

Attachment 4-7



**Control Program for Dioxin-like Compounds per Permit Provision C.9.e.iii.  
March 1, 2003**

Dioxin-like compounds are included in Provision C.9.e. of the Santa Clara Valley Urban Runoff Pollution Prevention Program's (SCVURPPP's) NPDES permit issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board). This provision requires that the SCVURPPP ultimately develop a control program to eliminate or reduce discharge of dioxin-like compounds from urban runoff conveyance systems from controllable sources (if any). The first steps in this process are described by Provision C.9.e.i., ii. and iii, which include the following language:

*Characterize the representative distribution of PCBs and dioxin-like compounds in the urban areas of the Santa Clara basin to determine if: a) PCBs and dioxin-like compounds are present in urban runoff, b) if any such PCBs or dioxin-like compounds are distributed relatively uniformly in urban areas, and c) whether storm drains or other surface drainage pathways are sources of PCBs or dioxin-like compounds themselves, or whether there are specific locations within urban watersheds where prior or current uses result in land sources contributing to discharges of PCBs or dioxin-like compounds to San Francisco Bay via urban runoff conveyance systems;*

*Provide information to allow calculation of PCBs and dioxin-like compound loads to San Francisco Bay from urban runoff conveyance systems;*

*Identify control measures and/or management practices to eliminate or reduce discharges of PCBs or dioxin-like compounds conveyed by urban runoff conveyance systems...for dioxin-like compounds: submit plan with implementation schedule by March 1, 2003; begin implementation by July 1, 2003.*

The SCVURPPP prepared this work plan to address the above requirements for dioxin-like compounds. As stated in our past work plans, the SCVURPPP's program to address dioxin-like compounds excludes dioxin-like polychlorinated biphenyls (PCBs).<sup>1</sup>

## **Background**

The several hundred compounds often referred to as dioxin-like compounds are generally members of three closely related families: the polychlorinated dibenzo-p-dioxins (referred to as dioxins hereinafter), polychlorinated dibenzofurans (referred to as furans hereinafter) and certain PCBs referred to as dioxin-like PCBs. The United States Environmental Protection Agency listed San Francisco Bay as impaired by certain compounds from each of these three families in the 1998 and 2002 303(d) lists. Both 303(d) lists designate the TMDL priority for dioxins and furans as low, and a schedule for performing a TMDL has not been determined by Regional Board staff.

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<sup>1</sup> Potential sources of releases to the environment of PCBs, including dioxin-like PCBs, differ from dioxins and furans. The SCVURPPP is therefore addressing PCBs, including dioxin-like PCBs, in a separate program.

There is considerable controversy regarding the potential threats to the environment and human health in the Bay area by dioxins and furans. It is our understanding that the California State Water Resources Control Board (SWRCB) and the Regional Board opposed the 1998 listing of dioxins and furans. More recently, a letter dated December 6, 2002 to the SWRCB from the Bay Area Clean Water Agencies (BACWA) requested that the SWRCB move dioxins and furans from the 303(d) list to the "Monitoring List". BACWA believes the original rationale for listing dioxins and furans in San Francisco Bay was inadequate, and that new information developed since 1999 further supports removal of these compounds from the 303(d) list. This new information includes studies on pollutant concentrations in San Francisco Bay fish and local fish consumption, and data associated with the California Toxics Rule and the State Implementation Policy.

## **Previous Work**

One year ago, the SCVURPPP submitted a work plan to address dioxins and furans (*Control Program for Dioxin-like Compounds, March 1, 2002 Submittal per Provision C.9.e.i. and ii. of SCVURPPP's NPDES Permit*). The work plan specified reviewing readily available data on methods used to characterize dioxin-like compounds in stormwater runoff and surface waters and concentrations typically found in the Bay area and other areas. The results of the review were documented in a technical memo submitted to the Regional Board (*Dioxins Information Review, October 1, 2002*). The review found that dioxins and furans have been found in urban runoff in the Bay area and other locations, and in sediments in the Bay and other estuaries. It was concluded, however, that existing data are not sufficient to characterize the distribution in urban runoff among Bay area land uses or calculate loadings to the Bay. In the Bay area, combustion-related air emissions may currently be the major source of dioxins and furans to the environment and stormwater runoff. Reservoirs of dioxins and furans associated with activities no longer practiced in the Bay area (i.e., medical waste incineration and municipal garbage burning) may also exist.

## **Current Work**

In accordance with the recommendations of the October 1, 2002 information review, the SCVURPPP had planned to analyze archived embedded storm drain and creek sediment samples for dioxins and furans. These samples were archived during last year's regional survey for mercury, PCBs and chlorinated pesticides. However, an internal communication error at the project laboratory resulted in inadvertent disposal of the samples before analysis could be performed. It should be noted that the Alameda County Clean Water Program is currently analyzing similar archived sediment samples collected in Alameda County for dioxins and furans. The SCVURPPP intends to look at the possibility of extrapolating the Alameda County data to other parts of the Bay area to develop rough characterization and loading estimates.

The SCVURPPP is currently collaborating with other Bay area stormwater management programs to develop a "synthesis" document on dioxin-like compounds. The synthesis document will summarize the current state of knowledge regarding dioxin-like compounds in relation to stormwater runoff, and will include the following elements:

- Chemical description, sources and environmental fate.
- Impacts to the environment and human health.

- A summary of existing relevant monitoring data, including water quality and biological data.<sup>2</sup>
- A more detailed description of the regulatory background, including the controversy surrounding the potential threats to the environment and human health in the Bay area by dioxins and furans and the 303(d) listing.
- A preliminary identification, comparison and evaluation of potential control measures to address dioxins and furans in urban runoff.
- Recommendations for follow-up work, if any.

The SCVURPPP anticipates that the synthesis document will be completed by the end of FY 02-03.

### **Future Work - FY 03-04 Activities**

In general, the SCVURPPP will work with other Bay area dischargers and Regional Board staff through the Clean Estuary Partnership (CEP) and Regional Monitoring Program (RMP) to coordinate and plan any future TMDL-related dioxins and furans monitoring activities. Agreed upon activities will be incorporated into the SCVURPPP's work plans as appropriate. During FY 03-04, the SCVURPPP will:

- Work with the BASMAA Monitoring Committee to establish BASMAA's strategy for addressing dioxins and furans and present this information to the CEP Technical Committee.
- Attend relevant stakeholder, CEP, RMP and work group meetings. As appropriate, review and comment on any related documents prepared by the CEP, RMP and Regional Board staff.

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<sup>2</sup> The results of the SCVURPPP's October 1, 2002 information review (which was previously submitted to the Regional Board) will be incorporated into this section.