisco’s Westside Basin, San Mateo’s bayside basins, Santa

Clara Valley, Niles Cone (in the Fremont area), and the East Bay Plain (extending from Hayward to Richmond). As a result of this emphasis, we have seen relatively few cases where groundwater contamination has impacted supply wells in this region, and we have been able to respond vigorously in those few cases to resolve the problem.

We also use our Environmental Screening Levels (ESLs) to identify potentially high-threat sites. Sites with concentrations much greater than ESLs for soil, groundwater, soil-vapor, or indoor air are generally high-threat candidates. A given site's threat (and therefore its priority) often changes over time. For example, our discovery of a vapor-intrusion threat to adjacent homes would elevate the site's threat. Conversely, interim cleanup actions can reduce the threat.

As a practical matter, setting priorities in the cleanup programs is complex and considers more than just the threat to human health and water quality. Below is a program-specific discussion of priority setting:

UST Program: The State Water Board's 2012 UST policy includes low-threat closure criteria and directs the steps the Regional Water Boards and local agencies must take for UST cases to meet these closure criteria. Some of the criteria address human health and water quality. The UST policy focuses on petroleum USTs and recognizes that these sites generally pose a lower threat than other contaminated sites, because petroleum contaminants are more amenable to bio-degradation than solvents and other contaminant types. The UST Program's priorities focus on low-threat closures – and the cleanup tasks necessary to get to that point.

SCP Program: We use a more complex set of factors to set priorities in the SCP Program. These include: a site's potential threat to human health and water quality (based on input from water districts and other local agencies and our Geotracker database), how much "bang for the buck" our oversight provides (we get more cleanup for a given level of staff effort at sites with cooperative dischargers), the need to check compliance at sites with cleanup orders, and customer service considerations (such as supporting proposals to clean up and redevelop Brownfield sites). Our priorities are influenced by SCP funding. Since most of the funding is from SCP cost recovery, most of our oversight work tends to be on sites that are enrolled in the SCP cost recovery program. Our resources to work on orphan and under-funded sites are limited.

DOD Program: We also use a more complex set of factors to set priorities in the DOD Program. We consider the same human health and water quality factors as in the SCP Program. We also prioritize sites where property transfer is imminent (from DOD to a local agency or private developer) or where post-transfer cleanup orders are in effect. While limited federal funding may slow some higher-priority work, it is usually a temporary hurdle that can be overcome through negotiation or dispute process under the military cooperative agreement.

Tracking Cases

We use several tools, notably Geotracker, to track our progress at cleanup cases. Geotracker is a geographic information system that tracks regulatory actions (such as site cleanup orders) and discharger reports for each cleanup case. It includes a compliance-tracking tool that allows us to determine a discharger's compliance with specific task deadlines. This tool is used extensively in the UST Program where a discharger's significant non-compliance can make them ineligible for reimbursement of cleanup costs; as noted the April 2015 Executive Officer's Report, we are expanding

use of this tool in the other cleanup programs. Geotracker also includes reports on program performance measures, such as number of cases closed and number of cases starting cleanup during a particular interval. As required by the State Water Board, we set performance targets for both measures at the beginning of each fiscal year and track our progress in meeting those targets during the fiscal year. We report our progress in semi-annual status reports to the Board.

We also use annual and monthly workplans for each Board staff member as a tracking tool. The annual and monthly workplans identify specific next steps at priority cases. Section leaders meet monthly with individual staff to discuss progress on monthly workplan tasks. Section leaders also conduct mid-year evaluations of progress towards achieving annual workplan goals. In both cases, we make mid-course correction, if necessary, to achieve these goals.

“Front End” Work in SCP Program

The SCP Program relies heavily on cost recovery funding, as noted earlier. By its nature, cost recovery funding is only available once a discharger is subject to a site cleanup order (unless a discharger is requesting oversight due to a property transfer or redevelopment proposal). Therefore, cost recovery funding is not available for the tasks leading up to the site cleanup order (“front end” work). For example, if we learn that a drinking water supply well is impacted by groundwater contamination, then we need to work backwards from the well to identify likely sources of that contamination, determine the actual sources, identify the dischargers for those source sites, and develop sufficient evidence of a discharge to support a site cleanup order. Only then would cost recovery funding become available.

Two other “front end” tasks are worth mentioning:

- (1) Dry cleaner spill sites – We recognize that dry cleaners spill sites pose a special threat, both in our Region and statewide. Past studies demonstrate that most of the older dry cleaners have experienced solvent spills. Former dry cleaners are widely dispersed in our Region and are often located in sensitive groundwater basins or near existing supply wells. The dischargers at these spill sites (current and former landowners and past operators) often lack the resources to clean up the resulting contamination or pay for our oversight costs. Working with local groundwater management agencies, we have compiled inventories of past dry cleaner locations in key groundwater basins including the Santa Clara Valley, Niles Cone, Livermore-Amador Valley, and Westside Basin. In each, we have prioritized these locations in terms of spill likelihood (a function of the starting date and duration of operations) and groundwater sensitivity.
- (2) Environmental Screening Levels – This office’s ESLs constitute a valuable tool to assess the severity of site contamination. The ESLs need to be updated regularly to remain relevant. Drinking water standards change, toxicity factors change, and exposure assumptions change; all these changes need to be reflected in our ESLs.

We have used our General Fund resources, discussed in the “background” section earlier, to pay for this “front end” work in the SCP Program. However, this funding is insufficient to carry out all “front end” tasks. For example, in the dry cleaner arena, we have prioritized lists of former dry cleaner locations. But we are not able to utilize these lists to target dry cleaner locations that pose the largest potential threat to groundwater resources.

Future Changes in SCP Program due to SB 445 Legislation

SB 445 (Hill) was signed into law and took effect in January of this year. It focuses on the statewide UST Program, notably extending the per-gallon gasoline tax that funds the UST Cleanup Fund for ten more years. It also created a new Site Cleanup sub-account, funded by a 0.3 cent per gallon surcharge, that is intended to clean up under-funded SCP sites. Under-funded sites are defined broadly and could include many “mom and pop” dry cleaner spill sites. The sub-account funds can also be used for “front end” activities noted above. The Site Cleanup sub-account is one of three programs that will be funded by the 0.3 cent per gallon surcharge, which is expected to generate about \$20 million per year. The State Water Board plans to direct funds from the new sub-account to three different activities: (i) grants to dischargers or other project proponents to fund cleanup at under-funded sites, (ii) contracts to allow the Water Boards to directly clean up “orphan” sites where there is no responsible party, and (iii) funding associated Water Board oversight costs. While this amount is not sufficient to fully address all orphan and under-funded sites, it will significantly expand the Water Boards’ non-cost recovery funding in the SCP Program.

The State Water Board has encouraged the Regional Water Boards to identify priorities for using the sub-account funds. In our Region, we have identified four top priorities:

- Oversee under-funded SCP sites that pose a significant potential threat (including dry cleaner spill sites and mines);
- Direct cleanup at orphan SCP sites that pose a significant threat (including dry cleaner spill sites and mines);
- Screen our SCP inactive cases to determine if any of them pose a significant threat; and
- Oversee groundwater management efforts by local agencies, including salt and nutrient management plans and new “sustainable groundwater management” plans.

Sub-account funds will become available starting this July. We anticipate receiving funding for three positions (20% of our current SCP cost recovery funding), although this will result in a three-position drop in our SCP cost recovery funding since SB445 did not authorize any new positions. We will be making adjustments in staffing assignments and program management to take advantage of the new funding source. For example, we expect to concentrate the sub-account funding with just a few staff, so that they can focus on non-cost recovery work, rather than dispersing the funding among many staff. We are also pursuing efforts to offset the 20% reduction in SCP cost recovery funding with limited-term positions, since the demand for SCP cost recovery oversight has increased significantly with the economic recovery.

SB 445 will significantly expand the Water Boards’ non-cost recovery funding in the SCP Program. We will be less constrained by funding restrictions. Our priority setting for under-funded and orphan sites will focus more on high-threat sites and less on sites with good “bang for the buck” or customer-service. SB 445 also provides an opportunity to improve our ability to track our progress on high-priority SCP cases in Geotracker. State Water Board staff are currently considering new functionality or reporting that would improve Geotracker in this respect. Improvements to Geotracker would also benefit the other cleanup programs.

Conclusion

The cleanup programs command a significant portion of the Board's resources. Even so, the number of contaminated sites exceeds our capacity to work on them all. Over time, we've developed tools and procedures to maximize the amount of cleanup we can obtain with these limited staff resources. These tools and procedures rely on the "polluter pays" principle. That approach works well for contaminated sites with financially-capable dischargers and not so well for orphan or under-funded sites, particularly in the SCP Program. SB 445 provides an opportunity to start fixing this problem. We will update the Board in future as we proceed with implementing this new law and funding source.