



Western States Petroleum Association
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February 28, 2007

Ms. Song Her
Clerk to the Board, Executive Office
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100



Re: Comment Letter – Methylmercury Objectives –
CEQA Scoping Comments of Western States Petroleum Association

Dear Ms. Her:

This letter contains the comments of the Western State Petroleum Association (WSPA) regarding the scope of compliance with the California Environmental Quality Act (CEQA) for the proposed adoption by the State Water Resources Control Board (State Board) of water quality objectives for methylmercury (MeHg).

WSPA is a trade association that represents the companies and other entities that conduct most of the petroleum-related operations in the western United States. These operations include production, transportation, refining and marketing of petroleum and petroleum-based products. We appreciate the opportunity to submit these CEQA scoping comments on the State Board's proposal. Many of the issues raised by this proposal were also addressed in our November 28, 2006 scoping comments on the proposed Sediment Quality Objectives (SQOs). We attach those comments as Attachment A for incorporation into the record on the MeHg objectives.

Our comments are based on the *Informational Document – Public Scoping Meeting for Proposed Methylmercury Objectives For Inland Surface Waters, Enclosed Bays and Estuaries* dated December 2006 (referred to herein as the "Informational Document"). WSPA believes that adopting and implementing the MeHg objectives as outlined in the Informational Document would have potential environmental impacts and that additional alternatives are available to reduce such impacts. These issues are addressed in our scoping comments, below, and in our technical comments, attached as Attachment B.

Comment 1 – Inadequate Basis for CEQA Scoping

The January 5, 2007 *Notice of Two Public California Environmental Quality Act Scoping Meetings* solicits scoping comments on the range of actions, alternatives, mitigation measures and potential significant environmental impacts that should be evaluated. However, readers of the Informational Document would never know it was intended as a CEQA scoping document. The Informational Document does not even mention the words “environmental impact” or “CEQA.” The State Board should not disregard the requirements for a scoping document which must include the “probable environmental effects of the project” and provide “sufficient information” to enable a “meaningful response.” CEQA Guidelines (14 Cal. Code Regs.) § 15082(a)(1); see also § 15083(c).

WSPA assumes that the State Board will prepare a Substitute Environmental Document (SED) consistent with its past practice (although this is not stated in the notice or the Informational Document). We recognize that not all procedures for an Environmental Impact Report (EIR) need apply to an SED. Still, having decided to engage in public scoping for an SED that serves as the functional equivalent of an EIR, the State Board should provide the functional equivalent of EIR scoping. The Informational Document does not do so as it is far too brief and lacking in crucial specifics to allow a “meaningful response” by scoping commenters. Therefore, except with regard to additional alternatives that should be considered (as discussed below), WSPA’s comments can only be general in nature. We will provide further comment when the State Board provides further information on its proposal.

Comment 2 – Adverse Environmental Side-Effects Must Be Analyzed

When an agency proposes to adopt new pollution control standards or requirements, CEQA requires an analysis of the impacts of methods of compliance, feasible mitigation measures, and alternative means of compliance which would avoid or eliminate the impacts. CEQA Guidelines § 15187. Where requirements intended for environmental protection may have adverse environmental side-effects, those effects must be evaluated. For example, in *City of Arcadia v. State Water Resources Control Board*, 135 Cal. App. 4th 1392 (2006), the court held that the Los Angeles Regional Water Quality Control Board violated CEQA in adopting a Total Maximum Daily Load (TMDL) for trash in the Los Angeles River. The court found that the regional board failed to evaluate potential environmental impacts of actions by cities – in particular, installation of structural trash controls – to meet their TMDL allocations. Similarly, the State Board’s SED must evaluate the potential environmental impacts of actions to meet the MeHg objectives.

Unfortunately, the Informational Document contains almost no specifics on proposed methods of compliance and no alternatives or mitigation measures formulated to address impacts. In their absence, it is difficult to comment on these issues, other than to state that the SED must address them. However, the summary in the Informational Document does include numeric effluent limits in National Pollutant Discharge Elimination System (NPDES) permits, as well as unspecified “actions to reduce or eliminate mercury discharges” and “treatment optimization” under the heading of pollution minimization. Compliance would, at the least, involve new or modified wastewater treatment facilities. As detailed in our prior SQO scoping comments, resulting potential impacts include the following (see Attachment A, p. 8):

- Solid and hazardous waste impacts from disposal of residuals from increased wastewater treatment
- Construction impacts for new or modified treatment facilities

- Energy consumption for treatment facility operations
- Cumulative impacts of wastewater treatment expansion

The Informational Document (p. 6) also refers to implementation through unspecified “other water quality regulatory programs.” Presumably this statement refers, at least, to TMDLs and to the proposed mercury offset program which the State Board is also considering. Reasonably foreseeable impacts would include those of remedial dredging or capping projects to address contaminated sediments, as discussed in our SQO comments, such as the following (see Attachment A, pp. 4-7):

- Impacts on water quality and biological resources (including species that are fished commercially and recreationally) from turbidity and suspended contaminants
- Impacts on benthic communities due to physical disturbance
- Air emissions from project equipment operations and from barge and truck trips for transport of material
- Solid and hazardous waste impacts on disposal site capacity
- Cumulative impacts of these effects

Comment 3 – Additional Alternative MeHg Objectives Must Be Studied

Exhibit 1 to the Informational Document presents six alternatives for human health and wildlife objectives. These alternatives rely on a series of conservative assumptions, as discussed in WSPA’s technical comments (Attachment B). For example, the Informational Document characterizes fish consumption data from the San Francisco Bay Area as “California-specific consumption information.” However, there is no evidence that the Bay Area rate is representative of the whole of California or of the most sensitive receptors. The national dataset used by the U.S. Environmental Protection Agency (EPA) for its consumption rate of 17.5 g per day could be more representative of variation throughout California than data from one area within the state. Other assumptions are similarly conservative and unsupported; see Attachment B.

More critically, each of Alternatives 1-5 in Exhibit 1 to the Informational Document relies on controversial EPA bioaccumulation factors (BAFs) to convert fish tissue concentrations into ambient water quality objectives (AWQOs). Bioaccumulation is highly variable both spatially and temporally, and no reliable relationship has been demonstrated between fish tissue concentrations and levels of mercury in the water column. EPA’s own draft guidance document “acknowledges that these national BAF values might significantly over- or under-estimate site-specific bioaccumulation. As a result, EPA decided not to use the draft national BAFs to develop a national water column-based [criterion] for methylmercury.” EPA, *Draft Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion* (August 2006), p. 23. In fact, one of EPA’s reasons for developing fish tissue objectives (FTOs) was to avoid the need for BAFs to “translate” into water column objectives. *Id.*, p. 13. For this reason, the draft national BAFs are EPA’s least preferred means for developing state MeHg objectives.

Alternative 6 is the only alternative that does not rely on the national BAF values to set AWQOs. However, alternative 6 also assumes, without justification, that Bay Area consumption rates

apply statewide. That is, the State Board has unreasonably excluded the alternative of an FTO using a broader dataset of consumption rates, but without AWQOs based on BAFs.

CEQA requires consideration of a reasonable range of alternatives to the project that could feasibly attain its basic objectives and would “substantially lessen the significant environmental effects.” CEQA (Cal. Pub. Res. Code) § 21002; CEQA Guidelines § 15126.6. The compounded conservatism of the alternatives in Exhibit 1 is not supported by any indication that they will produce commensurate benefits, nor are they crafted to reduce or avoid adverse-side effects. An SED need not evaluate every conceivable alternative, but an adequate range of alternatives is critical. Instead, Exhibit 1 selects combinations which yield more stringent outcomes. Therefore, WSPA urges the State Board to add the following to the list of alternatives in Exhibit 1:

- Alternative 7: Set an FTO of 0.3 mg/kg (based on the nationwide consumption rate of 17.5 g per day) and do not include AWQOs.

Comment 4 – Additional Alternatives to MeHg Wildlife Objectives

In addition, all six alternatives in Exhibit 1 contain the same FTOs for protection of wildlife, based on information provided by the U.S. Fish and Wildlife Service (USFWS). In other words, the State Board is prepared to consider no alternatives at all with respect to the wildlife objectives. These include an FTO specific to small fish, by far the most stringent of proposed objectives, in order to protect the endangered Least Tern.

For protection of wildlife, the State Board should consider only species that are actually threatened by MeHg as opposed to other effects (such as predators, habitat loss or other toxic chemicals) which may make MeHg a minor factor. Moreover, the USFWS’s views on MeHg levels necessary to protect wildlife (in particular, endangered bird species) are controversial. The San Francisco Bay and Central Valley Regional Boards have been considering TMDL targets for fish tissue based on USFWS evaluations. This reliance has been challenged for lacking scientific support and using incorrect exposure scenarios for bird species. An ongoing CALFED study is intended to address these issues. See Schwarzbach et al., *Mercury in Birds of the San Francisco Bay-Delta: Trophic Pathways, Bioaccumulation and Ecotoxicological Risk to Avian Reproduction* (2005 Annual Report). The State Board should defer consideration of wildlife objectives for MeHg until there is sound scientific information on which to base them.

Therefore, WSPA urges the State Board to add the following options to the list of alternatives in Exhibit 1:

- Alternatives that do not include FTOs for protection of wildlife. Development of such objectives will be deferred until additional scientifically defensible information is available.
- Alternatives that include an FTO of 0.20 mg/kg for protection of wildlife, but not a specific FTO for small fish to protect the Least Tern. Development of such an objective will be deferred until additional scientifically defensible information is available.

Comment 5 – Implementation Must Be Clarified and Additional Alternatives Studied

It is impossible to assess the environmental impacts of MeHg objectives as required by CEQA prior to their adoption, without any description of how the objectives will be applied to trigger

management actions or affect regulatory decisions. Such actions or decisions, including NPDES permit limits, listing under Clean Water Act section 303(d), and TMDL development, must be described with sufficient specificity to allow evaluation of impacts and alternatives.

Instead, the Informational Document raises more questions than it answers. For alternatives 1-5, where FTOs have been translated to water column objectives using EPA's default BAFs, the resulting AWQOs would be implemented by procedures set forth in the State Implementation Policy (SIP) for the California Toxics Rule. It is unclear how alternatives 1-5, which include both human health FTOs and AWQOs, and wildlife FTOs unaccompanied by AWQOs, can be implemented *only* by relying on SIP procedures to establish effluent limits based on the AWQOs. Alternatives 1-5 also must include implementation for the wildlife objectives that are stated as FTOs only.

With respect to Alternative 6, which does not include AWQOs, the Informational Document indicates that reasonable potential (RP) will be determined by comparison to AWQOs, calculated using EPA's default BAF values and other assumptions. This approach is perplexing, given that the purpose of adopting Alternative 6 would be to avoid establishing AWQOs based on the default BAFs. Here, the problematic BAFs would be reintroduced at the implementation stage. As EPA's August 2006 guidance (pp. 21-23) concluded, relying on the default BAFs can lead to both under- and over-protective results. While under-protective results would be a problem for effective regulation, over-protective results would likewise be a problem under CEQA, leading to unnecessary and potentially significant adverse impacts as discussed above.

The Informational Document suggests that RP can be presumed because MeHg in discharges will cause a direct and comparable input to MeHg in fish tissue, and that reducing MeHg in discharges will cause a direct and comparable reduction in the MeHg in fish tissue, in a straightforward relationship. On the contrary, this presumption of a simple and well-understood relationship is not supported by current science.

WSPA therefore requests that the SED consider an additional alternative as follows:

- Reasonable Potential (RP): Fish tissue exceeds the FTO and the discharge is demonstrated to contribute to the level of MeHg in fish tissue.

For effluent limits for Alternative 6, the Informational Document states (p. 6, Exhibit 2): "If RP exists, implement PMP [Pollutant Minimization Programs] and limit mercury as appropriate" – but does not state what is intended by "as appropriate." The text on pp. 6-7 of the document suggests that, if Alternative 6 is adopted, it would be implemented by NPDES permit requirements including numeric effluent limits for mass loading, "established at the existing effluent level or any existing numeric limit."

WSPA does not believe that to "limit mercury as appropriate" should include numeric mass limits which would lock in current discharge levels, especially given the limited information on the linkage between discharges and fish tissue. At this stage of understanding, best management practices would be the most appropriate approach to controlling both sources (as in PMPs) and effluent levels in order to address FTOs. We therefore request that the SED consider an additional alternative as follows:

- Effluent Limits: If RP exists, implement best management practices for pollutant minimization and reduction of effluent levels.

Comment 6 – TMDL Implementation Must Be Considered

Other than a vague reference to “other water quality regulatory programs” (p. 6), the implementation section of the Informational Document focuses on NPDES permits and does not address TMDLs. However, impacts of establishing MeHg objectives obviously include those associated with TMDL compliance; see *City of Arcadia v. State Board, supra*. Assuming an appropriate and scientifically sound FTO can be established, the SED must address the means of implementation in the TMDL program, and the environmental side-effects of over-protective choices as discussed above:

- How will the State Board’s 303(d) listing policy be implemented for an FTO, especially with respect to data quantity and data quality objectives?
- How many fish species, trophic levels and samples exceeding the FTO will trigger a designation of “impairment”?
- How will the TMDL allocations of point and nonpoint sources to fish tissue loadings of MeHg be determined? This will require a complex and information-intensive modeling exercise for which the necessary data and resources are not now available.

Comment 7 – Background Levels Must Be Considered

Mercury occurs naturally in the environment and is widespread in soils in California, regardless of human contributions. In addition, large quantities of mercury were discharged to water bodies in the state over many decades during gold mining activities and remain in the sediment. The Informational Document does not indicate how existing background levels of mercury will be taken into account. It is not clear that controlling point source discharges to the low levels proposed in the document would reduce the levels of MeHg in fish tissue, if the background levels of total mercury in sediments and water are sufficiently high. Moreover, the document does not appear to address the contribution of MeHg from methylation of mercury that is contributed from non-anthropogenic sources, and from fall-out from airborne sources that may be long distances away. It would be inappropriate to establish a fish tissue objective which cannot feasibly be met, given the extent of background concentrations from natural, legacy and long-distance sources; see attachment B.

Comment 8 – MeHg Objectives Should Not Be Adopted Without a Variance in Place

The Informational Document, p. 6, acknowledges that MeHg objectives may not be feasibly attainable and point source dischargers may need to seek variance relief. This is a considerable understatement. As discussed in EPA’s August 2006 draft guidance, adoption and implementation of MeHg objectives is likely to result in widespread noncompliance. Moreover, EPA recognized that, in many situations, attempting further mercury reductions from point source discharges would result in no discernable benefit to water quality, which is dominated by mercury from legacy sources and aerial deposition. To address this problem, EPA suggested that states consider statewide or multiple-discharger variances, as described on pp. 34-37 of the draft guidance.

Deferring the consideration of variance procedures until after unattainable MeHg objectives are adopted would force dischargers into noncompliance for a possibly prolonged period. WSPA therefore urges the State Board to consider an additional implementation alternative:

- Adopt statewide or multiple-discharger variances at the same time that MeHg objectives are adopted.

Comment 9 – Economic Analysis under Water Code section 13241

Finally, we note that, under Water Code section 13241, economic considerations must be taken into account in evaluating the proposed MeHg objectives. As the State Board acknowledged in connection with its proposed SQOs, the required analysis of economic considerations should be incorporated into or appended to the SED. This is an important issue on which the regulated community should have a full and fair opportunity to comment. Accordingly, WSPA urges the State Board to make its economic analysis available for review and comment no later than the public draft SED.

Thank you for considering our comments. We look forward to the opportunity to comment on the SED when it is issued and for further discussion of these issues with the State Board.

s/Kevin Buchan
(sent via email)

Enclosures: Attachment A: “meHg Objective, WSPA CEQA Scoping cmts, attA, 2-28-07”
Attachment B: “meHg Objective, WSPA CEQA Scoping cmts, attB, 2-28-07”



Western States Petroleum Association
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Kevin Buchan
Environmental Representative

November 28, 2006

Ms. Song Her
Clerk to the Board, Executive Office
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

**Re: Comment Letter – Sediment Quality Objectives –
CEQA Scoping Comments of Western States Petroleum Association**

Dear Ms. Her:

This letter contains the comments of the Western State Petroleum Association (“WSPA”) regarding the scope of compliance with the California Environmental Quality Act (“CEQA”) for the proposed adoption of Sediment Quality Objectives (“SQOs”) and a Sediment Quality Plan (“SQO Plan” or “Plan”) for enclosed bays and estuaries by the State Water Resources Control Board (“State Board”).

The Western States Petroleum Association is a trade association that represents the companies and other entities that conduct most of the petroleum-related operations in the western United States. These operations include production, transportation, refining and marketing of petroleum and petroleum-based products. We appreciate the opportunity to submit these CEQA scoping comments on the proposed SQO Plan.

As outlined in the *CEQA Scoping Meeting Informational Document - Development of Sediment Quality Objectives For Enclosed Bays and Estuaries* dated August 17, 2006 (hereinafter “Scoping Document”), the State Board intends to prepare a Substitute Environmental Document (“SED”) in lieu of an Environmental Impact Report (“EIR”). The Scoping Document outlines a number of alternatives to aspects of the SQO Plan, but does not identify any environmental impacts that the State Board intends to consider in its SED. WSPA is concerned that implementation of SQOs by means of the SQO Plan will have reasonably foreseeable potential environmental impacts which must be fully analyzed in the SED. Moreover, we believe that additional alternatives, not considered in the Scoping Document, are available to avoid or reduce such impacts and therefore should be included and evaluated in the SED. These issues are addressed in our CEQA scoping comments, below, and in our technical comments, attached as Attachment A.

Comment 1 – Impacts Of Compliance Methods Must Be Analyzed

The CEQA guidelines require an SED to contain an analysis of reasonably foreseeable environmental impacts of methods of compliance with new standards or requirements, feasible mitigation measures, and alternative means of compliance which would avoid or eliminate the identified impacts. CEQA Guidelines (14 Cal. Code Regs.) § 15187. It is well settled that, where there is evidence that a program or regulation intended for environmental protection may have unintended adverse environmental consequences, those consequences must be analyzed, and feasible alternatives or mitigation incorporated in accordance with CEQA, before the program or regulation may be adopted. See, e.g., *County Sanitation District v. County of Kern*, 127 Cal. App. 4th 1544 (2005). One particularly relevant recent case is *City of Arcadia v. State Water Resources Control Board*, 135 Cal. App. 4th 1392 (2006), in which the court found that the Regional Water Quality Control Board (“Regional Board”) failed to comply with CEQA in adopting a Total Maximum Daily Load (“TMDL”) for trash in the Los Angeles River watershed, when the Board failed to evaluate reasonably foreseeable environmental impacts of the means of compliance likely to be utilized by the cities subject to wasteload allocations. For these reasons, the SED must evaluate the impacts of and alternatives to anticipated means of compliance with the SQO Plan.

Comment 2 – Tiered CEQA Analysis

While the Scoping Document is not entirely clear on this point, it appears that the SED will contain a program-level or Tier 1 CEQA analysis, deferring consideration of specific implementation actions to later project-level or Tier 2 CEQA analyses. While CEQA encourages tiered environmental review and would allow a Tier 1 SED to defer consideration of information that may not be feasibly reviewed at the programmatic level, the tiering approach does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier. CEQA Guidelines § 15152(b). If a future implementation action “is reasonably foreseeable in general terms, the [tier 1 EIR or SED] must include a general discussion of the fact and its possible environmental effects, but need not include a detailed analysis of specific facts that cannot reasonably be foreseen at the time the [EIR or SED] is prepared.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry and Fire Protection*, 139 Cal. App. 4th 165 (2006). Again, for these reasons, the SED must evaluate the impacts of and alternatives to anticipated means of compliance with the SQO Plan.

Comment 3 – The SQO Plan Lacks Critical Specifics On Implementation Actions

We understand that the merits of the SQOs and SQO Plan are not yet being considered at the CEQA scoping stage. Even so, we must point out that the SQO Plan as drafted is fundamentally flawed in a manner that is highly relevant to CEQA review. Even as a program document, the Plan is excessively vague and lacking in critical specifics on potential implementation actions. Analysis of the environmental impacts of, and alternatives, to the Plan will require a sufficiently specific description of the proposed action and reasonably foreseeable means of compliance.

Aside from CEQA, the current draft Plan is so lacking in specificity that it fails to contain the elements required by Water Code § 13242. That section requires such implementation programs to contain “a description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private.” The SQO Plan contains none of these things.

Moreover, when the State Board does come to consider the merits of the SQO Plan, we believe that a clearer understanding of its implementation mechanisms will be critically important, both

for the State Board's decision whether to adopt the Plan and to guide future decisions by the Regional Boards. A number of particularly important issues are addressed in WSPA's technical comments, Attachment A.

Comment 4 – Reasonable Range Of Alternatives

CEQA requires consideration of a reasonable range of alternatives to the project that could feasibly attain its basic objectives and would “substantially lessen the significant environmental effects.” CEQA (Cal. Pub. Res. Code) § 21002; CEQA Guidelines § 15126.6. While the Scoping Document outlines a number of alternatives to specific aspects of the SQO Plan, these alternatives appear to have been crafted more as available options, without any attempt to develop alternatives that could lessen impacts. It is not reasonable to consider only alternatives that will have no effect on environmental impacts in the first place, or are by definition infeasible, and to then rely on the inadequacy of those “straw man” alternatives to justify adopting the SQO Plan as currently drafted.

Comment 5 – No Alternatives To “How SQOs Could Be Applied”

Most critically, Section 2.21 of the Scoping Document – “How could SQOs be applied?” – considers no alternatives. This is not surprising, since the SQO Plan is so vague in its discussion of future management actions that it is difficult to understand its meaning, much less identify and evaluate reasonably foreseeable means of compliance and associated impacts. It is impossible for the State Board to assess the environmental impacts of SQOs as required by CEQA prior to their adoption, without any description of how the SQOs will be applied to trigger management actions or affect regulatory decisions such as listing under Clean Water Act section 303(d), TMDL development and NPDES permitting. If the section is intended to describe which actions might be triggered by application of the SQOs, they must be described with sufficient specificity – including reasonably foreseeable means of compliance – to allow proper evaluation of impacts; and the State Board must consider alternatives that would avoid or lessen those impacts.

Comment 6 – The Current Regulatory Regime Is The CEQA “Baseline”

In CEQA analysis, environmental impacts of the proposed action and alternatives (including the No-Action Alternative) are compared to the baseline of existing conditions. CEQA Guidelines §§ 15125(a), 15126.2(a). The State Board is obligated by statute to adopt SQOs, so that a No-Action Alternative of not adopting SQOs themselves would be legally infeasible. However, the same is not true of discretionary implementation actions under the SQO Plan. When considering a new regulatory program such as the SQO Plan, the lead agency must compare impacts and alternatives to the baseline of the current regulatory regime. Sediment management issues to be addressed under the SQO Plan are currently regulated under the Clean Water Action section 404/401 program, the TMDL program under Clean Water Act section 303(d), and the toxic hotspots program under Water Code section 13394. In our view, continued reliance on these existing programs to implement SQOs constitutes the environmental baseline. Any change in activities that otherwise would have occurred under existing programs – for example, changes in patterns of maintenance dredging, or remedial actions triggered solely by SQO exceedances – must be considered as consequences of adopting the SQO Plan, and must therefore be evaluated for potentially significant environmental impacts.

Comment 7 – Changes To Current Dredging Regime

One clearly foreseeable context for SQO implementation is dredging. The SQO Plan could alter the current regime of dredging activities in two ways. First, Regional Boards could rely on

SQOs exceedances to trigger remedial actions or other dredging activities that might not otherwise have been undertaken. Second, routine maintenance dredging would become more difficult for marine terminals and other industrial facilities around the state, faced with additional regulatory burdens arising from the SQO Plan. The implications of these two issues are discussed in the following comments 8 to 13.

Comment 8 – Water Quality And Biological Resources Impacts Of Increased Remedial Dredging

With regard to the first point in Comment 7, the SED must consider the potential impacts that could arise from disturbance of sediments exceeding SQOs that would not otherwise have been disturbed. Sediment removal is typically performed by dredging. Dredged material must then be relocated, in some cases to approved ocean or bay disposal sites. However, in many instances, disposal of sediments exceeding SQOs would occur on land. Dewatering is often used to reduce the volume of sediment to be disposed, and the material must then be transported to a disposal site. These activities would be associated with potentially significant environmental impacts, including the following:

- Short-term water quality impacts from suspension of contaminants buried in sediment, temporarily increasing water column concentrations, due to releases of material during dredging and dewatering discharges (Zahakos, 2005; Lee and Jones, 2000; Kennish, 1998; Quantitative Environmental Analysis et al., 2001)
- Short-term water quality impacts from exceedance of water quality objectives for turbidity and suspended solids, due to dredging and dewatering discharges (Johnston, 1981; Koebel et al., 1999; Nichols et al., 1990)
- Longer-term water quality impacts, depending upon the duration and extent of the dredging operation, if contaminant concentrations at the sediment surface are increased as successive layers of sediment are removed and/or substantial material is lost during dredging (Su et al., 2002; Goossens and Zwolsman, 1996)
- Impacts on biological resources, from exposure of water column and benthic organisms to resuspended contaminants (Zahakos, 2005; Lee and Jones, 2000; Kennish, 1998)
- Impacts on benthic communities due to physical disturbance from dredging, including impacts to biota outside the dredged area which may receive additional sedimentation as resuspended material settles (Lee and Jones, 2000; Kennish, 1998)
- Air emissions from dredging and dewatering equipment operations (Starcrest Consulting Group, 2005)
- Air emissions from barge and truck trips for transport of dredged material to disposal sites (Starcrest Consulting Group, 2005; NRDC, 2004; Ports of Los Angeles and Long Beach, 2006)
- Solid and hazardous waste impacts on disposal site capacity which is already limited (CIWMB, 1992)

Comment 9 – Impacts To Disposal Site Capacity From Increased Remedial Dredging

It is reasonable to expect that implementation of the SQOs could result in substantial areas within active harbors being deemed in exceedance. To provide the basis for adequate evaluation of impacts, the State Board should develop an analysis of the enormous magnitude of additional disposal that could result. Available sediment data for representative locations could be used to estimate the number of acres of bottom where SQOs would be exceeded. Assuming that sediment exceeding SQOs is removed to a depth of two feet, the volume of sediment that would require disposal can be estimated. The estimated volume, in turn, can be compared to the volume of available land disposal or (for sediments characterized as hazardous) hazardous waste landfill capacity. Unless it performs such an analysis of the reasonably foreseeable consequences of SQO implementation, the State Board would have no basis to conclude that the potential impacts on disposal capacity sites will be less than significant.

Comment 10 – Air Quality Impacts Of Increased Remedial Dredging

Air emissions from dredging activity and truck trips to transport large volumes of material would be likely to exceed applicable CEQA significance thresholds. For example, the South Coast Air Quality Management District (SCAQMD) has adopted CEQA significance thresholds of (i) daily emissions of 100 pounds NO_x, 75 pounds ROG, 150 pounds SO_x or PM₁₀, or 550 pounds of CO and (ii) calendar quarterly emissions of 2.5 tons of ROG or NO_x, 6.75 tons of SO_x or PM₁₀, or 24.75 tons of CO (SCAQMD 1993).

Based on the estimated volumes of dredge material (see comment 9), the amount of air emissions, should SQO exceedances be addressed by remedial action over large areas, can be estimated. The typical suite of equipment involved in dredging operations includes the dredge vessels and dredges themselves, tugs used to transport barges of dredged material to shore, off-loading equipment, and trucks to transport dredged material to disposal sites. All are sources of emissions with potentially significant effects on air quality. The emissions associated with removing and transporting the estimated volume of additional dredged material, from representative origins to likely disposal destinations, can be calculated and compared to the applicable CEQA emission thresholds.

Even without performing such a quantitative analysis, given the low thresholds set by SCAQMD and other air districts, it is foreseeable that potentially significant air quality impact would result. Unless it performs such an analysis of the reasonably foreseeable consequences of SQO implementation, the State Board would have no basis to conclude that the potential impacts on air quality will be less than significant.

Comment 11 – Cumulative Impacts Of Increased Remedial Dredging

The State Board should also consider potentially significant cumulative impacts in the vicinity of areas likely to be affected by the SQO Plan. For example, according to the *San Pedro Bay Ports Clean Air Action Plan Technical Report* (Ports of Los Angeles and Long Beach, 2006), other projects are contributing and will contribute to serious environmental concerns related to truck traffic, air pollution and noise in the areas adjacent to the Ports of Los Angeles and Long Beach.

Comment 12 – Capping Impacts

In addition to sediment removal by dredging, sediment sequestering or capping is another reasonably foreseeable activity that could result from adoption of SQOs and identification of sediments that exceed SQOs. Accordingly, the State Board's CEQA evaluation for adoption of

the SQO Plan must evaluate the reasonably foreseeable environmental impacts of capping as an implementation strategy.

Sediment sequestration or capping would entail covering contaminated bed sediments in a water body with clean fill material from another source. Capping is used to make the contaminants less biologically available by sequestering them from the human environment and from the biologically active sediment layer, which is generally the top six inches of sediment. Construction of sediment caps on contaminated sediments can result in impacts similar to those that occur for dredging, including increased ship and boat traffic (barges are generally used to transport clean sediment to the area to be capped), truck traffic (when capping material comes from land-based sources), and increased air pollution. In addition, capping requires a clean sediment source, which is generally taken from a marine borrow area or from a land-based source, and the capture and transport of the capping material can also cause environmental impacts.

- Capping areas of contaminated sediments would temporarily increase the turbidity of overlying waters, with impacts to organisms in the water column (Koebel et al., 1999)
- Similar to dredging operations, exhaust emissions from barges and sediment placement equipment would contribute to air quality impacts (EA Engineering, Science, and Technology, 2005)
- Taking capping material from marine borrow sources would disturb a area of clean sediment elsewhere, resulting in impacts to the biota in the borrow location, resuspension of sediments, and associated turbidity that would likely be similar to impacts for dredging (see dredging references cited above)
- Using capping material from land-based sources would require the transport of clean material to the capping area by truck, with resulting air emissions that would likely be similar to impacts for dredging (see dredging references cited above)

Comment 13 – Economic And Indirect Environmental Effects

As noted above in Comment 7, another foreseeable consequence of SQO implementation is that routine maintenance dredging will become more difficult for ports, marine terminals and other industrial facilities around the state. Moreover, if contaminated sediments in port areas were capped, maintenance dredging would have to avoid the sediment caps and thus would become more difficult, potentially reducing the frequency and scope of maintenance projects.

While economic effects are not environmental impacts, CEQA requires consideration of environmental impacts that may arise as a reasonably foreseeable consequence of economic effects. CEQA Guidelines §§ 15064(e), 15131(a). In this case, the increased difficulty of maintenance dredging could have indirect impacts as a consequence of the reduced availability of port facilities, leading to re-routing of goods and petroleum products to land transport with resulting increased traffic impacts and emissions of air pollutants from truck cargo trips (NRDC, 2004; Ports of Los Angeles and Long Beach, 2006).

Comment 14 – Economic Analysis Under Water Code Section 13241

We also note that, under Water Code section 13241, economic considerations must be taken into account, separately from CEQA, in evaluating the proposed SQOs. As the State Board has

itself acknowledged: “Under Water Code section 13241, the State Board is legally required to consider economics, as well as other factors, prior to adopting SQOs. The analysis of economic considerations will likely be incorporated into or appended to the [SED].” State Board, Responses to Comments on the Draft Revised Workplan (2003), p. 19; see also p. 29: “The State Board will comply with all applicable federal and state legal requirements, including Water Code section 13241, prior to adopting any SQOs.” This analysis has not yet been done. The SQO Plan and Scoping Document contain no discussion of economic considerations or indication of how the State Board intends to carry out its obligation to do so. This is an important issue on which the regulated community should have a full and fair opportunity to comment. Accordingly, the State Board should make its analysis available for review and comment no later than the public draft SED.

Comment 15 – Implementation In NPDES Permits And TMDLs

With respect to the prospect of SQO implementation in NPDES permits and/or TMDLs, the State Board should consider the following potential impacts:

- Solid and hazardous waste impacts from disposal of residuals from increased wastewater treatment (City of St. Helena, 2006)
- Construction impacts for new treatment facilities (Pierce County, 2000)¹
- Energy consumption for treatment facility operations (SBW Consulting, Inc., 2002; M/J Industrial Solutions, 2003)
- Cumulative impacts of wastewater treatment expansion and/or remedial dredging at upstream sources of contaminants (Pierce County, 2000)

Comment 16 – Remedial Action Alternatives

In Section 2.4 of the Scoping Document, the recommended Alternative 1 – “Regional Water Boards retain the discretion to apply the SQOs and the supporting tools to cleanup activities, where appropriate” – is excessively vague and would likely lead to sediment removal or remediation actions that would not have occurred otherwise. Potentially significant impacts could result, including effects on water quality, biological resources, air quality, etc. as discussed above. Each of these impacts should be evaluated in the SED for the State Board staff’s recommended alternative.

The SED should also consider other alternatives that would reduce or avoid such impacts:

Alternative 3: An SQO evaluation, by itself, would not be used to trigger or initiate a sediment cleanup action. SQOs will be implemented in sediment cleanup actions under the existing toxic hotspots and TMDL programs, not through independent sediment cleanup actions.

These existing regulatory programs constitute part of the existing conditions or “CEQA baseline,” against which the SED must evaluate impacts of adopting the new SQO Plan. By

¹ See Tables A-12 and A-13, pp. 29-32.

limiting the application of SQOs to the existing regulatory programs, adverse environmental impacts associated with SQO adoption will be reduced.

Alternative 4: Remedial actions that are already underway and those for which plans have been approved will not be affected by the SQO process or subject to SQO evaluation.

The reason for this alternative is that planned remedial measures at a site will have already been formulated to include ecological risk evaluations. SQO evaluation for these projects would duplicate prior work and likely delay remediation plans that already taken a significant amount of time and effort to formulate.

Comment 17 – Alternatives Regarding Use Of Multiple Lines Of Evidence

WSPA generally agrees with the multiple lines of evidence (MLOE) approach proposed in the SQO Plan. However, the draft Plan, Section C.2, specifies that only two lines of evidence (chemistry and toxicity) shall be used for bays and estuaries where benthic tools are unavailable. Section J provides an evaluation matrix that uses chemistry and toxicity to make a determination for a station with missing benthic data. WSPA is especially concerned with the classifications of some of the boxes within Table 3.10 on p. 50, which allow final SQO assessments to be made using only two lines of evidence. Section 2.19 of the Scoping Document (pp. 30-32) discusses the application of SQOs to estuaries and recommends adoption of Alternative 3, which would allow use of sediment toxicity and chemistry alone (i.e., only two lines of evidence) to implement the narrative objective.

WSPA strongly disagrees with the recommendation to adopt Alternative 3 and requests that the State Board carefully consider Alternative 1, requiring use of three lines of evidence in estuarine environments. The use of only two lines of evidence directly contradicts the recommendations of the Scientific Steering Committee and cannot be implemented with the tools currently specified in the draft SQO Plan. (See discussion in WSPA's technical comments, Attachment A to this letter, and the excerpts from the Scientific Steering Committee Consensus Opinion on MLOE Approach (March 2, 2005), attached to the technical comments.) Reliance on too few lines of evidence risks both under- and over-inclusive results, i.e., mistakenly failing to identify some affected sediments while mistakenly identifying others that are in fact unaffected. For example, relying on the chemistry line of evidence could lead to mis-classifying sediments which were not tested for those toxic contaminants actually causing serious impacts to benthic community organisms. Conversely, without chemistry and toxicity data, it is impossible to determine if alterations in the benthos may result from natural factors. Sediments not actually causing biological impacts could be misclassified due to the presence of toxic chemicals that are not bioavailable. Spurious results of toxicity tests could also be attributable to the presence of natural factors such as ammonia, hydrogen sulfide or physical abrasion or alternatively, the result of contaminants not tested.

An under-inclusive result could result in direct environmental consequences, by ignoring sediments that should be addressed; while an over-inclusive result could lead to inappropriate remedial actions with potentially significant adverse side-effects for water quality, air quality and disposal site capacity as discussed above. These reasonably foreseeable consequences must be considered in the SED. The SED must also consider alternatives requiring three lines of evidence for all provisions in the draft Plan that currently allow reliance on only two lines of evidence. As discussed in WSPA's technical comments, two options that should be considered when the SQO tool for benthic community evaluation is unavailable: using the best professional

judgment of a trained benthic ecologist or taxonomist; or using available indices developed outside the SQO program.

Comment 18 - Natural Attenuation/Recovery Alternative

In particular, the SED should evaluate an alternative providing that, whenever remedial action is considered based on exceedance of SQOs, management by means of natural attenuation (also referred to as natural recovery) must be evaluated. Natural attenuation is generally preferred when a remedial action (either dredging or capping) would cause more harm than leaving the sediment in place. Natural attenuation is generally appropriate in “accretional areas” where cleaner sediments are already accumulating and burying existing contamination; or for pollutants that are degrading in situ (e.g., via biodegradation).

As discussed at the outset of these comments, WSPA understands that the State Board intends the SED to serve as a programmatic CEQA document. That is, the SED will not purport to fully evaluate environmental impacts in a manner that would permit the Regional Boards to order implementing actions without any further CEQA review. Rather, the SED will constitute a “tier 1” CEQA document covering only adopting of the SQO Plan and analyzing impacts of implementation on a program level. This approach requires the Regional Boards to conduct subsequent “tier 2” CEQA analyses for the actions they ultimately select to implement SQOs. However, even under the tiered approach, as noted above, if a later implementation action “is reasonably foreseeable in general terms, the [Tier 1 CEQA document] must include a general discussion of the act and its possible environmental effects.” *Ebbetts Pass Forest Watch*.

For this reason, the SQO Plan should direct the Regional Boards that they should evaluate a natural attenuation/recovery alternative before ordering remedial actions based on exceedance of SQOs. While it not necessary to conduct a full evaluation of the impacts of future actions in the Tier 1 CEQA document, if the Tier 1 document does defer certain areas of specific analysis to Tier 2, those issues must be addressed by the Regional Boards which undertake future Tier 2 actions. In other words, the Regional Boards cannot rely on the State Board for CEQA compliance that the State Board deferred to the Regional Boards. By adopting an alternative that requires the Regional Board to consider the benefits and impacts of natural attenuation, on a case-by-case basis, the State Board can rely on the Regional Boards to perform the evaluation of impacts and alternatives, which the State Board did not perform.

Thank you for considering WSPA’s scoping comments. Please contact me at 916-498-7755 if you have any questions or wish to discuss our comments. We look forward to the opportunity to comment on the SED when it is issued and for further discussion of these issues with the State Board.

Sincerely yours,

s/Kevin Buchan
(sent via email)

Enclosure: Attachment A

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ATTACHMENT B
**Technical Issues Related to the CA SWRCB's Informational Document on
Proposed Methylmercury Objectives for Inland Waters, Enclosed Bays, and
Estuaries in California.**
February 28, 2007

Issues Related to Compounded Conservatism:

1. U.S. EPA's Reference Dose for Methylmercury is a Conservative Estimate – As described in the U.S. EPA's Final Water Quality Criterion Document, the reference dose (RfD) for methylmercury is a very conservative (i.e. health protective) estimate of a safe exposure level for the entire population. The RfD is derived to be protective of the most sensitive receptor, the developing fetal central nervous system. Furthermore, even though the RfD is based on human data, and very sensitive neuropsychological endpoints, and is based on the 95% lower confidence limit of an estimated dose that would be expected to produce no effects in 95% of the population, the U.S. EPA still incorporated a 10-fold safety factor to ensure that the RfD is health protective. As described below, the approach proposed by the SWRCB to establish an AWQO for methylmercury incorporates numerous additional conservative default assumptions, which would further lower the AWQO, and increase the technical and economic difficulties of meeting it, without commensurate risk reduction. The SWRCB should describe and acknowledge the conservative methodology applied by U.S. EPA in deriving the Water Quality Criterion for methylmercury, and justify that further conservatism is warranted by commensurate reductions in risk.
2. The Proposed California-Specific Fish Ingestion Rate – The SWRCB proposes using an SFEI study to justify increasing the default fish ingestion rate, for locally caught fish, for all of California to 32 g/day, which is approximately twice the default rate applied by U.S. EPA. This ingestion rate is described as the (upper) 95th percentile consumption rate for consumers of San Francisco Bay fish; however, there is no indication that this ingestion rate is justified for all of California or for the target population of pregnant or nursing women.
3. Ingestion of Drinking Water – The formula proposed on page 3 of the informational document includes an adjustment for the ingestion of drinking water (DI). The U.S. EPA Criterion Document clearly indicates that ingestion of drinking water is not a significant source of methylmercury exposure. Therefore, this adjustment should be eliminated from any AWQO calculation.

4. Bioaccumulation Factors (BAFs) – The document also proposes to use U.S. EPA default BAFs. However, a cursory review of the literature (and U.S. EPA’s Criteria Fact Sheet) indicates that, if BAFs are to be used at all, site-specific BAFs should be applied, because numerous factors affect the bioaccumulation of methylmercury, which vary for different water bodies. Even site-specific BAFs are problematic. Since it is highly unlikely that MeHg would be detectable by available methods at such low levels, such BAFs would likely be based on MeHg in fish and total mercury in water. However, the correlation between total mercury in receiving waters and MeHg concentrations in fish is too complex and poorly understood for such calculations to be considered reliable.
5. Fish Trophic Level – The document further discusses the option of assuming that all locally caught fish be assumed to be from fish species in trophic level 4 (TL4), which is another unwarranted, conservative assumption. U.S. EPA’s document titled, “What You Need to Know About Mercury in Fish and Shellfish” lists a number of TL4 fish species that are high in methylmercury, but it also lists TL4 fish species that are low in methylmercury (such as light tuna). This fact clearly documents that different fish species within a given trophic level will have markedly different levels of methylmercury, and that applying a default BAF that is based on high accumulators to all fish species is very conservative. Furthermore, it is unrealistic to assume that all of the locally caught fish will be high accumulators from TL4.
6. Fish Species Consumed by People and Wildlife – For FTOs based on human health impacts from fish consumption, the FTO should not be based on all fish species for which data may be available, but only to those fish being consumed, as the average over a market basket of local fish. For FTOs intended to protect wildlife, only fish species actually consumed by wildlife should be considered.
7. The Method for Converting Dissolved Methylmercury to Total Mercury – The Appendix shows a formula for calculating a total mercury AWQO from the fraction of total mercury that is present in water as methylmercury (f_d). This ratio will be affected by numerous physical and chemical factors, and should not be established as a default, even for the same source, as the ratio is likely to change. Therefore, the AWQO should not be applied to total mercury.

Issues Related to Implementation:

8. Background/Ambient Mercury and Methylmercury Concentrations – The current SWRCB proposal does not appear to adequately account for existing background concentrations of methylmercury (or total mercury) in aquatic systems that would be subject to the proposed AWQO. Mercury occurs naturally in the environment and in California mercury is widespread in soils. Large quantities of mercury were discharged to water bodies in the state over many decades during gold mining activities and remain in the sediment. It is not clear that controlling point source aqueous discharges to the low levels proposed in the document would reduce the levels of methylmercury in aquatic organisms, if the background levels of total mercury in sediments and water are sufficiently high. In addition, the document does not appear to address the contribution of methylmercury from methylation of mercury

that is contributed from non-anthropogenic sources, and from fall-out from airborne sources that may be long distances away. The SWRCB proposal must address the geological cycling that mercury is known to undergo, and justify that any proposed AWQO would result in significant reductions of methylmercury in fish tissue of species of importance for local fishers and consumers. It would be inappropriate to establish a fish tissue objective which cannot feasibly be met, given the extent of background concentrations from natural, legacy and long-distance sources.

9. Analytical Detection Limits – Exhibit 3 of the document lists calculated AWQOs for methylmercury that are as low as 0.014ng/L (14 parts per quadrillion). It is highly unlikely that current analytical methodology can reproducibly achieve such low quantitation levels, which could lead to problems with the implementation of testing requirements for permitted discharges. Indeed, EPA Method 1631¹ established a method detection limit (MDL) of 0.2 ng/L for total mercury “when interferences are not present.” There can be no quantification with confidence at the MDL; levels at which analytes can be quantified with confidence are typically at least three times higher and probably more for analytes this low in concentration. EPA has never deemed methylmercury important enough to promulgate a specific analytical method pursuant to Clean Water Act section 304(h).
10. The Correlation Between Total Mercury in an Aquatic System and Methylmercury Concentrations in Fish is Complex and not Fully Understood – The SWRCB proposal suggests that the this relationship is straight-forward and well understood, such that reducing methylmercury input in aqueous discharges will have a direct and comparable reduction in the total methylmercury present in the aquatic system (and ultimately in fish tissue). A cursory review of the literature indicates that this relationship is not well characterized, which means that the effect of implementation of such a program are unknown. It is not clear that the risk reduction achieved through this program (if any were achieved) would warrant the resources required to implement and comply with it. The SWRCB should evaluate any proposed AWQO for methylmercury against existing ambient concentrations in water bodies in California, including those known to be impacted by discharges, and those with minimal or no anthropogenic inputs of methylmercury. Furthermore, the relationship between aqueous concentrations and fish tissue concentrations should be investigated within these water bodies to determine the relationship between water concentrations and fish tissue concentrations for various species.

¹ Method 1631, Revision E: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry, August 2002. (EPA-821-R-02-019)
<http://www.epa.gov/waterscience/methods/1631e.pdf>