

C.12.b. Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation (e.g., Window Replacement) Activities

i. Task Description – The Permittees shall evaluate potential presence of PCBs at construction sites, current material handling and disposal regulations/programs (e.g., municipal ordinances, RCRA, TSCA) and current level of implementation.

ii. Implementation Level –

- (1) The Permittees shall develop a sampling and analysis plan to evaluate PCBs at construction sites that involve demolition activities (including research on when, where, and which materials potentially contained PCBs).
- (2) The Permittees shall implement a sampling and analysis plan at a minimum of 10 sites distributed throughout the combined Permittees' jurisdiction areas.
- (3) The Permittees shall develop/select BMPs to reduce or prevent discharges of PCBs during demolition/remodeling. The BMPs will focus on methods to identify, handle, contain, transport and dispose of PCB-containing building materials.
- (4) The Permittees shall develop model ordinances or policies, train and deploy inspectors, and pilot test BMPs at 5 sites.

iii. Reporting –

- (1) In their 2010 Annual Report, the Permittees shall submit the sampling and analysis plan (of Provision C.12.b.ii.).
- (2) In their 2010 Annual Report, the Permittees shall submit a status report on sampling and analysis along with whatever sampling results are available.
- (3) In their 2011 Annual Report, the Permittees shall submit the results of the evaluation (Provision C.12.b.i.) of current regulations, level of implementation, and regulatory gaps as well as the final sampling and analysis report, a list of appropriate BMPs, BMP training program, and model ordinances and policies to prevent PCB discharges from building demolition and improvement activities.
- (4) In the March 15, 2014 Integrated Monitoring Report, the Permittees shall submit the results of pilot program effectiveness evaluation.

C.12. PCBs Controls

The C.12 provisions are consistent with the regulatory approach and implementation plan of the San Francisco Bay PCBs TMDL adopted by the Water Board. They follow the general approach for sediment-bound pollutants discussed above where we seek to build our understanding and level of certainty concerning control actions by implementing actions in a phased approach. We then expand implementation of those actions that prove effective, and perhaps scale back or discontinue those that are not effective. Accordingly, there are some provisions that will be implemented throughout the region, some that will be tested on a limited basis first before making the decision to expand region-wide in the next permit term.

Fact Sheet Findings in Support of Provision C.12

C.12-2 On February 13, 2008, the Water Board adopted a Basin Plan amendment establishing a TMDL for PCBs in San Francisco Bay and an implementation plan to achieve the TMDL. Approval by the State Water Board and USEPA is pending. The following excerpts from the TMDL implementation plan are relevant to implementation of the municipal stormwater permit.

“Stormwater runoff wasteload allocations shall be achieved within 20 years and shall be implemented through the NPDES stormwater permits issued to stormwater runoff management agencies and the California Department of Transportation (Caltrans). The urban stormwater runoff wasteload allocations implicitly include all current and future permitted discharges, not otherwise addressed by another allocation, and unpermitted discharges within the geographic boundaries of stormwater runoff management agencies including, but not limited to, Caltrans roadway and non-roadway facilities and rights-of-way, atmospheric deposition, public facilities, properties proximate to stream banks, industrial facilities, and construction sites.

Requirements in each NPDES permit issued or reissued shall be based on an updated assessment of best management practices and control measures intended to reduce PCBs in urban stormwater runoff. Control measures implemented by stormwater runoff management agencies and other entities (except construction and industrial sites) shall reduce PCBs in stormwater runoff to the maximum extent practicable. Control measures for construction and industrial sites shall reduce discharges based on best available technology economically achievable. All permits shall remain consistent with Section 4.8 - Stormwater Discharges.

In the first five-year permit term, stormwater Permittees will be required to implement control measures on a pilot scale to determine their effectiveness and technical feasibility. In the second permit term, stormwater Permittees will be required to implement effective control measures, that will not cause significant adverse environmental impacts, in strategic locations, and to develop a plan to fully implement control measures that will result in

attainment of allocations, including an analysis of costs, efficiency of control measures and an identification of any significant environmental impacts. Subsequent permits will include requirements and a schedule to implement technically feasible, effective and cost efficient control measures to attain allocations. If, as a consequence, allocations cannot be attained, the Water Board will take action to review and revise the allocations and these implementation requirements as part of adaptive implementation-

In addition, stormwater Permittees will be required to develop and implement a monitoring system to quantify PCBs urban stormwater runoff loads and the load reductions achieved through treatment, source control and other actions; support actions to reduce the health risks of people who consume PCBs-contaminated San Francisco Bay fish; and conduct or cause to be conducted monitoring, and studies to fill critical data needs identified in the adaptive implementation section.

Stormwater runoff management agencies have a responsibility to oversee various discharges within the agencies' geographic boundaries. However, if it is determined that a source is substantially contributing to PCBs loads to the Bay or is outside the jurisdiction or authority of an agency the Water Board will consider a request from an stormwater runoff management agency which may include an allocation, load reduction, and/or other regulatory requirements for the source in question."

- C.12-3 Some PCB congeners have dioxin-like properties.** Dioxins are persistent, bioaccumulative, toxic compounds that are produced from the combustion of organic materials in the presence of chlorine. Dioxins enter the air through fuel and waste emissions, including diesel and other motor vehicle exhaust fumes and trash incineration, and are carried in rain and contaminate soil. Dioxins bioaccumulate in fat, and most human exposure occurs through the consumption of animal fats, including those from fish. Therefore, the actions targeting PCBs will likely have the simultaneous benefit of addressing a portion of the dioxin impairment resulting from dioxin-like PCBs.

Specific Provision C.12 Requirements

Provision C.12.a. PCBs were used in a variety of electrical devices and equipment, some of which still can be found during industrial inspections. Provision C.12.a requires the stormwater management agencies to ensure that industrial inspectors can identify PCBs or PCB-containing equipment during their inspections and make sure appropriate agencies are notified if they are found. There is enough experience and/or background knowledge about the presence of such PCB-containing equipment that this measure should be implemented region-wide during this permit term.

Provision C.12.b. PCBs are used in a variety of building materials like caulks and adhesives. PCBs contained in such materials can be liberated and transported in runoff during and after demolition and renovation activities. At this point, it is not known how extensive this type of PCB contamination is in the region. Therefore, the expectation for

this permit term is that Permittees conduct pilot studies (Provision C.12.b) that includes evaluation of the presence of PCBs in such materials, sampling and analysis, and BMP development to prevent PCBs in these materials from being released into the environment during demolition and renovation. Conducting these pilot tests and reporting results will help determine if control measures for PCBs from these sources should be implemented in a more widespread fashion in the next permit term.

Provisions C.12.c and C.12.d form the core of PCB-related efforts for this permit term, and these efforts are crucial for the iterative development of effective control measures for PCBs and other sediment-bound pollutants in future permit terms. The overarching purpose of these two provisions is to conduct five comprehensive pilot studies in locations known to contain high levels of PCBs. The pilot studies will involve a combination of efforts including abatement of the on-land PCB contamination (Provision C.12.c) as well as exploration of sediment management practices (C.12.d) that can be implemented by municipalities to control migration of the PCBs away from the source of contamination. We expect that a suite of control measures will be applied in these five pilot regions to determine the optimum suite of measures for controlling PCB contamination and preventing its transport through the storm drain system. The lessons learned through these pilot efforts will inform the direction of future efforts targeting contaminated zones throughout the Region in subsequent permit terms.

Provision C.12.e. One promising management practice for addressing a wide range of sediment-bound contaminants, including PCBs is on-site treatment. Provision C.12.e requires selection of 10 locations for pilot studies spanning treatment types as described in the Provision. This effort can be conducted in conjunction with Provision C.12.d such that on-site treatment efforts conducted as part of C.12.d can be counted toward accomplishing C.12.e requirements.

Provision C.12.f. Another promising management practice is the diversion of certain flows to the sanitary sewers to be treated by the local POTWs. Provision C.12.f requires an evaluation of locations for diversion pilot studies and implementation of pilot studies at five pump stations. This effort can be conducted in conjunction with Provision C.12.d such that POTW diversion efforts conducted as part of C.12.d can be counted toward accomplishing C.12.f requirements. Also see discussion under Provision C.2.g.

Provision C.12.g requires, consistent with the approach taken in the PCBs TMDL, development of a monitoring system to quantify PCBs loads and loads reduced through source control, treatment and other management measures. This monitoring system will be used to determine progress toward meeting TMDL load allocations. This system should establish the baseline loading or loads reduced against which to compare future loading and load reductions.

Provision C.12.h. There are still uncertainties surrounding the magnitude and nature of PCBs reaching the Bay in urban runoff and the ultimate fate of such PCBs, including biological uptake. Provision C.12.h requires that Permittees ensure that fate and transport studies of PCBs in urban runoff are completed.

Provision C.12.i. requires actions that manage human health risk due to mercury and PCBs. These may include efforts to communicate the health risks of eating Bay fish and other efforts aimed at high risk-communities.