STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MAY 8, 2009
Prepared on April 7, 2009

ITEM NUMBER: 11

SUBJECT: **Site Cleanup Program Update**

INTRODUCTION

This Staff Report summarizes Site Cleanup Program's (SCP) efforts in the Central Coast Region to move toward our vision of Healthy Watersheds and highlights progress on groundwater cleanup cases during the 2008/2009 fiscal year. Case closure is a significant program milestone because this means that a site no longer poses a risk to human health or the environment. SCP staff have closed three cases this year and hope to close at least two more. SCP staff also consider performing a corrective action to be a program milestone because pollutant mass is being removed from the subsurface. To date, responsible parties have implemented some type of corrective action at eight sites. Recent program changes include: the addition of one new Water Resource Control Engineer, completion of a Case Ranking/Prioritization effort for all sites, and furlough impacts.

Program Overview

For the 2008/2009 fiscal year, Central Coast Water Board SCP resources include 7.6 person-years (PY) from Cleanup and Abatement funds and 1.2 PY from the State's General Fund. One additional PY from Cleanup and Abatement funds for Brownfields[1] site cleanups was added to our region this fiscal year because of increasing redevelopment activities statewide. These 8.8 SCP positions work on 189 SCP cases, with the majority being former or active dry cleaners (24%), industrial/manufacturing facilities (22%), bulk fuel storage facilities (20%), and oilfield-related facilities (20%).

SCP staff members oversee investigations and cleanups at "Brownfield" sites in large cities and polluted properties in rural areas. As of the date of this status report, there are 189 open and 72 closed SCP cases in the Central Coast Region. SCP cases include unauthorized waste discharges of:

- petroleum products from bulk fuel storage facilities, wash racks, rail road, or oil field operations;
- chlorinated solvents from dry cleaning or industrial or illegal drug manufacturing operations;
- pesticides, ammonia, and nitrates from pesticide or fertilizer manufacturing or nursery operations;
- heavy metal (including mercury or hexavalent chromium) discharges from power plants, metal plating, computer chip manufacturing, or mining operations.

[1] A Brownfields site, using the federal definition, is a property in a city that has been blighted by pollution. Consequently, city redevelopment agencies or property owners have redevelopment difficulties because they have to cleanup and abate wastes before the property can be utilized, compared to developing a property without pollution.

Perchlorate unit staff oversee perchlorate waste discharges at non-military facilities. More specific information about perchlorate cleanups in the Central Coast Region will be provided to the Board at the July 2009 meeting.

Responsible parties reimburse the State for our staff oversight costs associated with cleanup of groundwater discharges, as directed under the California Water Code (Sections 13304, 13172, and 13365). Recovering these costs enables us to pay for the technical and support staff that work on these projects, with a minimal impact to the State General Fund (and tax payers).

SCP project managers include four Water Resource Control Engineers: Hector Hernandez, Katie DiSimone, Karyn Steckling, and Kristina Seley, and six Engineering Geologists: Donette Dunaway, Diane Kukol, Rich Chandler, Wei Liu, Dan Niles, and David Schwartzbart. Two Senior Engineering Geologists (Thea Tryon and Sheila Soderberg) and one Senior Water Resource Control Engineer (Chris Adair) oversee these SCP project managers, in addition to supervising other program staff and managing other programs in the Groundwater Protection Section. Administrative staff assisting the SCP program include Barbara Brooks, Sue Gerdsen, and Sherry Kuykendall. The SCP program is included in the Groundwater Protection Section which is supervised by John Robertson, Supervising Engineering Geologist.

With the exception of three staff, who are assigned more complex cases or work only part-time in the SCP unit, each SCP staff person is assigned up to 60 cases, sometimes in different geographical areas. In addition, another two SCP staff are assigned unique sites (e.g. pesticide or fertilizer manufacturing facilities, drug labs, and power plants) because of the complexity of the site and/or waste itself. One person oversees the Regions' oil field beneficial reuse of non-hazardous crude oil impacted soil projects at active oil field properties. The oil field beneficial reuse projects are authorized under the General Conditional Waiver of Waste Discharge Requirements (General Waiver) Order No. R3-2005-005 and General Waiver Order No. R3-2005-2006. To date, the Executive Officer has approved seven beneficial reuse projects and the construction of five waste pile management facilities in the Central Coast Region.

For the last billing period (September 1 through December 31, 2008), Central Coast Water Board staff expended 5,940 hours reviewing and analyzing data in technical work plans and reports and preparing regulatory correspondence related to SCP cleanup cases.

Significant Groundwater Cleanup Milestones and Outcomes

As of the date of this status report, the Board approved closure of one drug lab case in September 2008, which was officially closed in March 2009 after existing monitoring wells were destroyed. In addition, the Executive Officer has closed two cases in this fiscal year. The Executive Officer plans to recommend at least one additional case closure to the Board at a future meeting. Additionally, the Executive Officer has approved eight corrective action plans this fiscal year. However, fifteen new cases have been referred to the Water Board's SCP unit for cleanup oversight so far this fiscal year, an increasing trend.

Significant case milestones for perchlorate projects will be included in the perchlorate status report to the Board in July 2009. The following list provides brief descriptions for several non-perchlorate sites with significant environmental outcomes that have taken, or will take place, during the current fiscal year:

- Guadalupe Oilfield, San Luis Obispo County: As required by Cleanup and Abatement Order No. 98-38 issued to Unocal (now Chevron Environmental Management Company),

Chevron continues to excavate petroleum wastes in soil from N12, C7N, C7SE, B1, B2-3, B3A, and B11 areas. To date, Chevron has hauled a total of 663,000 tons of material to the Santa Maria landfill. Chevron biologists continue to monitor restoration sites throughout the lease. Water Board staff is reviewing Chevron's current groundwater monitoring plan and effectiveness of the free product recovery system.

- Venoco (Former Chevron) Oil and Gas Facility, Santa Barbara County: The Executive Officer approved Chevron's cleanup plan to remove DDX from soil at the nursery area and metals in soil from the sand blast area. Chevron has met with the City of Carpentaria and other agencies to begin the permitting process to begin cleanup.
- Shell Hercules Gas Plant, Santa Barbara County: Department of Toxic Substance Control (DTSC), Water Board, and Santa Barbara County Fire and Energy Division work together as an Interagency Work Team to direct site cleanup, although DTSC is the official lead agency. Shell continues to operate a soil vapor extraction system to remove petroleum products in soil beneath the fill pad. In addition, Shell continues to extract water that accumulates in a fill pad drain. Prior to discharge to the Pacific Ocean, Shell's extraction and treatment system removes polychlorinated byphenols (PCBs) and petroleum products in compliance with our NPDES permit. In December 2008, Shell installed several groundwater monitoring wells to characterize petroleum and PCB wastes in groundwater. Shell is currently completing a coastal development permit to cleanup the site.
- Former Ambassador Laundry, Santa Barbara County: Mission Industries (Mission) continues to expedite soil and groundwater cleanup efforts at this former facility. Mission recently completed injections on a downgradient property and are evaluating the effectiveness of the solvent cleanup. Currently, Mission is performing additional soil vapor assessment on an adjacent vacant property prior to it being redeveloped as an office building.
- Raytheon – Coromar Drive, Santa Barbara County: Raytheon continues to expedite soil and groundwater cleanup efforts at this facility. In December 2009, Raytheon used electrical heating to remove free-phase TCE and other solvents from soil and groundwater beneath this facility. Raytheon is currently monitoring the effectiveness of the clean up.
- Santa Cruz Industries, Santa Cruz County: After receiving Executive Officer and Santa Cruz County Environmental Health approval of the corrective action plan and enrollment under the Water Board's General Waiver of Waste Discharge Requirements for Specific Types of Discharges (General Waiver), Santa Cruz Industries injected materials to reduce TCE and metal wastes in soil and groundwater beneath the site. Santa Cruz Industries is currently evaluating the effectiveness of the injections and evaluate if additional injections are necessary.
- Sudden Service Vapor Cleaners, Monterey County: Cleanup and Abatement Order No. R3-2006-0021 and Cleanup and Abatement Order R3-2008-0053 requires the responsible parties to submit an investigation workplan to completely define the extent of chlorinated solvent pollution in soil and groundwater, and to evaluate if chlorinated solvent pollutants are discharging into nearby surface water bodies. The Executive Officer concurred with the scope of work presented in the workplan and the responsible parties are required to submit the results of the field investigation on June 9, 2009. Implementation of the workplan is a milestone for moving this project forward because the pollutants need to be delineated before a determination on cleanup and can be made. Additionally, the results of the field investigation will determine if there are any current risks to the public associated with the chlorinated solvents in groundwater.
- Scotts Valley Dry Cleaners, Santa Cruz County: On April 3, 2009, the Executive Officer approved a corrective action plan and enrolled Scotts Valley Dry Cleaners in the General Waiver. Scotts Valley Dry Cleaner consultants will implement full-scale remediation using

chemical oxidation to reduce chlorinated solvent concentrations in groundwater. SCP staff will monitor the effectiveness of the remediation in the upcoming groundwater monitoring reports. Implementation of the corrective action plan is a milestone because chemical oxidation is an effective means (as shown in the pilot study) for destroying the chlorinated solvents in groundwater. Removing pollutant mass from groundwater will reduce the contributions of pollutants to the Scotts Valley Groundwater Basin.

- Pescadero Illicit Drug Lab, San Mateo County: After receiving Executive Officer approval, the responsible parties injected materials to reduce Freon and solvent wastes in soil and groundwater beneath the site. The responsible parties' consultants also planted a phytoremediation barrier to prevent offsite migration of wastes in groundwater. The consultants are currently evaluating the effectiveness of the injections and barrier and will evaluate if additional injections are necessary.
- Moss Landing Commercial Park (Former National Refractories), Monterey County: After receiving Executive Officer approval, the responsible parties' consultants injected materials to reduce hexavalent chromium wastes in groundwater beneath the site. In addition to reducing hexavalent chromium, the injections may also reduce solvent concentrations in groundwater. The responsible parties are currently evaluating the effectiveness of the injections. In addition, consultants are developing a plan to cleanup fuel-related wastes in soil and groundwater and the federal government is removing a residual onsite chromite wastepile.

SCP Site Ranking and Prioritization Efforts

Beginning in October 2007, SCP staff developed a case ranking protocol to assist with work prioritization and work assignment distribution. By developing appropriate criteria and identifying our highest priority groundwater cases, we can focus our effort at those sites that require the most immediate attention.

In 2007, SCP staff considered three primary case ranking criteria: 1) risk to human health and the environment; 2) site hydrogeologic and waste complexity; and 3) level of public participation. Risk to human health and the environment relates to actual or threatened impacts to human health and ecological receptors, including surface water and groundwater beneficial uses. Site hydrogeologic and waste complexity relates to site and waste conditions, including (but not limited to) beneficial water uses, geology, hydrogeology, topography, soil type, waste types, plume characteristics, land use, etc. Public participation considers the number and degree people are impacted, as well as the amount of interest and concern the case presents. Political and social interests are also considered in this ranking element.

SCP staff weighed each case ranking criterion based on priority. For example, of the three criteria listed above, risk to human health and the environment is the highest priority and has greater weight in determining the rank for each SCP project. Similarly, the site wastes/complexity criteria also have full weighting. Additionally, SCP staff recognizes the value of "low hanging fruit" and therefore attempt to move relatively "easy" cases to closure, because ultimately a closed case poses no human health or environmental risk. The program manager maintains a "closure watch list" to focus on these cases and manage staff resources to move these cases into closure in an efficient manner.

Public involvement and participation in the site cleanup process is also important, but this element can, by itself be overrated. Accordingly, program managers attempt to maintain the level of SCP staff's response to public involvement proportionate to the risk to human health and the environment posed by the site. Therefore, this criterion is weighted less than the other two criteria, as the main driver for site cleanup is risk to human health and the environment.

Using these criteria, each project manager ranked each of their sites (high, medium, and low in each category). Currently, the program managers and section manager are reviewing the results to ensure cases are appropriately assigned based on individual staff skills, job classification, and work experience. Based on this evaluation, the Groundwater Protection program managers will periodically redistribute work load among SCP staff to ensure the priority cases are getting appropriate attention and that we are not over- or under-weighting individual staff case loads. Through time, each project manager will periodically re-evaluate a sites priority over the "life" of the cleanup project and as a site achieves cleanup goals, the risk to human health and the environment decrease, until the site poses no risk and the case is closed.

Program Work Force Reduction

Because most State workers are furloughed two days per month beginning in February 2009, SCP and other Water Board programs experienced an automatic 10% program reduction. Consequently, Groundwater Protection program managers are using the above case ranking information to help focus SCP staff time and efforts. SCP staff will continue to work on our highest risk (e.g. highest priority) sites in our Region and decrease time spent on lower risk sites.

SCP staff are planning to: 1) reduce work on cases where other regulatory agencies are lead (and if we have to work on these cases, focus on those cases where Water Board permits were issued); 2) reduce quarterly groundwater monitoring frequency for medium and low risk sites to semiannual or annual monitoring; 3) reduce duplicative program roundtable participation; 4) reduce travel to meetings (when possible, participate via teleconference); and 6) push on cases that are close to closure, to move them into closure.

SCP staff anticipates additional General Fund PY reductions for the 2009/2010 fiscal year. Again, SCP staff will continue to work on those sites that pose the highest risk to human health and the environment. Consequently, program managers will direct staff not to work on low risk cases and these cases will become "inactive".

We initiated the prioritization effort described above as a means to identify and focus more attention on the most important work, as defined by the criteria. Subsequent to our prioritization exercise, furloughs and budget reductions reduced our available staff time to get work done. The prioritization exercise provided us significant assistance and clarity in identifying our lowest priority work.

The next SCP status report is scheduled for the May 2010 Board meeting.

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